CRIMES AGAINST THE ENVIRONMENT: THE STATE'S RESPONSES TO PESTICIDE USE IN BRITISH COLUMBIA

by

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Abstract

Crimes against the environment are a crucial problem facing our society. Despite a growing awareness of and concern over environmental abuses, such acts remain widespread. This thesis represents an attempt to study environmental crimes, and the state's response to them, by focusing on pesticide abuse as a "crime" against the environment. The thesis provides insights into corporate crimes against employees and consumers, since pesticide misuse can also constitute a "crime" against these groups of people.

This thesis is an historical, macro-sociological analysis of the British Columbia pesticide legislation (*Pesticide Control Act*). The analysis focuses on the political and social factors associated with the creation of the *Pesticide Control Act* in 1977 and amendments to the *Act*, at specific junctures. The evolution of the *Act* is examined using a modified, structural Marxist theory. This theory places the actions of the state within an economic framework, while allowing the state a degree of autonomy from the needs of capital and the influences of capitalist factions. The evolution of the *Pesticide Control Act* is traced through an analysis of: (i) government reports and documents (e.g., the Ministry of Environment's annual reports), (ii) non-government documents (e.g., documents of the Council of Forest Industries of B.C.), and (iii) newspapers (e.g., *The Vancouver Sun*). The period of analysis is between the early 1970s and early 1990s.

The findings of this thesis suggest that the Social Credit government's responses to pesticide use in British Columbia between the mid 1970s and early 1990s were conditioned largely by the need, on the one hand, to maintain the government's legitimacy (e.g., popular support) and, on the other hand, to protect capitalist interests. The Social Credit government attempted to preserve the conditions necessary for continued capital accumulation by avoiding measures (e.g., legislation aimed at reducing pesticide use) that could disrupt the production and, thus, the profitability of major pesticide users. At the same time, the government tried to preserve its legitimacy, and the legitimacy of capitalism, by responding to various public concerns and criticisms about pesticide use in British Columbia. Government responses to public concerns and criticisms took the form of legislative and policy changes. The Social Credit government was able to act with relative autonomy, at times making legislative and policy changes which did not appear to meet the needs or reflect the interests of capital. These amendments were a result of the actions of human agents (e.g., interest groups), which posed a significant legitimation problem.

Dedication

To my parents, David and Maggie Liew, with love

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This thesis has also benefited from the information provided by pesticide management branch staff (both former and present), members of the Canadian Farmworkers Union, members of the Council of Forest Industries of B.C., and members of the West Coast Environment Law Association. Finally, I owe a debt of gratitude to my parents, brother, and fiancé, who have continuously given me their support and love.

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Chapter One:
Introduction

Thesis Overview

Crimes against the environment are one of the most crucial problems confronting our society.[1] Such crimes are prevalent in Canada.[2] In August 1987, for example, the International Nickel Company (Inco) released two tons "of sulphur trioxide into the atmosphere from its Copper Cliff refinery in Ontario."[3] A cloud of sulphuric acid one kilometer long and half a kilometer wide, drifted over residential and summer resort areas and resulted in the hospitalization of 150 people. "The release was due, in part, to the failure of three safety systems."[4] In March 1989, an Environment Canada report revealed that "83 of the 149 pulpmills in Canada were dumping toxic chemicals (i.e., organochlorines, including the poison dioxins) into waterways at a rate and level higher than national pollution standards allowed."[5] The pulp mills were not investing in pollution control. The contamination of water affected fish (a source of human food) and other marine life.

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[1] Crimes against the environment are acts that seriously harm the environment. They include:

> [C]orporate actions that result in a general or specific pollution of the land, air, and water; the contamination of both human beings and the sources of human nutrition; the depletion or destruction of species of flora, and marine and aerial life; or the wanton destruction and waste of valuable resources (Gordon & Coneybeer, 1995: 402).

[2] See, for example, Howard (1980) and McMullan (1992: 31-3).
[3] Gordon & Coneybeer (1995: 404).
[4] Ibid.
[5] Ibid.

There is a growing awareness and concern over environmental abuses.[6] A survey conducted in 1989 reported that about one third of all Canadians felt that environmental pollution is the most important issue facing Canada today.[7] Forty percent of Canadians and 52 percent of British Columbians believed that the situation will be worse in ten years' time. More than 50 percent of the respondents agreed that "[w]e are in serious danger of destroying the world environment in the near future."[8] Canadians are concerned about environmental pollution, primarily because of its effects on health.[9]

Environmental issues did not receive widespread attention in Canada until the second half of this century. Until then, it was assumed that industries had a right to freely use the land, air, water, and other natural resources.[10] It was believed that human activity would have no permanent impact on the environment and that natural resources could never be exhausted. Further, the benefits associated with the use of these resources, even if they were scarce, "were thought to outweigh any environmental damage or destruction which resulted."[11]

Today, the corporate sector is "aware of the sensitive nature of the environment, the limited character of some of its resources, and the need to pursue economic activities in a manner that will not only contribute to sustainable productivity in the future, but also

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[6] Law Reform Commission of Canada (1985: 11); B.C. Ministry of Environment (1989/90: 11); and Neuman (1990: 3-4).
[7] *The Vancouver Sun* (2 Oct., 1989: A1), cited in Ratel (1992: 2). "Polls are considered accurate within 2.5 percentage points (i.e., 19 out of 20 times)" (Ratel, 1992: fn 3).
[8] Ratel (1992: 3).
[9] B.C. Ombudsman (1988: 61); Environment Canada (1988); Health & Welfare Canada (1992: 7-8); and Synergistics & Environics (1990).
[10] Caputo, et al. (1989: 169-71).
[11] Ibid, p.169.

minimize negative environmental impacts."[12] As Tavender et al. observe, public pressure has prompted governments at the federal and provincial levels to enact and amend legislation to "increase the accountability and responsibility of corporations to ensure protection of the environment."[13] The corporate sector is aware that there has been an increase in the prosecution of individuals and corporations responsible for environmental crimes.[14]

Crimes against the environment have been subjected to examination by environmental groups, governments, and academics. Nevertheless, there is a need for more intensive and rigorous studies of such crimes in Canada. This need becomes more pressing since environmental issues will continue to dominate the public agenda over the next few decades.

This thesis focuses on pesticide use.[15] The use of chemical pesticides can be a "crime" against the environment when pesticides lead to serious environmental damage, especially when they are improperly handled. The widespread use of pesticides can also be a "crime" against employees and against consumers because of the problems that pesticides are capable of posing to the health of employees and consumers.[16]

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[12] Bird & Rapport (1986: 231).

[13] Tavender, et al. (1993: 281). "British Columbians ... are demanding effective monitoring, regulations and enforcement, greater industry responsibility, and better information on environmental issues" (B.C. Ministry of Environment, 1989/90: 11).

[14] See s.122 of the *Canadian Environmental Protection Act*, R.S.C. 1985, c.16 (4th Supp.).

[15] For the purpose of the present study, "pesticides" will be defined as chemicals that are used to prevent, destroy, repel or mitigate a pest. These chemicals include insecticides, herbicides, rodenticides, fungicides, bactericides, and miticides (B.C. Ombudsman, 1988: 1; Health & Welfare Canada, 1992: 55-8).

[16] It is important to note that crimes against the environment, consumers, and employees overlap to some degree. Thus, it is not always possible to draw a clear distinction between them.

Literature Review

In Canada, pesticides are widely used in agriculture, forestry, homes, and gardens. The benefits of pesticides can be enormous. Pesticides contribute to the availability of cheaper food and the increased supply of wholesome food at a reasonable price.[17] Particularly in developing countries (e.g., Africa, South-east Asia), pesticides assist in maintaining public health through the control of insect-transmitted diseases, such as malaria, filariasis[18], and onchocerciasis.[19] Above all, pest control products have fostered highly successful agricultural systems throughout the world. Over the last few decades, pesticides have played a major role in increasing agricultural production in both developed and developing countries,[20] and they are an integral part of world agricultural programmes.[21]

Generally, there are three main forces in society that encourage the extensive use of pesticides. One is *farmers' desirability for higher profits.*[22] By preventing crop losses due to pests and diseases, pesticides can secure and increase agriculture yields, and thus profitability. A second force is *consumer expectations*: consumers demand wholesome food with consistent quality and appearance.[23] Finding a worm in a tomato, for instance, would provoke an instant complaint. Accordingly, farmers find that they have to produce

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[17] Arnold (1992: 9-11); Furtick (1976: 10); Green (1976: 19); and Schuhmann (1976: 58-9, 66).
[18] Filariasis is a disease transmitted by mosquito species such as anopheline and culicine. The disease produces elephantiasis, "in which various parts of the body swell to enormous proportions" (Davidson, 1979: 32).
[19] Arnold (1992: 10); Davidson (1976); and Durham (1979). Onchocerciasis is a disease carried by various blackfly species. "The symptoms of onchocerciasis include itching rashes, thickening and depigmentation of the skin, skin nodules ... and eye lesions that often lead blindness" (Davidson, 1976: 36).
[20] Adam (1976) and Schuhmann (1976).
[21] Castrilli & Vigod (1987: 5).
[22] Denis (1988: 431-2) and Gordon & Coneybeer (1995: 416).
[23] Edwards (1993: 40) and Green (1976: 19, 61).

blemish-free fruits and vegetables: "[g]ood appearance and substantial freedom from blemish or damage ... are prerequisite for a grower to obtain a reasonable price for his [or her] crops .... "[24] Through intensive use of crop protection chemicals, farmers can fill shops with produce that is of good appearance and high quality.[25]

A third force for increased use of pesticides is *chemical corporations*. The chemical industry constantly promotes the positive effects of its products, and downplays or conceals the negative impact of pesticides.[26] These corporate practices are largely motivated by the goal to increase profits.[27] The estimated pesticide sales in Canada are worth $250 million per year.[28] The chemical industry has also resisted increased testing or related regulatory controls, stating the need for government to be more conscious of the economic benefits of pesticides for the food and fiber sectors of the economy.[29] Moreover, chemical representatives (e.g., the Canadian Chemical Producers' Association) often claim that field testing of new pesticides under Canadian conditions prior to registration is adequate, although testing requirements and practices in the registration process have been shown to be deficient.[30]

While the application of pesticides has been viewed as providing agricultural and other benefits to society, the current widespread use of pesticides (once thought to be

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[24] Green (1976: 19).
[25] Fresh fruits and vegetables deteriorate much more rapidly in transport and storage if they have previously been damaged by pests.
[26] Denis (1988: 423, 427-8); Sachs (1993: 380, 386); and Schrecker (1984: 32-3).
[27] While corporations "may have other goals such as the increase or maintenance of corporate power and prestige, along with corporate growth and stability, their paramount objectives are the maximization of profits and the general financial success of the corporation" (Clinard, 1983: 18).
[28] Gordon & Coneybeer (1995: 416).
[29] Castrilli & Vigod (1987: 55).
[30] Ibid, pp.51-2.

quite safe) can lead to serious environmental and human health problems. Many problems result from misapplications, accidents, and/or improper use, handling, or storage of pesticides. Three main categories of undesirable effects of pesticide use can be identified: (i) impact on the environment, (ii) adverse effects on the health of employees, and (iii) health effects on consumers. The following discussion will elaborate on these issues.

Impact on the environment

Increasing concerns about the environment have led many in the general public to question whether the benefits pesticides bring outweigh the environmental damage they cause. Environmental problems posed by pesticides include air, water, and land pollution.[31] Contamination can occur in a number of ways: direct application to land and water, disposal of pesticides and used pesticide containers, as well as washing pesticide containers. Pesticide pollution can adversely affect humans and other non-target organisms. For example, pesticides in rivers and lakes can contaminate micro-organisms (e.g., plankton) that inhabit the sediments. When fish (a source of human food) and other marine life feed on these micro-organisms, they can also be affected. Pesticides in the Great Lakes have been shown to affect the reproductive processes of fish in the lakes.[32]

The widespread use of pesticides, ironically, can contribute to the destruction of crops through aerial spraying[33], soil degradation[34], and pest resistance and resurgence, which may lead to more spraying.[35] Another problem posed by pesticides is the destruction of non-target species (which can include beneficial natural predators and

[31] Dinham (1993: 65) and Edwards (1993: 32-3).
[32] *The Vancouver Sun* (2 Sept., 1995: A10).
[33] Pimentel, et. al (1993: 60-4).
[34] Edwards (1993: 31).
[35] Dinham (1993: 66); Edwards (1993: 30); and Metcalf (1989).

parasites).[36] Indeed, some pesticides (e.g., aldicarb and calcium cyanide) are extremely toxic to non-target organisms, such as wildlife and aquatic life.[37]

Even properly applied, pest control chemicals have a number of inevitable side-effects. Some pesticides (e.g., organochlorines) do not degrade rapidly and remain toxic in the environment for many years. These pesticides can become sufficiently concentrated along a food chain to affect the health of living organisms (e.g., inhibit fertility and reproduction).[38] There is also evidence that air pesticides can travel long distances. Traces of Atrazine pesticides, for example, have been found in the Arctic.[39] In short, pesticides can cause serious damage to non-target organisms and the environment.

Impact on employees

Everyone, everywhere, is exposed to some pesticide residues in water, food and the atmosphere. However, the highest levels of pesticide exposures occur among workers engaged in the manufacture of pesticides.[40] These workers face a wide range of acute and chronic health hazards. Several studies have found significant links between occupational exposure to arsenical pesticides and the development of respiratory and lung cancers.[41] A Danish study[42] of 3,390 phenoxy herbicide[43] manufacturers reveals a higher risk for soft

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[36] Dinham (1993: 67-8) and Pimentel, et al. (1992: 278). Extensive use of pesticides has been linked to the deaths of eagles, wild ducks, honey-bees, and birds in Canada (Castrilli & Vigod, 1987: 9, *The Vancouver Sun*, 24 Jan., 1993: B1; 15 Mar., 1994: B1).

[37] Adams (1992: 203, 209-10) and Pimentel, et al. (1992: 278).

[38] Culliney, et al. (1993: 137-8); Edwards (1993: 14, 26-7); and Health & Welfare Canada (1992: 56-7). For this reason, the use of some organochlorine pesticides (i.e., DDT and toxaphene) is prohibited in Canada.

[39] Kurtz (1990).

[40] Arnold (1992: 61, 97); Bolaria & Bolaria (1994a: 107); and Franklin (1985: 430).

[41] Ott, et al. (1974). Arsenicals are rarely used in agriculture today.

[42] Lynge (1980). Also see Cook, et al. (1980); Ott, et al. (1980); and Zack & Suskind (1980) (cited in Sharp et al., 1986: 447-8).

tissue sarcomas.[44] An increased risk of pre-malignant skin lesions is associated with manufacturers of 4,4'-bipyridyl, "an intermediate compound used in the manufacture of paraquat."[45]

Many studies on the morbidity experience of pesticide manufacturers suggest that dibromochloropropane (DBCP) has permanent adverse effects on male fertility.[46] Male production workers exposed to DBCP have lower than normal sperm counts. Sperm count is directly associated with the degree and length of exposure.

Some mortality studies found associations between exposure to organochlorine pesticides[47] and the development of hypertension, cerebrovascular disease, and arteriosclerotic cardiovascular disease.[48] No increased cancer risk for any particular site or an overall cancer risk was detected.[49] Failure to find a relationship between organochlorine pesticide exposure and the development of cancer does not eliminate the likelihood of one. Animal studies have consistently reported that organochlorine pesticides could be human carcinogens.[50]

Three U.S. studies of workers exposed to phenoxy herbicides and their contaminant (the dioxin 2, 3, 7, 8-TCDD) report no significantly increased rates of

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[43] Phenoxy herbicides are "widely used for weed control in grain crops. They are selective because grasses and some other crop species are resistant to them .... They have low to moderate toxicity to humans and animals." (Adams, 1992: 6).
[44] Sarcoma is "a malignant tumor of connective tissue or its derivatives" (Arnold, 1992: 194).
[45] Arnold (1992: 98). Paraquat is a type of herbicides used especially for controlling weeds.
[46] Milby & Whorton (1980) and Whorton, et al. (1977, 1979).
[47] Organochlorine pesticides include DDT, chlordane, heptachlor, aldrin, and dieldrin.
[48] Morgan, et al. (1980) and Wong, et al. (1984) (cited in Sharp et al., 1986: 452).
[49] Also see Wang & Grufferman (1981, cited in Sharp et al., 1986: 452).
[50] Sharp, et al. (1986: 452). Some of the mortality studies have methodological limitations. These limitations include use of occupation recorded at time of death as an exposure index and loss of subjects (pp.451-2).

cancer, although exposure was high.[51] This finding is supported by Lynge's (1980) Danish study and Coggon et al.'s (1986) UK study.[52] Some Swedish studies, on the other hand, show that phenoxy herbicides and their contaminants are related to increased rates of cancer.[53] Animal studies also suggest that phenoxy herbicides have potential carcinogenic effect.[54] In light of these inconsistent findings, the carcinogenic potential of phenoxy herbicides and dioxins remains unconfirmed.[55]

The studies cited above suggest that workers engaged in the manufacture of pesticides face acute and chronic health hazards. These range from pre-malignant skin lesions and soft tissue sarcomas to more serious, long-term problems such as lung and respiratory cancers, and reproductive hazards.

Pesticide sprayers, agricultural workers, and people who live near agricultural areas (where there are high rates of pesticide use) generally face higher levels of exposure to pesticides than other members of the community.[56] Contact with pesticides among farmworkers and pesticide applicators usually occurs during application and disposal of pesticides, while handling sprayed produce, mixing, loading, and transporting pesticides, and while working in sprayed fields.

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[51] Cook, et al. (1980); Ott, et al. (1980); and Zack & Suskind (1980) (cited in Sharp et al., 1986: 447-8). These studies are limited by the small cohort size of the populations studied. Furthermore, the follow-up period in one of the studies (Cook et al., 1980) may have been insufficient to detect any carcinogenic effect from exposure to the chemicals (Sharp et al., 1986: 447-8).

[52] Also see Bonsall (1985: 62).

[53] Axelson, et al. (1980) and Eriksson, et al. (1981).

[54] Sharp, et al. (1986: 450).

[55] Arnold (1992: 98-9) notes that the chronic effects of some pesticides (i.e., 2,4-D; 2,4,5-T; EDB; 4,4'-bipyridyl) are not confirmed. Further, there is a lack of studies conducted on the workers engaged in the manufacture of many pesticides.

[56] Dinham (1993: 38-63) and Pimentel, et al. (1993: 50).

Increased use of pesticides in agriculture has raised concerns that farmworkers' health is being adversely affected. The Matsqui-Abbotsford Community Services survey (1982), conducted on 270 farmworkers in British Columbia, provides an insight into the problems of exposure to dozens of toxic pesticides:

> [Fifty five] per cent of workers surveyed had been directly sprayed. 79.5 per cent had to work in fields which had just been sprayed; more than 25 per cent had their living quarters sprayed; and while seven out of ten became physically ill after direct spraying, less than [four] per cent of growers obtained medical help for their workers. Over 50 per cent of the workers exposed to pesticides reported that they suffered headaches; 44 per cent suffered from skin rashes; 35 per cent had experienced dizziness; and 36 per cent suffered burning eyes. Almost 70 per cent of the workers had no proper wash-up facilities and over 80 per cent had no choice but to eat lunch in sprayed field areas.[57]

Further, most of the farm employees did not receive information or instruction regarding pesticide hazards.[58]

A study of 194 Punjabi farmworkers by Basran et al. (1995) reveals that 21.6 percent of farmworkers have been exposed to empty pesticide containers left on the work site. Almost ten per cent breathed pesticide fumes, about ten percent got pesticide residues on their clothing or skin from working, and over 30 percent had to work in fields which had been recently sprayed.[59] "[O]n average, each respondent reported experiencing [more than three] different symptoms during the past 12 months that may have been the consequences of pesticide exposure."[60] Seventy-three percent of farmworkers reported fatigue, about 67 suffered headaches, almost 50 percent experienced excessive sweating,

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[57] Castrilli & Vigod (1987: 10).
[58] Bolaria (1992: 240).
[59] Basran, et al (1995: 77).
[60] Ibid, pp.79-80.

about 34 percent reported sore throat, about 25 percent experienced skin rash, and 22 percent suffered itching.[61]

These studies suggest that farmworkers face extensive pesticide exposure and associated health risks.[62] However, little effort has been made to minimize the risks for farmworkers by providing washing facilities, and protective clothing and equipment. Bolaria notes that in Ontario and British Columbia, farmworkers and their families have no proper wash-up facilities.[63] Gordon and Coneybeer report that "at one of the largest farms in the Fraser Valley in British Columbia, workers are being required to undertake between ten and twelve hours of continuous pesticide application, every day, without protective apparel ... "[64] In some cases, farmworkers are exposed to toxic pesticides that have not been properly tested for safety or that are known to be carcinogenic.[65]

Numerous studies suggest that farmworkers could have a greater risk of developing certain cancers, and pesticides may play a role.[66] Farmworkers have been shown to have higher mortality rates from malignant brain tumors.[67] Some researchers report that agricultural workers have a higher risk of developing testicular cancer.[68] Although these studies indicate an increased level of certain cancer in agricultural occupations, it cannot be inferred that contact with pesticides is the cause or a cause of such diseases. However, the fact that people in frequent contact with pesticides seem to

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[61] Ibid.
[62] Also see B.C. Human Rights Commission (1983: 20-2); Bolaria (1992: 238-45); Bolaria & Bolaria (1994b: 153-60, 162-4); Richards (1985); and Strigini (1982: 273-81).
[63] Bolaria (1992: 241).
[64] Gordon & Coneybeer (1995: 411). Also see *The Province* (17 Oct., 1990).
[65] Bolaria (1994: 687).
[66] Cuzick & de Stavola (1988); Saftlas (1987); Mills, et al. (1984); and Petersen & Milham (1980).
[67] Delzell, et al. (1985).
[68] Mills, et al. (1984).

have higher cancer rates suggests reasons to be concerned with the widespread use of pesticides.

Farmworkers' families are exposed to high levels of pesticides. They can be exposed to pesticides when working or playing in the fields. Exposure can also occur in the home from washing contaminated equipment and clothes. Children may be particularly at risk due to their small body size, and their careless eating and dressing habits.[69] According to MacLean, "[a]lmost 1,500 children a year in Surrey are being exposed to dangerous pesticides and machinery as they accompany their parents or caregivers to work on the farms .... About 40 per cent of these children, or 600 of them, are under the age of five."[70] Charan Gill, founding president of the Progressive Inter-Cultural Community Services, confirms that there are many cases of pesticide poisoning among farmworkers' children.[71]

Farmworkers' spouses also face extensive pesticide exposure. The wives of male workers are subject not only to the similar risks of carcinogenicity (ability to cause cancer) and other adverse health effects as their husbands, but also to the risk of teratogenicity (effects on the fetus). Some studies report that there is a high incidence of congenital malformations in female workers exposed to pesticides.[72] Frequent exposure to pesticides has also been linked to a high rate of miscarriages, stillbirths, and infertility.[73]

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[69] Basran, et al. (1995: 4); Lawson (1993: 210); and Strigini (1982: 277).
[70] *Insider* (1995: 1).
[71] Ibid, p.3. Also see Basran, et al. (1995: 4-5, 83-6).
[72] Basran, et al. (1995: 3-4) and Schwartz & Logerfo (1988).
[73] Rita, et al. (1987) and Dinham (1993: 50).

Impact on consumers

The public is exposed to pesticides largely through the food they eat and the water they drink. Vegetables and fruits would contain higher levels of pesticide residues than any other commodity because they receive the highest dosages of pesticides.[74] Residues can be found in meat and dairy products because some pesticides (e.g., chlorinated hydrocarbons) decompose slowly and can build up in the body fat of animals. Pesticide residues may remain on some foods even after processing. Drinking water can also be contaminated. Indeed, drinking water in Toronto, drawn from Lake Ontario, contained chemical pesticides that may be carcinogenic.[75]

As Green points out, "[a]lthough the trace amounts of pesticides actually present in food and water will not cause any acute damage to health, they might have subtle long term chronic effects."[76] Some studies have linked cancer to pesticide residues in foods.[77] Of course, the risk depends on the dosage of the pesticide, the magnitude of dietary pesticide exposure, and the susceptibility of the individual. Elderly people and children may be particularly at risk because they have limited detoxification capacities. People whose diets consist of very high amounts of certain food products (those that often contain high levels of pesticide residues, such as vegetables and fruits) also face higher risks of cancer.

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[74] Sewell & Whyatt (1989).
[75] Castrilli & Vigod (1987: 11).
[76] Green (1976: 66).
[77] Archibald & Winter (1989); Cohen (1987); and NAS (1987). Also see *The Globe & Mail* (16 Mar., 1989: A7); *The Province* (28 Feb., 1989); and *The Province* (1 Mar., 1991).

In recent years, the public has become more concerned about pesticide residues in food and water.[78] There is a growing demand for 'organic foods' and bottled water.[79] Increased concern about pesticides is largely a result of public awareness of pesticide toxicity, incidence of pesticide poisonings, and increased pesticide use.[80] Even the agriculture industry is aware that consumers are worried about pesticides on their food. For example, one of Western Canada's largest produce growers, B.C. Hot House, advertises that, in view of public concern, it has minimized the use of pesticides.[81]

In sum, the available literature indicates that pesticides pose serious threats to the environment and human health. Increasing public concern about the "inherent toxicity and deliberate poisonous nature" of pesticides has led to long-standing government intervention in the Canadian market (by means of legislation and regulatory controls) to govern the sale, use, and disposal of such products.[82] As the Honourable H. A. Olson, federal Minister of Agriculture in the late 1960s, stated during Parliamentary debate (on Bill C-157 to regulate pesticides):

> [Pesticides] bring us untold benefits, but they can also get us into trouble if they are not handled properly .... Government control of the manufacture and use of these potentially dangerous substances is necessary if we are to protect people from the misuse of pesticides .... The increased use of pesticides and associated products, and a greater concern over their potential for

[78] Arnold (1992: 19, 97, 122) and Sachs (1993). Also see *The Province* (28 Feb., 1989; 1 Mar., 1991).
[79] Arnold (1992: 169). Also see *The Globe & Mail* (16 Mar., 1989: A7) and *The Province* (28 Feb., 1989).
[80] Sachs (1993: 387).
[81] The author found this folksy advertisement on the boxes of tomatoes produced by B.C. Hot House: "We've taken some very small steps to radically reduce pesticides. In fact, we took steps ten years ago by introducing little critters like this to our hot house. [Picture showing a ladybug] They eliminate pests naturally. So we rarely have to use any pesticides at all. And that's a step worth taking for the good of your customers and your business."
[82] Castrilli & Vigod (1987: 39)

> harm as well as good necessitate a broader authority for regulation than in the past.[83]

Federal, provincial, and municipal governments regulate the sale, use, and disposition of pesticides because these chemical products, if improperly tested or used, can threaten the environment, employees' health, and general public health. There is always a "possibility that unscrupulous manufacturers might not give sufficient consideration to the safety of their products or that careless growers might handle and use them in an unsafe way .... "[84] Clearly, governments cannot hope to preserve their legitimacy (i.e., popular support) if they fail to take action to control this class of toxic substances or if they ignore the wrongdoing of chemical manufacturers or pesticide users. Government legitimacy rests on taking action or, at least, the *appearance* of taking action to regulate pesticides.[85]

Several researchers have examined the existing pesticide regulatory controls in Canada. Castrilli and Vigod (1987) examined the adequacy of federal laws, particularly the *Pest Control Products Act*, with respect to the front-end (e.g., pesticide registration, tolerance setting for residues on food) and back-end (e.g., re-evaluation, re-classification, suspension, administrative orders, and prosecutions) of pesticide regulation. At the provincial level, the B.C. Ombudsman (1988) has provided an analysis of "the process for regulation of pesticide use by the provincial government", including "a review of the pesticide use permit system administered under the *Pesticide Control Act* and of the

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[83] Canada (1969: 4275, cited in Castrilli & Vigod, 1987: 42).

[84] Green (1976: 21). Also see Castrilli & Vigod (1987: 49-52, 74-82); *The Globe and Mail* (30 Jun., 1983: 1); *The Globe and Mail* (27 Apr., 1981: 1); and Schneider (1983: 14-26).

[85] O'Connor (1973: 6, cited in Panitch, 1977: 8) writes: "A capitalist state that openly uses its coercive forces to help one class accumulate capital at the expense of other classes loses its legitimacy and hence undermines the basis of its loyalty and support."

provision for appeals to the Environmental Appeal Board."[86] In their study, Ross and Saunder (1993) analyzed the adequacy of federal pesticide legislation and policy in Canada, and examined the distinctive features of some provincial pesticide control statutes. The authors concluded that the *Pesticide Control Products Act* is largely ineffective in controlling the manufacture and importation of pesticides in Canada. With respect to provincial statutes, the authors found that they differ in various attributes, including the number of pages they devote to pesticides, the provision for public input in the decision-making process, the power to make stop orders, and the penalties imposed for violations.

Canadian studies on pesticide legislation have thus focused exclusively on the adequacy of pesticide regulation. They fail to advance a theoretically informed analysis of the field that explains the form, content, and enforcement of existing pesticide legislation in Canada. A theoretically informed analysis of the evolution of pesticide legislation is useful for two reasons. First, it could enable public interest groups to make informed criticisms of state policies with respect to pesticides, thus contributing to the efforts of those pursuing regulatory reforms of pesticide use. Second, such an inquiry could provide empirical support for particular tenets of state theory.

Objectives and Limits of the Thesis

The thesis analyzes the evolution of pesticide legislation in Canada using state theory. The scope of this topic, however, requires that some limitations be placed on the examination of the pesticide regulatory system. This thesis will focus on current

[86] B.C. Ombudsman (1988: 2). This study will be elaborated in Chapter Three.

provincial pesticide law in British Columbia (*Pesticide Control Act*),[87] although the federal pesticide legislation (*Pest Control Products Act*)[88] will be noted in passing. Given that municipal authority to control pesticides is determined by provincial legislation, the thesis will not include municipal efforts to control pesticides. Further, the thesis is restricted to state institutions directly related to pesticides, such as the Environmental Appeal Board of British Columbia and the B.C. Ministry of Environment, including the Pesticide Management Branch.

Overview of the Forthcoming Chapters

Chapter two offers a brief review of central perspectives on the modern state; namely, classical liberalism, liberal democratic theory, structural functionalism, elite theory, pluralism, classical Marxism, and Neo-Marxist theories (instrumental and structural Marxism).[89] It also points out the strengths and weaknesses of each theory. The chapter concludes by identifying a theoretical perspective (modified structural Marxism) that will enhance an understanding of the state's responses to pesticide use in Canada. The modified, structural Marxist theory incorporates the complex dialectic interplay between *structural forces* and *human agency* (i.e., thought, consciousness, and will).

Chapter three provides a theoretically informed account of the evolution of the British Columbia *Pesticide Control Act*. The "colour" of the interpretive lens is a modified, structural Marxist theory identified in chapter two. This chapter is divided into two sections. The first section explores the origins of the *Act* in the early 1970s. The

[87] *Pesticide Control Act*, R.S.B.C. 1979, c. 322.
[88] *Pest Control Products Act*, R.S.C. 1985, c.P-10.
[89] The state, often known as the government or polity, denotes the major institutions and top officials of governing bodies and their jurisdictions.

second section examines the amendments to the *Act* and its *Regulation* between 1978 and 1991. The chapter concludes by providing a summary of the evolution of the British Columbia pesticide legislation.

Chapter four integrates the findings of this thesis with Canadian research into pesticide legislation and with modified, structural Marxist theory. The thesis finds empirical support for the theoretical contention that the state is not merely functioning to support the long-term reproduction of capital, but is also subject to mobilization "from below", as well as from the dominant social group. The chapter also offers some recommendations for future research. Various methodological issues are discussed separately in Appendix I. The constitutional basis for federal and provincial legislative authority in the control of pesticides, and an overview of the provincial and federal pesticide legislation, are provided in Appendix II.

Chapter Two:
Perspectives on the State

Introduction

The concept of the state has been at the heart of political analysis since the late sixteenth century. As Held points out, the idea "found its earliest expression in the ancient world (especially in Rome) but did not become a major object of concern until the early development of the European state system from the sixteenth century onwards."[90] Thus, the state is an important institution in modern society. It plays an enormous and ever-increasing role in regulating human activities and providing order for today's complex society:

> The state - or apparatus of 'government' - appears to be everywhere, regulating the conditions of our lives from birth registration to death certification. Yet, the nature of the state is hard to grasp. This may seem peculiar for something so pervasive in public and private life, but it is precisely this pervasiveness which makes it difficult to understand. There is nothing more central to political and social theory than the nature of the state and nothing more contested.[91]

Despite 400 years of study, the nature of the modern state continues to be a subject of heated debate. The issues that remain highly contested include the relationship of the state to society, the interests represented by the state, and the implications of state activities for social well-being. There is disagreement among some social scientists about the nature of the state mainly because they have different conceptions of human nature.[92] Theorists such as Hobbes and Locke, viewed human nature as fixed and static, and

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[90] Held (1983: 1)
[91] Ibid.
[92] Knuttila (1992: 4).

humans as naturally selfish, egotistical and self-interested. Others, such as John Stuart Mill and Comte, countered that the central determinant of human behavior is environmental factors. Clearly, these different views about the essential nature of human species "have significant implications for any larger view of society and ultimately for a view of the state."[93]

Classical Liberal Theory

Classical liberalism is concerned with issues of sovereignty, obligation and the duties of citizens. Two theorists are generally associated with this perspective: Thomas Hobbes and John Locke. According to Hobbes, humans are naturally self-interested and possessive individuals. They have unlimited desires and appetites which they seek to satisfy.[94] Hobbes asserted that individuals will employ natural rights that allow them to fulfill their interests with any means available.[95] The consequences of this state of nature are conflict, violence and death.[96] A solution to continual war is the creation of a social contract, in which individuals gave up the exercise of their natural rights and acknowledged an individual or a collective body as their ruler. For Hobbes, the sovereign state so created (which can be either an assembly or an individual) is self-perpetuating and undivided; it has absolute power to make and enforce laws.[97] The duty of the sovereign is to protect the people and their property. The sovereign's subjects, in turn,

[93] Ibid.
[94] Hobbes (1968: 119-20).
[95] Ibid, p.190.
[96] Ibid, p.186.
[97] Knuttila (1992: 15).

have a duty to obey the sovereign. However, according to Hobbes, the subjects have an obligation to obey the sovereign only when it is capable of protecting them.[98]

Hobbes' political theory has at least three shortcomings. First, the theoretical perspective fails to specify "where sovereign authority properly lay .... "[99] Does the authority lay with the ruler (the monarch), the state, or with the public?[100] Second, Hobbes' position does not to take into account class division and class cohesion: "the universality of the competitive struggle between individuals is assumed to have dissolved all class inequalities and all class cohesiveness."[101] This failure leads Hobbes to conclude that self-perpetuating power is an essential attribute of sovereignty. However, the conclusion is not applicable to possessive market societies (class-divided societies with cohesive dominant classes).[102] Another problem with Hobbe's theory is that it advocates an absolute sovereign state without articulating a principle that will establish the limits or legitimate scope of state action. This conception of sovereignty has "potentially tyrannical implications."[103]

Like Hobbes, Locke viewed the state as essential for the existence of civil society. He asserted that nature has made men free and equal, capable of rationality and morality.[104] In the state of nature, men also enjoy a right to property; that is, a right to "life, liberty and estate."[105] They only have a duty of preservation - self-preservation and

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[98] Hobbes (1968: 268-72).
[99] Held (1989: 222).
[100] Hobbes views the state as a "form of public power separate from both the ruler and ruled, and constituting the supreme political authority within a certain defined boundary" (cited in Held, 1983: 2).
[101] Macpherson (1972: 94).
[102] Ibid, pp.93-4.
[103] Held (1989: 222).
[104] Locke (1976: 4).
[105] Ibid, pp.15, 43. For Locke, a right to property can also include a right to possess goods.

the preservation of all mankind - which they owe to God. In addition, Locke argued, men can employ natural rights to punish individuals who violated the rights of mankind.[106] However, there is no guarantee that individuals will obey the law of nature or that punishment will be impartial; thus, partiality, confusion, and violence will follow. To avoid societal disorder, government is established.[107] In establishing government, individuals surrender their right to execute the law of nature, in exchange for order maintenance, safety and liberty in civil society.[108] Contrary to Hobbes, Locke maintained that the legislative power is not self-perpetuating and absolute.[109] Citizens have the ultimate power to withdraw consent from a legislature that either rules in an arbitrary manner or fails to meet its purpose: the preservation of men's property.[110]

Locke's position has been challenged on at least two grounds. First, Locke claimed that government power is held "on trust"; however, he was ambiguous on the issues of what constitutes a breach of trust; under what conditions trust should be bestowed; and who constitutes "the people" (who decide whether or not government has violated the trust).[111] Another difficulty is that Locke's theory is based on contradictory postulates. Specifically, Locke believed that humans have equal natural rights and that humans are, by nature, equally rational. Yet, he assumed that individuals without

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[106] Ibid, pp.5-6.
[107] Ibid, pp.8-9.
[108] Locke (1976: 63-6). Locke suggests that government "should be conceived as an 'instrument' for the defence of the 'life, liberty and estate' of its citizens" (Held, 1983: 10).
[109] Locke (1976: 67-73).
[110] Ibid, pp.105-10. If consent is withdrawn, Locke states: "[T]he people are at liberty to provide themselves by erecting a new legislature, differing from the other by the change of persons or form, or both as they shall find it most for their safety and good" (p.109).
[111] Knuttila (1992: 19).

property are incapable of living a rational life.[112] In equating full human rationality with the possession of property, Locke's assumptions lead "logically to differential class rights and so to the justification of a class state."[113]

Both Hobbes and Locke can be criticized for their conception of human nature. The classical liberalists contend that humans are, by nature, self-centred, egotistical and possessive. While it is true that humans have displayed these attributes, this has not always been the case. Further, both theorists assume that these attributes will persist in perpetuity. Such a fixed conception of human nature is not only pessimistic but also inaccurate. One of the human being's greatest attributes is his or her ability to learn and adapt as he or she grows. There is nothing about humans that makes them static. If humans are not static, how can one justifiably generalize human nature as static? Despite the limitations of Hobbes and Locke's works, their contributions have served to invigorate the classical liberal theory of the state.

Liberal Democratic Theory

Liberal democratic theory is concerned with the accountability of the state to its citizens.[114] The theorists generally associated with this perspective are Jeremy Bentham, James Mill, and John Stuart Mill. Central to the position of Bentham and James Mill is the belief that humans are driven by a desire to maximize pleasure and minimize pain. This basic premise is known as the "principle of utility."[115] For both Bentham and Mill, government is essentially a means to ensure "the greatest happiness for the greatest

[112] Macpherson (1972: 221-9).
[113] Ibid, p.251.
[114] Liberal democratic theory can be considered an expansion of Locke's view of the state.
[115] See Bentham (1960: 125-31).

number"[116]: it must provide subsistence, produce abundance, ensure equality, and secure life and property.[117] If these subsidiary goals are pursued, obedience to the government will be in the best interests of the citizens. However, according to the authors, governors will use their power to appropriate resources for their own pleasure at the expense of the governed.[118] To minimize government's opportunities for misuse of power, without rendering government impotent to secure life and property for which it was originally established, Bentham and Mills suggested that individuals make government answerable to them. This form of government is known as democratic government.[119] This "minimal state" would leave individuals free to pursue their own interests without arbitrary state interference.[120] Although Bentham and Mill advocated a liberal democratic state, they were reluctant advocates of democracy. They argued against the right to vote for women, the working class, illiterate individuals, men under the age of 21, and foreigners.[121]

A central problem with Bentham and Mill's position is its contention that society is composed of utilitarian individuals calculating how to maximize satisfactions and minimize suffering. Of course, in making decisions, individuals are governed to a certain degree by the principle of utility. However, to suggest that they are governed solely or primarily by this principle is to misunderstand human thought and behavior. The authors downplayed or ignored individual free will. Put simply, Bentham and Mill's position is

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[116] Held (1983: 15).
[117] Rosen (1983: 29).
[118] Held (1983: 15).
[119] Democratic government involves the election of a body with interests not significantly different from those of the whole community.
[120] Held (1983: 16). Both Bentham and Mill argued for a secret ballot, competition between potential political representatives, shorter parliaments, separation of powers, and free press and speech (p. 15).
[121] Rosen (1983: 32).

based on an inadequate and somewhat superficial assumption of human beings and their relationship with the larger society.

Unlike Bentham and James Mill, John Stuart Mill is "a clear advocate of democracy, preoccupied with the extent of individual liberty in all spheres of human endeavour."[122] In his view, humans evolve, develop and progress. Mill believed that, through education, individuals could elevate their life conditions.[123] Thus, government is required to do more than simply maximize the existing desires of individuals. In particular, government must assist human development.[124] For Mill, government interference with individual liberty is essential; however, such interference is justified only when an act is harmful to others.[125] A civil libertarian, he recognized the possibility of the "tyranny of the majority" and contends that a representative government (which is subject to periodic elections) is the best form of government to guard against despotism.[126] Further, Mill recommended proportional representation to safeguard minorities, and plural voting for individuals with more knowledge and ability.[127] He argued against suffrage for illiterate members of the society and those who receive benefit(s) through indigence.[128]

There are several drawbacks to Mill's work. First, Mill is criticized for not adequately addressing the issue of ultimate control of the representative government.

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[122] Held (1983: 17).
[123] Knuttila (1992: 24).
[124] Mill (1951: 95-6).
[125] Ibid, pp.95-6.
[126] Ibid, pp.88-9, 271-92.
[127] Ibid, pp.344-93.
[128] Despite these restrictions, Mill maintained that "ultimately the franchise would be extended as more and more people became educated and thus competent ... "(Knuttila, 1992: 25).

According to Mill, "[t]he meaning of representative government is, that the whole people or some numerous portion of them, exercise through deputies periodically elected by themselves the ultimate controlling power, which in every constitution must reside somewhere."[129] The problem with these remarks is that they do not specify who constitute "the whole people" or its "portion."[130] Does "the whole people" include women, children, illiterate persons, and/or individuals without property? Second, despite his recognition of economic inequalities and class-based oppression in civil society, Mill did not fully espouse political equality. This point is illustrated by his proposal for a system of plural voting for individuals deemed mentally capable - these individuals also possess more wealth and power. Clearly, Mill did not recognize that all citizens should have equal weight in the political system.

Structural Functionalist Theory

Structural functionalists view the problem of disorder as a central social problem. A sign of disorder and discord is the lack of a shared moral or normative code that would provide a basis for integration and order in society. For functionalists, then, the main purpose of the state is to provide a basis of social solidarity and social integration.[131] The state is understood as having the general approval of the members of society because it reflects their basic values and norms.

Clearly, functionalists hold the view that the state as a sub-system is serving the interests of the entire society. Talcott Parsons, for example, emphasized the "positive"

[129] Mill (1951, quoted in Knuttila, 1992: 25).
[130] Knuttila (1992: 25).
[131] Ibid, p.47.

functions the state performs for the social system as a whole, particularly the attainment of collective goals.[132] He believed that the state and other social institutions (e.g., educational systems, religious institutions) are established in response to general social needs, and are shaped by these needs.[133] That Parsons saw the state as the institution specializing in "collective goal attainment" is significant. It implies that ideally the state is beneficial for all classes and groups in society. It is the function of the state sub-system to meet collective goals of society without favouring a particular group within society.

Structural functionalist theory has been widely criticized. A major criticism is that functionalists see the state acting in the interest of society as a whole, rather than in the interest of particular groups or classes. It is certainly true that the state is sometimes functional for the entire society; however, this is not always the case. Functionalists overlook the extent to which self-interested powerful groups (e.g., corporations) shape state activities. In particular, they ignore or downplay "the class basis of the state and the role of class struggle in the determination of state policy."[134]

Furthermore, by stressing the positive functions of the state, functionalist theorists downplay how state activities can produce *negative* consequences (i.e., "dysfunctions") that undermine the social system. For example, state policy allowing extensive use of pesticides can increase agricultural productivity and advance corporate interests in Canada. However, such a policy can have adverse consequences for the environment, and the health of employees and consumers. Clearly, the same state policy can be functional

[132] Szymanski (1978: 6-7).
[133] Ibid, p.6.
[134] ibid, p.9.

for some parts or goals of the society but negative for others. This contradiction is largely ignored by structural functionalists.

Some assumptions on which structural functionalist theory is predicated must be questioned. Specifically, one cannot assume that social solidarity, stability and order (as opposed to competition, conflict, and violence) are the normal conditions of civil society, that a shared normative value system exists, that a given set of norms and values is not a form of normative or ideological domination, and that the basis of social order is the presence of a moral or normative code.[135]

Elite Theory

Elite theorists maintain that elites are an inevitable feature of human societies.[136] Classical elite theorists attribute the condition to biological factors.[137] Contemporary theorists focus on the role of organizations in the formation of elites in human societies.[138] Regardless, elite theorists have several points of agreement. First, social, economic and political inequalities are an inescapable feature of human society. Second, elites largely determine the structures and characteristics of their societies.[139] Third, the masses are incapable of governing themselves, due to their lack of interest or their inherent incapacity to govern. Fourth, the elite class also manipulates the passive

[135] Knuttila (1992: 146).
[136] Szymanski (1978: 11).
[137] Vilfredo Pareto (1848-1923), for instance, contended that some humans are inherently more capable - physically, morally and intellectually - than others. He characterized the superior performers as the elite and the "average" performers, the majority, as non-elite (Pareto, 1976: 247-9). Pareto divided the elite class into the governing and non-governing elites (p.248).
[138] For example, according to John Porter (1965: 27) and Mills (1959: 4, 9), the basis of elite power is rooted in the hierarchical structure of major institutions (i.e., corporations, the military, branches of the federal government, and the mass media) in modern society.
[139] Knuttila (1992: 62).

masses.[140] Finally, they argue that since the inevitability of elites is a fact of life, democracy or widespread popular participation becomes very difficult, if not impossible, to realize in human societies.[141]

One difficulty with elite theory is its assumption that social, economic, and political inequalities are an inevitable or "natural" aspect of the human condition. The fact that inequalities have existed does not mean they will always exist. Humans can learn from the past and seek to diminish the condition or the processes leading towards elite control. Further, classical elite theorists rely on arguments based on biological factors (i.e., motivating forces or dispositions) to explain the inevitability of inequalities in human society. Such "simple determinist arguments" are debatable on empirical grounds.[142]

A second difficulty with elite theory is that it exaggerates the power of the elite and underestimates the power of the masses. While elite theorists may be correct that a small elite normally occupies the "command posts" of the major institutions of society, they err in arguing that the elite totally controls the masses and the functioning of society. Contrary to the elite perspective, "people continually resist domination, sometimes quite successfully - either on a specific issue when they force the dominant group to retreat, or occasionally altogether in a social revolution."[143] In its failure to recognize that politics is a matter of struggle over state policies, elite theory has difficulty accounting for historical change, especially change involving masses of people.

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[140] Szymanski (1978: 11-2).
[141] Knuttila (1992: 62).
[142] Ibid, pp.146-7.
[143] Szymanski (1978: 15).

Pluralist Theory

Pluralists see conflict as a fact of life. Following functionalists, pluralists assume that the state serves some "national interest."[144] Nevertheless, for pluralists, the state does not solve problems for the society as a whole; rather, it is the location of legitimate conflict and competition among various interest groups.[145] Therefore, the role of the state is to contain social, political, and economic conflicts. Pluralists believe that modern society is composed of a large number of diverse and competing interest groups. The various groups, parties, and associations engage in struggles to shape governmental policies. According to pluralists, "[a]lliances among interest groups are unstable and shifting, forming and fracturing as issues change such that no single alliance is homogeneous for all purposes."[146] Further, power is divided among a number of competing interest groups, none of which is able to maintain domination: "all the active and legitimate groups in the population can make themselves heard at some crucial stage in the process of decision."[147] While a particular group, such as a business association or a labor union, may win on some occasions, it will lose on many others.[148] The result is a political process which generates compromise among the competing groups.[149]

Pluralist theory has been accused of misrepresenting politics as essentially democratic.[150] While there are thousands of interest groups in the North American

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[144] Knuttila (1992: 148).
[145] Ibid, p.78.
[146] Ratner et al. (1987: 89).
[147] Dahl (1965: 137-8).
[148] Szymanski (1978: 4).
[149] Ibid, p.2.
[150] Miliband (1969: 4) contends that the pluralist view of the capitalist state "is in all essentially wrong - that this view, far from providing a guide to reality, constitutes a profound obfuscation of it."

political arena, only a minority of groups have sufficient resources to influence state policy. Pluralists fail to understand that economic inequalities in society prevent many groups from having equal influence on the political process:

> For the central premise of this position - the existence of multiple power centres, diverse and fragmented interests, the marked propensity of one group to offset the power of another, the state as arbitrator between factions - cannot explain a world in which there are systematic imbalances in the distribution of power, influence, and resources.[151]

There is such an asymmetrical distribution of power[152] among interest groups in the political arena that state policies generally reflect interests of corporations and business associations.[153]

Another primary criticism of the pluralists is their failure to recognize the relationship between the state and economic forces. Pluralists assume that the state serves some "national interest" and that it establishes the base of social harmony. Such a view of the state is limited:

> [T]he state is ultimately dependent upon the productive wealth of the economy in order to implement its policies and is thus compelled to reproduce the general viability of the economic relations of capitalism .... the state, and the law, including its coercive institutions, are implicated, directly and indirectly, in securing and bolstering the social foundations of vested capitalist interest while claiming universality and impartiality.[154]

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[151] Held (1989: 61).
[152] "Power is the means of getting things done and, as such, directly implied in human action" (Giddens, 1984: 283).
[153] Clement (1983: 83-106); McMullan (1992: 79-111); and Snider (1993: 89-132).
[154] Ratner, et al. (1987: 90).

Classical Marxist Theory

For Karl Marx, the capitalist "mode of production" society is divided into two basic economic classes, each with antagonistic interests.[155] The class that owns the "means of production" (i.e., labour, factories, and land) is the bourgeoisie, and the class that sells its labour to earn a living is the proletariat or working class. Marx asserted that the wage-earning workers are exploited by the capitalist class that controls capital resources. Society, therefore, consists of classes of people with unequal economic power; this inequality is due to differences in their "relations of production."[156]

Marx maintained that growing contradictions and class conflicts in capitalist society led to the development of the state.[157] The modern state exists to advance the interests of the dominant class, to secure private property and control the working class. Marx and Engels asserted that "the executive of the modern state is but a committee for managing the common affairs of the whole bourgeoisie."[158] Marx predicted that the exploited class would ultimately revolt against the bourgeoisie: "the history of all hitherto existing society is the history of the class struggle."[159] After the revolution, power would be transferred to the working class, private property would be abolished, and the state would "wither away" (Engels' expression). The result will be a classless society.[160]

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[155] Classical Marxists also include Engels (1820-1895) and Lenin (1870-1924). Due to space limitation, this chapter will not discuss the works of these theorists.
[156] Lynch & Groves (1989: 10-11).
[157] Knuttila (1992: 95).
[158] Marx & Engels (1955: 11-2).
[159] Ibid, p.9.
[160] Knuttila (1992: 102-3). Marx's prediction has not occurred. On the contrary, capitalism has proved more dynamic than Marx could ever have believed. Its ability to expand and persevere, even in light of strong opposition, has continually falsified Marx's assertion about the inevitable emergence of socialism or collapse of capitalism. The failure of Eastern European countries to achieve Marxist ideals (socialism) weakens Marx's claim. It is also ironic that capitalism is now flourishing in the world's two largest communist states, China and Vietnam.

Classical Marxist theory has been criticized for reducing political power to economic power: not all issues can be reduced to class-based relations of power and domination. For instance, the classical Marxist approach is of little help in explaining such issues as women's subordinate position in society, the domination/exploitation of racial and ethnic minorities by other groups, and the power of physicians over their patients.[161] Another weakness of the classical Marxist position is that it fails to "offer a clearly articulated theoretical approach to the state. It ties the state to the dominant economic class, but does not systematically analyze the precise modes of domination that help to translate economic power into political power."[162]

Despite these limitations, Marx's work, as a critique of capitalism, continues to attract interest and inspire thinking. Further, classical Marxist theory should be credited for suggesting that law and the state cannot be analyzed apart from their wider economic, political and social context. The theory stresses the importance of the role of class and the importance of understanding the relationship between economic and political institutions.

Neo-Marxist Theories

Neo-Marxist scholars have made a number of systematic efforts to re-evaluate and reformulate Marx's thought. Among all the Neo-Marxist approaches to the state, instrumentalist and structuralist Marxist perspectives "stand as two core approaches in critically understanding the nature of domination and social change in capitalist societies."[163]

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[161] Held (1989: 166) and Young (1990: 50).

[162] Knuttila (1992: 104). This drawback to the theory can be partly attributed to Marx's failure to provide a coherent theoretical analysis of the state (Jessop, 1990: 25).

[163] Burtch (1992: 35). Major branches of Neo-Marxist theory also include the class conflict theory and the capital-logic approach. Class conflict theory comes out of the work of Antonio Gramsci (1971). See Jessop

Instrumental Marxism

Instrumentalists maintain that the state and law serve as a simple tool or instrument of the ruling class: "state officials have very little autonomy in setting policies ... their primary role is to assist the bourgeoisie in accumulating surplus value and consolidating their dominant position over the mass of workers."[164] One of the best examples of the instrumentalist perspective is the work of Ralph Miliband. Miliband maintained that a dominant class owns and controls the means of production in Western societies.[165] The ruling class is closely associated with powerful institutions and is disproportionately represented at all levels of the state.[166] Moreover, there are similarities in social background, interests, and ideological dispositions between the ruling class and the personnel of the state.[167] In Miliband's view, the state is a means of class domination. He insisted, however, that if the state is to act as "a class state", it must have some degree of autonomy in relation to the ruling class.[168] The role of the relatively autonomous state is to ensure the continuation of capitalist relations of production.

The instrumentalist view of the state is confirmed by some empirical studies. Research has shown that there is a variance in the formulation and application of justice between the lower classes and the "powerful" class.[169] For example, laws prohibiting

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(1990: 41-4) and Ratner, et al. (1987: 94-6) for a discussion and a critique of the theory. The capital-logic approach is founded on the work of a group of German scholars (Holloway & Picciotto, 1979). See Jessop (1982), Knuttila (1992: 125-8), and Ratner, et al. (1987: 96-8) for a discussion and a critique of the capital-logic perspective.

[164] Burtch (1992: 35).

[165] Miliband (1969: 23-48).

[166] Ibid, pp.59, 66-7.

[167] Ibid, pp.63-4, 128-9.

[168] Miliband (1977: 74, cited in Knuttila, 1992: 118).

[169] Ratner, et al. (1987: 91).

corporate crime are less likely to be enforced. [170] On the other hand, crimes of the lower classes attract considerable state condemnation.[171] An additional strength of the instrumental perspective is that it emphasizes "the central role of the state apparatus in disguising and managing [class] struggles."[172]

Instrumental Marxism has been criticized as an inflexible and rather extreme position: "instrumental Marxists go too far in equating law with economic interest alone."[173] Critics also argue that the theory is simplistic:

> Explanations ... are almost always put in terms of individuals or interest groups who staff the state justice apparatus .... arguments tend to be reduced to the intentions of groups or agents, and there is little systematic analysis of how the voluntarism of the powerful is itself shaped and limited by impersonal, invisible structural relations.[174]

Instrumentalists also exaggerate the cohesiveness of the ruling class. They overlook the fact that capitalists, like any other social class, have competing interests and not all their interests can be represented by the state.[175]

Another criticism of the instrumental view is its contention that the state is merely a 'superstructure' serving the interests of the dominant class. It is simply not true that the state always secures and promotes the interests of groups with power. History shows that the state has enacted legislation aimed at protecting the interest of the working class. Examples of this are anti-combines legislation, occupational health and safety laws, laws

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[170] McMullan (1992: 101-11); and Snider (1987: 56; 1993: 120-32, 145-67). Some contrary findings exist. See, for example, Croall (1992) and Goldman (1992).
[171] Gordon & Coneybeer (1995: 400) and Ratner, et al. (1987: 91).
[172] Burtch (1994: 43).
[173] Lynch & Groves (1989: 24).
[174] Ratner, et al. (1987: 92).
[175] Clement (1989: 214).

protecting labor unions, and environmental laws.[176] Clearly, the working class is able to influence the state decision-making process and have some of its interests represented by the state. In sum, instrumentalists underestimate the state's autonomy in resolving conflict.[177] Accordingly, they cannot explain state initiatives which do not reflect the interests of the dominant class.

Another shortcoming of the instrumentalist perspective is that it "neglects the ideological role of the state."[178] The state performs the crucial role of "maintaining the legitimacy of the social order." It can fulfill this function only if it appears neutral in the class struggle. "In short, even if the state is an instrument of ruling-class purpose, the fact that it must appear otherwise indicates the need for a more complex framework for analyzing state policies."[179]

Structural Marxism

Structural Marxists reject the instrumentalist view that the state is merely an instrument of the ruling class. Instead, they argue that the capitalist state has "an objective relationship to classes and the productive forces in a society."[180] The state acts to protect and advance the interests of capitalism as a whole. The long-term interests of capitalism may even demand that the state occasionally operates against the short-term goals of factions of the capitalist class.[181] In short, structuralists conceive the state in capitalist

[176] Goff & Reasons (1978); Schrecker (1989); and Snider (1993).
[177] Ratner, et al. (1987: 92).
[178] Block (1987: 53).
[179] Ibid, p.53.
[180] Ratner et al. (1987: 93).
[181] Ibid, p.94.

society as having some degree of independence from the ruling class, but this autonomy is *relative* to the requirements of capitalism as a whole.

Nicos Poulantzas is a major contributor to the structuralist approach. In his view, "the state is a complex social relation."[182] Poulantzas argued that the state acts as the "factor of cohesion" between various levels of a social formation; it must ensure the maintenance of relations of production that make capitalism possible.[183] For Poulantzas:

> the state must function to ensure (1) the 'political organization' of the dominant classes ... ; (2) the 'political disorganization' of the working classes ... which can threaten the hegemony of the dominant classes; and (3) the political 'regrouping' by a complex 'ideological process' of classes from the non-dominant modes of production ... who could act against the state.[184]

To maintain relations of production, according to Poulantzas, the state must be able to take action against the particular interests of capitalists; that is, it must remain "relatively autonomous" from capital or any fraction of the ruling class.[185]

Although structural Marxism is a more useful framework for analyzing the state in capitalist society compared with instrumental Marxism, it does not provide a satisfactory analysis of the state. The perspective fails to answer the fundamental question: why does the state in a capitalist society tend to serve the interests of capitalism?[186] Some structural Marxists, including Poulantzas, have been criticized for their functionalist tendencies.[187]

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[182] Jessop (1990: 30).
[183] Poulantzas (1975: 47, 50).
[184] Held (1989: 69). Also see Poulantzas (1975: 188-9).
[185] Poulantzas (1972: 247). With respect to the precise degree of the relative autonomy of the state, Poulantzas (1976: 71) states that the question can be addressed only through specific empirical inquiry: "the degree, the extent, the forms ... of the relative autonomy of the State can only be examined ... with reference to a given capitalist state, and to the precise conjuncture of the corresponding class struggle."
[186] Knuttila (1992: 120-7).
[187] Held (1989: 70); Hessing (1993: 34); and Ratner, et al. (1987: 94).

In analyzing the capitalist state in essentially functionalist terms - the state functions to maintain the system in the long-run interests of the capitalist class - these theorists "make it difficult to differentiate themselves from more orthodox functionalists."[188] Another inadequacy of structural Marxism is that it lacks empirical evidence, remaining instead at the level of theorizing.[189] Finally, the structuralist approach underestimates the capacity of subordinate classes to influence the state. The theory thus makes "advantages won from the state by struggles 'from below" (e.g., welfare expenditures, legislation prohibiting child labour) difficult to understand.[190]

Conclusion

This chapter has briefly discussed the central theories of the state and pointed out some of their strengths and limitations. In fairness, one must keep in mind that these theories were formulated in specific time frames: the concerns and issues of the time periods were reflected in the theories. For example, Marx's classical political writings are concerned primarily with capitalist society of the nineteenth century. During this period, a clearly defined class structure had emerged. Those who were able to gain capital resources formed the dominant class both economically and politically. The industrial working class, on the other hand, was on the margins of power in society. These developments constituted a major context for Marx's work.[191] Parsons' preoccupation with the problem of order must also be viewed in the context of his times. As Knuttila notes, Parsons' theoretical work emerged out of the Great Depression of the 1930s, an

[188] Knuttila (1992: 149).
[189] Jessop (1982: 181-9).
[190] Ratner, et al. (1987: 94).
[191] Knuttila (1992: 81).

epoch characterized by crisis and instability. Parson was also influenced by the work of Emile Durkheim (1858-1917).[192]

In this thesis, a promising approach to explaining the state's responses to pesticides is one that recognizes the role of both structural (e.g., the economy and social institutions) and non-structural forces, such as human agency (thought, consciousness, and will), in determining pesticide laws and policies. A modified, structural Marxist perspective acknowledges the role of the state in protecting the interests of capitalism as a whole, through its *capital accumulation*, *legitimation*, and *social control* functions.[193] The accumulation role "maintain[s] or create[s] conditions in which profitable accumulation is possible."[194] For example, the state cannot introduce harsh and repressive regulatory measures that threaten the profits of chemical companies, farmers, and other pesticide users. The legitimation role creates "stability and social harmony to allow the accumulation to take place smoothly."[195] The state responds to problems posed by pesticides by regulating the sale, use, and disposal of these chemicals. The social control role involves the use of various components of the state apparatus (e.g., the criminal justice system and the legal system) to maintain order in society, and to "suppress disruptive elements" (e.g., illegal corporate behavior and public protests) perceived as threatening the interests of capitalism as a whole.[196]

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[192] Ibid, p.40. Durkheim was an early advocate of structural functionalism. See Knuttila (1992: 35-40).
[193] Panitch (1977: 8).
[194] O'Connor (1973: 6, cited in Panitch, 1977: 8).
[195] Basran (1992: 7).
[196] Ibid, pp.8-9.

The modified, structural Marxist view recognizes real gains made through class struggle which do not meet the needs of capital.[197] As Giddens points out, members of subordinate classes are not passive.[198] They can think, make choices, have a critical perspective on their situations, and can organize collectively against their oppressors.[199] This implies that the state is not merely a guarantor of the interests of capitalism as a whole, but is also "subject to 'mobilizations from below", as well as from the dominant group.[200] Giddens writes: "The state can in some part be seen as an emancipatory force: neither a class-neutral agency of social reform ... nor a mere functional vehicle of the 'needs' of the capitalist mode of production .... "[201]

In sum, a modified, structural Marxist perspective that recognizes the *contradictory* character of the state and the role of *human agency* in struggling for reforms is a useful framework for understanding the capitalist state's responses to pesticide use. The theory transcends the partial view of structural Marxism. The structuralist approach emphasizes a functionalist argument about the long-term reproduction of capital, but ignores "the concrete social practices through which structural relations are reproduced."[202] In stressing human agency in the development of laws, modified structural Marxism breaks with the deterministic nature of the structuralist approach.

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[197] Ratner, et al. (1987: 94) and Snider (1991: 215).

[198] Giddens (1981b: 15). Clement (1989: 214) states:

> Because class power is relational, subordinate classes are neither "inert political clay" nor a "vanquished 'mass';" rather they may, and often do, challenge and moderate the power of capital.

[199] Young (1990: 28, 69-70).

[200] Ratner, et. al. (1987: 96, 101-2) and Taylor (1987: 202).

[201] Giddens (1981a: 220).

[202] Held (1989: 70).

Chapter Three:
The Evolution of the
British Columbia *Pesticide Control Act*

Introduction

This chapter sets out a theoretically informed account of the evolution of the *Pesticide Control Act*. The "colour" of the interpretive lens is a modified, structural Marxist perspective. The chapter is divided into two sections: (i) an exploration of the origins of the *Pesticide Control Act* in the early 1970s, and (ii) an examination of the changes to the *Act* and its *Regulation* between 1978 and 1991. The chapter concludes by providing a summary of the events between the early 1970s and early 1990s.

Origins of the *Pesticide Control Act* in the Early 1970s

On July 8, 1977, the Social Credit (Socred) government of British Columbia introduced Bill 46 (intituled *Pesticide Control Act*) in the Legislature.[203] Then Minister of Environment (Hon. J. A. Nielsen) stated at the time that "[t]he purpose of [the] bill is to enact a *Pesticide Control Act* which will replace provisions presently contained in the *Pharmacy Act*."[204] The Pesticide Control Bill was a response to the recommendations of a Royal Commission of Inquiry into the Use of Pesticides and Herbicides. The Commission was appointed in May, 1973 by the former New Democratic Party (NDP) government to address a legitimation problem.[205] In the late 1960s and early 1970s, there

[203] *DLA* (1977: 3499). The B.C. *Debates of the Legislative Assembly* are hereinafter cited as *DLA*. The Social Credit party is hereinafter stated as the Socred party.
[204] B.C. *Legislative Assembly. Bill. First Reading* (1977). The *Pharmacy Act*, S.B.C. 1974, c.62, "was amended in 1964 to provide the government with the authority to regulate the sale and the use of pesticides in British Columbia. The rationale for including pesticides in the *Pharmacy Act* at that time was to expedite matters to avoid a potential conflict in legislation" (*DLA*, 1977: 4697).
[205] The New Democratic Party is hereinafter stated as the NDP.

was a concern amongst citizens about the lack of opportunity to participate in the process for determining whether a pesticide should be used.[206] Their frustration and concern had led to protests against decisions to spray - decisions that were often made on the basis of factors such as costs for corporate pesticide users, rather than on factors such as safety of the pesticide application and availability of alternatives to chemicals.[207] In November, 1969, for instance, a group of furious Mayne Islanders protested against B.C. Hydro's plan to spray toxic herbicides along power lines.[208] In May, 1970, the use of herbicide sprays by the B.C. highway department was the subject of continuing complaints by Esquimalt residents.[209] In early August, 1972, Fraser Valley residents protested the Joint Boundary Commission's decision to spray brush-killing herbicides.[210] In response to the public's concern and frustration over the inability to have any input in the decision-making process on pesticide use, the NDP government appointed the Royal Commission to inquire into the provincial pesticide control system.[211] Clearly, the government could not hope to retain legitimacy (notably, popular support) if it failed to respond to the concerns of the public.

Between 1973 and 1975, the Commission held 37 public hearings, received 115 briefs, heard 186 witnesses, and carried out numerous field trips and meetings.[212] During

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[206] *DLA* (1977: 4698-4699) and Kellet (1981: 1-2). Public awareness of pesticide toxicity and increased chemical use led to greater concern about pesticides (Kellet, 1981: 1-2).
[207] Kellet (1981: 2). The B.C. forest service, for instance, used hazardous herbicides "to rid the areas of alder and other brush" because "the chemicals [were] much cheaper" than other alternatives, such as "clear[ing] the alder by hand" (*The Vancouver Sun*, 31 May, 1972: 26).
[208] *The Victoria Daily Times* (27 Nov., 1969: 2).
[209] *The Daily Colonist* (5 May, 1970: 10).
[210] *The Vancouver Sun* (5 Aug., 1972: 7).
[211] Kellet (1981: 1), *The Province* (19 Apr., 1973: 18), and *The Vancouver Sun* (19 Apr., 1973: 86).
[212] B.C. Royal Commission (1975: 1).

its inquiry, the Commission found that arrangements for the control of pesticides lacked public access and credibility. There was frustration amongst citizens over the inability to participate in the process for deciding the use of pesticides.[213] They did not see a way in which they could affect decisions on pesticide use, "except possibly [through] letters to their elected representatives."[214] Furthermore, citizens had little faith that government officials were adequately controlling the handling and use of pesticides.[215] They were of the view that corporate pesticide users "had the ability to manipulate the regulatory agencies and do exactly as they pleased."[216] On the other hand, citizens believed "that their concerns were being ignored" by government agencies, although the Commission did not find any clear evidence to support this belief.[217]

"The Commission felt that the citizen's concern for lack of communication and lack of credibility of government agencies was important. The facts underlying these concerns were not well established but the concerns were."[218] For this reason, the Commission recommended the establishment of a Pesticide Advisory and Appeal Board made up of informed citizens. This Board "should provide a link between technical personnel in government, Crown Corporations and industry and the private citizens."[219] The Commission further recommended that a *Pesticide Control Act* be enacted: "[t]he *Act* and its regulations would control the general commerce in pesticides within Provincial jurisdiction, including the sale, distribution, transportation, storage, handling and disposal

[213] Ibid, p.253.
[214] Ibid.
[215] Ibid.
[216] Ibid, p.254.
[217] Ibid, pp.253-4.
[218] Ibid, 254.
[219] Ibid.

of these materials."[220] It was suggested that the *Act* should: (i) "outline the duties, powers and constitution of the Pesticide Advisory and Appeal Board", (ii) provide for appeal procedures and stop orders,[221] (iii) require pesticide users, handlers or applicators to possess public liability insurance, (iv) "define powers, including the powers of entry and requirements for the inspection, follow-up and enforcement of licences, permits or orders", and (v) lay down restrictions and penalties for contravening the provisions of the *Act*.[222] These recommendations for a *Pesticide Control Act* were intended to enhance the existing, but woefully inadequate provincial pesticide legislation (ss. 66 to 72 of the *Pharmacy Act*).

The Commission's recommendations were released in the Final Report of May 30, 1975;[223] however, the NDP government did not respond to the Commission's report by initiating changes to pesticide legislation in British Columbia. One possible reason for the lack of response was the government's preoccupation with a variety of other legitimation problems[224] and with the possibility of a provincial election, which was eventually held at the end of that year. Following its electoral victory in December 1975, the new Socred government completely ignored the report. Arguably, the failure to act upon the Commission's recommendations was largely a result of the Socred

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[220] Ibid, p.272. "In making its recommendations for [the] *Pesticide Control Act*, the Commission used the Ontario *Pesticide Act* of 1973 as a precedent"(B.C. Commission, 1975: 255).
[221] A stop order is issued to the person responsible for a pesticide that is seen as dangerous to the environment and/or human health. The stop order would require him or her "to stop immediately the use, handling, storage, sale, disposal, application, or transportation of such pesticide either permanently or for a specific period of time" (Ross & Saunders, 1993: 70).
[222] B.C. Commission (1975: 272-3).
[223] The Commission's first and second interim reports (1973, 1974) were incorporated in its final report (1975).
[224] Rachert (1990).

government's attempt to protect the economic interests of major pesticide users, such as the agricultural industry, forestry companies, and some government agencies and Crown corporations (e.g., the Ministry of Forests and Lands, B.C. Hydro, B.C. Department of Highways). The Commission's recommendations, if implemented, would have led to greater regulatory control over pesticide use in the province. Increased government intervention in the use of chemical pesticides was clearly not in the interests of corporate pesticide users, since this could disrupt their production and, thus, profitability.[225]

The Socred government acted to secure the interests of pesticide users because agricultural producers and forestry corporations were strong allies of the party,[226] and because some government agencies used pesticides in their own operations.[227] Nevertheless, the government soon recognized that it had to adopt the Commission's recommendation for a *Pesticide Control Act*, as public interest groups (particularly environmentalists) were becoming increasingly dissatisfied with the existing pesticide law (ss. 66 to 72 of the *Pharmacy Act*).[228] The statute was widely criticized for a number of its shortcomings; for example, it only applied "to the retail sale of pesticides and the application of pesticides on a fee-for-service basis", rather than to all public and private uses of pesticides in the province."[229] To preserve popular support, the Socred

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[225] The extensive use of pesticides in British Columbia had played a significant role in the control of unwanted plant and pest species that affect agricultural productivity, "the usefulness of forests for the production of wood products", and the use of rights-of-way (e.g., electrical transmission lines, railways, highways, pipelines).(B.C. Commission, 1975: chapters IV, VI, VII). Also see *The Vancouver Sun* (11 Oct., 1973: 41).

[226] The Social Credit party was "a political party aligned with capitalist interests" (Rachert, 1990: 124). See also Howlett & Brownsey (1992: 268).

[227] B.C. Royal Commission (1975: 252).

[228] *DLA* (1977: 4698).

[229] Ibid. See also B.C. Royal Commission (1975: 217).

government had to respond to these criticisms by addressing the limitations of existing pesticide legislation.

While the government was under mounting pressure to introduce a new law respecting pesticides, it faced strong pressure from business interest groups (e.g., the B.C. Federation of Agriculture, the Council of Forest Industries of B.C.) not to introduce regulatory measures that could threaten the profits of corporate pesticide users. The agriculture industry, in particular, lobbied the government for little or no regulatory control over its use of pesticides,[230] while the forest industry demanded that the government not impose heavy penalties on those who violated the provisions of the pesticide law.[231] As some authors have pointed out, business pressure groups could exert considerable influence on the Socred government because, like many conservative governments, it was highly dependent on the corporate sector to provide jobs, tax revenues, and campaign funds.[232]

In response to criticisms directed by public interest groups at the existing pesticide law, and pressure exerted by powerful business interest groups for lax regulation of pesticides, the governing Socred party introduced Bill 46 (intituled *Pesticide Control Act*) on July 8, 1977.[233] The Pesticide Control Bill contained a number of new provisions designed to address the limitations of existing pesticide legislation.[234] They included provisions for: (i) the certification of pesticide applicators and

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[230] Private conversation with a former cabinet member who was involved in the enactment of the *Pesticide Control Act* in the mid 1970s. The conversation took place in March, 1996.
[231] Ibid.
[232] McMullan (1992: 107) and Snider (1993: 108).
[233] *The Daily Colonist* (9 Jul., 1977: 26), *The Province* (9 Jul., 1977: 35), and *The Victoria Daily Time* (9 Jul., 1977: 2).
[234] *DLA* (1977: 4698).

dispensers,[235] (ii) the establishment of a Pesticide Control Appeal Board and appeal procedures,[236] (iii) the formation of a Pesticide Control Committee made up of representatives from the major government agencies whose interests were in controlling pesticides,[237] (iv) the classification of pesticides and the designation of a pesticide as "restricted use" pesticide,[238] (v) the development of guidelines for the disposal of pesticides and pesticide containers,[239] and (vi) a bonding requirement.[240]

"After the first reading of the *Pesticide Control Act* in the Legislature, environmentalists and other citizens were dismayed."[241] They were appalled that the Pesticide Bill was vague and incorporated only some of the Commission's recommendations.[242] For instance, the proposed *Act* did not provide any outline for the powers and duties of the Pesticide Control Appeal Board or for its composition, although the Commission had clearly spelled these out in its final report.[243] Similarly, the appeal procedures and the criteria for evaluating permit applications were inadequately defined in the *Act.*[244] Such deficiencies led to fears that the *Act* could not effectively control the use of pesticides in the province.[245]

Fearing that citizens would form an organized opposition to the Pesticide Control Bill, the Minister of Environment quickly tried "to push it through the house .... "[246] In

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[235] *Pesticide Control Act*, S.B.C. 1977, c.59, s.3.
[236] Ibid, ss.11 & 12.
[237] Ibid, s.14.
[238] Ibid, s.20(b).
[239] Ibid, s.20(d).
[240] Ibid, s20(g).
[241] Lee (1978: 15).
[242] Ibid.
[243] *DLA* (1977: 4719) and Lee (1978: 17-8).
[244] Lee (1978: 16-7, 19).
[245] Ibid, p.15. Also see *The Daily Colonist* (13 Jul., 1977: 26).
[246] *The Vancouver Sun* (18 Aug., 1977: 10). Also see *DLA* (1977: 4700).

the Legislature, the Bill was strongly resisted by the NDP Opposition on the ground that it would not be effective in ensuring public and environmental safety from pesticides.[247] The Opposition argued that the provisions of the proposed *Act* were weighted in favour of those who used chemicals, against those who were concerned about the safety of pesticide use.[248] The NDP environment critic, Robert Skelly, charged:

> [Bill 46 was] designed not to control pesticides in the province of British Columbia, but to make it easier for government departments and friends of the government to apply pesticides while thwarting public opinion and thwarting any public access to an appeal procedure against the use of pesticides.[249]

In defence of the Bill, the Minister of Environment (Hon. J. A. Nielsen) "accused the opposition of deliberately distorting the bill's wording and intentions."[250] He maintained:

> [T]he intent of the bill is to ensure that pesticides are used in a proper and knowledgeable manner that is compatible with public health and environmental concerns. One of the most important aspects of the bill is to minimize the imposition of unreasonable, adverse effects from pesticides on the environment.[251]

In short, the Socreds were determined to enact the Pesticide Control Bill, despite the NDP's strong opposition and Bill 46, with minor amendments, was passed by the Legislative Assembly on August 30, 1977.[252] The *Pesticide Control Act* came into force by proclamation in March, 1978.[253] The *Act*[254] gave the cabinet power to make

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[247] *DLA* (1977: 4699-4722) and *The Vancouver Sun* (18 Aug., 1977: 10).
[248] *DLA* (1977: 4705, 4707), *The Vancouver Sun* (18 Aug., 1977: 10), and *The Victoria Daily Times* (18 Aug., 1977: 11).
[249] *DLA* (1977: 4700).
[250] *The Vancouver Sun* (18 Aug., 1977: 10).
[251] *DLA* (1977: 4698). Also see *The Victoria Daily Times* (18 Aug., 1977: 11).
[252] *DLA* (1977: 5123). The *Pesticide Control Act*, S.B.C. 1977, c.59, repealed the pesticide provisions in the *Pharmacy Act*.
[253] *Report* (1978: 35). The B.C. Ministry of Environment *Annual Reports* are hereinafter cited as *Reports*.
[254] *Pesticide Control Act*, S.B.C. 1977, c.59, s.20.

regulation, which was done by Order in Council on April 13, 1978. The *Regulation*[255] was published on April 25, 1978.[256]

The new *Pesticide Control Act* was readily accepted by major pesticide users in British Columbia because it did not threaten capitalist interests. Indeed, the *Act* was largely symbolic. Its objective was to regulate and legalize, rather than minimize, the use of pesticides:

> One of the things ... that the minister [of Environment] and the government lack is a real serious intent to minimize the use of chemical pesticides in the province. When they passed the *Pesticide Control Act* in the first place, it was simply to create a management system so that they would know what pesticides are being used; they would know that for certain categories of pesticides, licences of a certain nature would be issued to make sure that people who were applying those pesticides did have some background in the use of them.[257]

An analysis of the *Pesticide Control Act*[258] suggests that it provided little genuine protection for the public and the environment against pesticides. On the contrary, the legislation served the interests of pesticide users. For instance, the *Act*'s criteria to evaluate permit applications were weighted in favour of users of pesticides. Section 6(a) of the *Act* stated that pesticide use permits could only be issued if the Administrator was "satisfied that the application of pesticides [would] not cause an unreasonable adverse effect" to people or the environment[259] - a "reasonable" adverse effect was presumably

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[255] *Pesticide Control Act Regulation*, B.C. Reg. 172/78. See Appendix III.
[256] On August 31, 1981, "a new version of the *Regulation* was published. This version involve[d] major reorganization as well as a reduction in length and clarification of the existing *Regulation* without any loss in content" (*Report*, 1981/82: 53). See *Pesticide Control Act Regulation*, B.C. Reg. 319/81.
[257] *DLA* (1979: 653).
[258] *Pesticide Control Act*, R.S.B.C. 1979, c.322. In 1979, the *Pesticide Control Act*, S.B.C. 1977, c.59, was revised to reorganize its sections.
[259] Adverse effect was defined as "an effect that results in damage to man or the environment." See the *Pesticide Control Act*, R.S.B.C. 1979, c.322, s.1.

acceptable. Section 12(2)(a) empowered the Administrator "to determine in a particular instance what constitute[d] an unreasonable adverse effect." Clearly, the evaluation criteria were inadequate. They did not require applicants to demonstrate the need for the proposed pesticide use nor to consider non-chemical methods of pest control (e.g., the use of predatory and parasitic insects to control pests) before a permit could be granted. In addition, applicants were not required to indicate what measures they would use to ensure that the intended pesticide application would not have an adverse effect on humans and/or the environment. Such limited evaluation criteria posed little difficulty to individuals and corporations that wished to obtain pesticide use permits.

Under the *Pesticide Control Act*, there was no requirement for public notification of permit applications.[260] This meant that members of the public would have no opportunity to know that a pesticide use permit was being considered and, hence, no input into the process of deciding whether the permit should be granted. The exclusion of the public from the process of assessing permit applications could only increase the influence of applicants in the process, thereby enhancing their likelihood of obtaining a favourable decision.

Whenever the Administrator made a decision to grant a pesticide use permit to an applicant, the *Pesticide Control Act* placed an obstacle in the path of those who wished to oppose the Administrator's decision. Section 15(5) of the *Act* specified: "An appeal does not act as a stay unless the board directs otherwise." This section meant that members of the public would not be able to stop a possibly dangerous pesticide application

[260] *DLA* (1979: 650).

(authorized by a permit) by launching an appeal, unless the Pesticide Control Appeal Board first decided in their favour. As a result, a pesticide application program which was the subject of appeal could occur before the appeal was heard by the Board.[261]

Pesticide use by farmers on their own land was not regulated by the *Pesticide Control Act*, even though growers used the majority of chemical pesticides in the province.[262] Section 45 of the *Regulation*[263] exempted farmers from the permit, licence, and certificate requirements of the *Act* - requirements that pesticide users on public lands had to meet. The exemptions surely benefitted agricultural producers because their use of pesticides would not be restricted.

Penalties imposed for violating the provisions of the *Pesticide Control Act* were extremely modest. They consisted of a maximum fine of $2000 or imprisonment for six months, or both.[264] The financial penalties certainly would not be a deterrent to major users of pesticides, such as the forest industry, railways, and utility companies. As numerous writers have pointed out, fines are not effective in controlling corporate criminality because "corporate fines rarely even equal the amount of profit made from illegal behaviours" and imprisonment was highly unlikely.[265]

In sum, the *Act* served, rather than threatened, the interests of those who used pesticides. This was intentional. The law was the product of an attempt by the Socred

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[261] *DLA* (1977: 4700).
[262] Kellet (1981: 6).
[263] *Pesticide Control Act Regulation*, B.C. Reg. 172/78. Public land was defined in section 1 as land owned by the provincial Crown, municipality or regional district, as well as land controlled by public schools, universities, hospitals and corporations.
[264] *Pesticide Control Act*, R.S.B.C. 1979, c.322, s.22.
[265] McMullan (1992: 100). Also see Carson (1982), Ermann & Lundman (1978), Johnson (1986), Levi (1984), and Snider (1993).

government to balance the need to preserve its legitimacy in the face of public criticism of widespread pesticide use, with the demand of business interest groups for minimal legislative interference with short-term profitability. The passage of the largely symbolic *Act* had clearly fulfilled corporate demands. However, it did not have the intended effect of legitimizing the Socred government by convincing members of the public that the government was acting in their interests. Environmental groups in the province, such as the West Coast Environmental Law Association (WCELA) and the Society for Pollution and Environmental Control (SPEC), pointed out that the *Pesticide Control Act* contained serious shortcomings which would undermine its effectiveness in controlling pesticide use.[266] The statute was also criticized for incorporating only part of the Commission's recommendations.[267] In a joint brief released on August 17, 1977, WCELA and SPEC:

> ... said the *Act* was specifically designed to allow a government appointed administrator to authorize the use of dangerous pesticides .... the *Act* should be designed to prohibit harmful pesticide uses, and instead could be used to provide legal support for such cases.[268]

Other interest groups, such as the B.C. branch of the Canadian Bar Association, stated that the legislation was vaguely worded and "unworkable."[269] They criticized the government for failing to adequately consider valuable precedents, such as the Ontario *Pesticide Act*, in the drafting of the *Act*.[270] In short, the government's legitimation

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[266] Lee (1978: 16-20) and *The Province* (18 Aug., 1977: 9).
[267] Lee (1978: 17-20).
[268] *The Province* (18 Aug., 1977: 9).
[269] *The Vancouver Sun* (22 Feb., 1978: B16).
[270] Ibid. The Ontario *Pesticide Act* (S.O. 1973, c.25) covered some subjects not contained in the B.C. *Pesticide Control Act*, such as a provision for stop orders, procedures for appeals, and a definition of "adverse effect" that includes the term "is likely to result in damage."

exercise was not completely successful because the measure used to preserve legitimacy was clearly weighted in favour of pesticide users.

Changes to the *Pesticide Control Act* and its *Regulation* Between 1978 and 1991

The *Pesticide Control Act* was administered by the Pesticide Control Branch of the Ministry of Environment.[271] In addition to administering the legislation, the Branch carried out other major activities: (i) receiving applications and issuing permits for various types of pesticide use,[272] (ii) training, examining, and certifying pesticide applicators and dispensers, (iii) "[e]stablishing standards for and issuing licences to pesticide vendors and pest control services", (iv) inspecting premises of pesticide services and pesticide vendors to ensure compliance with the *Act*, (v) investigating complaints of pesticide accidents and misuse, (vi) providing the public with free advice on the proper handling and use of pesticides, and (vii) "[c]onducting monitoring surveys into pesticide sale and use."[273] A Pesticide Control Committee - composed of the Administrator of the *Act* (chairman), provincial representatives of Agriculture and Food, Health, Forests, and Environment, as well as a federal representative of Environment Canada - was established under the *Act* to assist the Branch in evaluating pesticide use permit applications.[274] Critics argue that public representatives were not appointed to the Committee because the Socred government wanted to protect the economic interests of its capitalist supporters. Public representatives, particularly those who were philosophically opposed to chemical use, could make it difficult for pesticide users to obtain permits.

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[271] "The Pesticide Control Branch, formerly under the Ministry of Agriculture ... was transferred by Order in Council to the Ministry of Environment" (*Report*, 1977: 37).
[272] Namely, pesticide use permits, restricted use permits, and special use permits.
[273] *Report* (1981/82: 53).
[274] Ibid.

The absence of public representatives, coupled with the lack of opportunity to participate effectively in the process of evaluating permit applications,[275] gave the appearance that health and safety concerns, and environmental needs, were not safeguarded when pesticide use decisions were being made.[276] Consequently, there were many appeals to the Pesticide Control Appeal Board (PCAB) based on concerns that decisions about pesticide use had been either wrong or deficient.[277] Most of these appeals were not upheld by the Board. During 1978, for instance, the Board held 14 public hearings for 20 appeals against 36 pesticide use permits.[278] Six appeals were allowed in whole or in part by amending the permits.[279] Seven permits under appeal were cancelled and one permit was withdrawn by the permit holder. During 1979, the Board held 11 public hearings to consider 33 appeals against 19 permits.[280] Twelve appeals were dismissed. Only one permit was allowed, and six permits were allowed in part by adding safety conditions to the permits. Four appeals were withdrawn after the permit holders agreed to exempt certain areas from spraying. Two appeals were cancelled when the permit holders withdrew the permits under appeal, another four were cancelled when the permits were rendered void, and one was cancelled after the appellant abandoned his appeal. Between January, 1980 and March, 1981, 62 permits and two suspension orders

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[275] The *Pesticide Control Act*, R.S.B.C. 1979, c.322, s.22, was silent on the public's right to be notified of permit applications.

[276] *The Daily Colonist* (26 Jan., 1979: 5).

[277] *Report* (1978: 61); (1979: 65); (1980/81: 76). Also see *The Vancouver Sun* (13 Aug., 1979: A8). On April 13, 1978, a Pesticide Control Appeal Board was set up "to hear appeals against any order, decision or action of the Administrator of the Pesticide Control Branch, or of any staff members of that Branch" (*Report*, 1978: 61). The focus of pesticide use permit appeals was whether or not the Administrator erred in making a decision to grant or refuse a permit.

[278] *Report* (1978: 61). In a number of cases, several appeals were filed against one permit.

[279] It is unclear, from the Ministry report, how many appeals were allowed in whole and how many were allowed in part by amending the permits.

[280] *Report* (1979: 65). "[O]ne permit was the subject of 12 appeals" (*Report*, 1979: 65).

were the subject of 20 public hearings involving 72 appellants.[281] Only two permits were cancelled. The rest of the permits were upheld, although many of them were amended in favor of the appellants.

In short, citizens had little success with their appeals against the Administrator's decisions to grant pesticide use permits. The low success rate can be attributed, in part, to the membership of the Board. Members of the Board were mostly "people with scientific background[s] and generally predisposed in favour of the use of modern chemicals."[282] It could be argued that persons interested in environmental matters were not given representation on the Board because the government wished to protect capitalist interests. If individuals concerned with environmental protection were appointed as Board members, they could sympathize with citizens appealing the granting of permits and, therefore, rule in favour of them (against permit holders).

Another factor that contributed to the low success rate of appeal was the narrow approach adopted by the Board to its jurisdiction.[283] In evaluating a proposed pesticide use, the Board would not consider such factors as the appropriateness of alternative methods of pest control; the relative danger posed by the pest vis-à-vis the risk involved in its control; the long-term effects of the chemical use; or the wishes of citizens who could be affected by the pesticide application (authorized by the permit under appeal).[284]

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[281] *Report* (1980/81: 76).
[282] Kellet (1981: 20).
[283] The *Pesticide Control Act* and its *Regulation* provided the Board little guidance to determine whether applying a pesticide in the manner authorized by the permit under appeal will cause an "unreasonable adverse effect." *DLA* (1978: 1831-2). The phrase "unreasonable adverse effect" in section 6 of the *Pesticide Control Act*, R.S.B.C. 1979, c.322 coupled with the definition of "adverse effect" in section one, were the only criteria for the Board's decisions.
[284] Kellet (1981: 18).

In addition, the Board was of the view that federally registered pesticides were generally safe to use[285] and that pesticides were safe if permit holders agreed to comply with the directions for use on the containers.[286] The Board also held that:

> ... the [pesticide] application in question had already been reviewed by the Pesticide Control Committee and the administrator. This previous decision should not be upset unless the appellant [was] able to produce very clear evidence to show that there [was] danger of immediate harm.[287]

Undoubtedly, the Board's approach to its jurisdiction was stacked against citizens who were appealing the issuance of permits. Arguably, a narrow approach was adopted by the Socred government to protect the economic interests of those who used pesticides. A broader approach to the Board's jurisdiction would not serve the interests of corporate pesticide users since it could increase the likelihood of the Board finding that a pesticide use would cause an "unreasonable adverse effect."

Although appellants were not successful in cancelling pesticide use permits, they enjoyed some success in affecting the terms of permits. Further, in some cases, the appellants were able to prevent the permit holders from proceeding with pesticide application in certain areas.[288] In other cases, the permit holders withdrew their pesticide

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[285] Ibid, p.17. This assumption is erroneous. There is evidence to suggest that many toxicological tests submitted in support of registration applications under the *Pest Control Products Act* were invalid (Castrilli & Vigod, 1987: 49-52). Canadian regulatory testing checks have also been found to be unreliable. For example, Agriculture Canada officials have allowed certain pest control products to enter the market despite the lack of adequate health and safety data (Castrilli & Vigod, 1987: 13-4, 49-52).

[286] Kellet (1981: 17). This view is problematic because even if the pesticide applicant has followed the directions properly, some harm may still result.

[287] Ibid, p.18.

[288] Some permit holders agreed to exempt certain areas from spraying "as a means of showing good will to those members of community who were opposed to the spraying of the site" (Rankin & Munro, 1989: 14).

application programs. These findings clearly demonstrate that some citizens had the potential to make real gains in their struggles against pesticide use in British Columbia.

Despite their enhanced ability to influence decisions on the use of pesticides on public land, environmental groups and citizens were not satisfied with the performance of the PCAB.[289] There were many complaints to the Ombudsman's office about the Board and its procedures. One of the major complaints was the Board's failure to disclose the criteria by which it decided whether a pesticide use would not cause an unreasonable adverse effect. As a result of this failure, appellants had no guidance with regard to "what information the board [would] find persuasive."[290] A second area of dissatisfaction concerned the failure of the Board to provide written reasons for its decisions.[291] The lack of reasons led those who failed in their appeals to suspect "that their views had not been given any serious consideration .... "[292] For appellants who won, on the other hand, the failure of the Board to give reasons for its decisions left them in the dark as to what they did right to gain favourable judgments.[293] Another major complaint concerned the Board's composition. The Board, composed almost entirely of persons with scientific backgrounds, was "perceived as being 'pro-pesticides' to the point that no matter what the appellants [said], the board [would] decide in favour of the use of pesticides."[294]

Essentially, criticisms directed at the PCAB were the same criticisms which the Commission had heard relating to government agencies in the early 1970s; namely, lack

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[289] Kellet (1981: 9, 11).
[290] Ibid, p.11.
[291] The Board usually stated: "The board is satisfied that the application of the herbicide will not cause an unreasonable adverse effect resulting from the exercise of the following permits ... " (Kellet, 1981: 11).
[292] Ibid, p.19.
[293] Ibid, p.24.
[294] Ibid, p.12.

of communication and lack of credibility. These criticisms concerning the Board undermined the government's legitimacy. However, the governing Socreds did not attempt to address the criticisms because they were in the process of incorporating the PCAB into the newly created Environmental Appeal Board.[295] "The [Environmental Appeal] Board was to bring together the separate processes under the *Waste Management Act*, the *Water Management Act*, ... the *Pesticide Control Act*", and the *Wildlife Act*.[296] On January 1, 1982, all appeals of pesticide use decisions came under the jurisdiction of the Board. The abolishment of the PCAB alleviated the government's legitimation problem.

Nonetheless, the Socred government soon faced another problem of legitimation because the lack of regulations for pesticide use on agricultural land was perceived as not in the interests of British Columbians.[297] The government's explanation for the absence of regulations for pesticide use on private land was a lack of enforcement resources:

> It would be virtually impossible to police .... It would mean that we would have to have somebody monitoring every farm, every vegetable garden and everything else .... We don't have the staff nor would I envision a chance of ever getting the kind of staff we'd need to enforce the use of pesticides on a province-wide basis.[298]

The lack of regulations for pesticide use on farms became a cause of concern for the Socred government following the insecticide poisoning of a twenty year old

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[295] *Report* (1981/82: 53). The Environmental Appeal Board was established by the Lieutenant Governor in Council pursuant to section 11 of the *Environment Management Act*, S.B.C. 1981, c.14.

[296] Rankin & Munro (1989: i). According to a press release issued by the Ministry of Environment, "the Board was to 'provide a common base for environmental appeal' and, inferentially, a more uniform approach to environmental issues in British Columbia" (Rankin & Munro, 1989: i).

[297] Farmers were exempted from permit and certification requirements of the *Pesticide Control Act* when applying pesticides on their own lands. The *Pesticide Control Act Regulation*, B.C. Reg. 319/81, s.10(2) requires a pesticide use permit only when public lands, public bodies of water, and private land for forestry, public utility and transportation, are involved.

[298] *DLA* (1980: 3623-4). Stated by the Hon. Mr. Rogers, then Minster of the Environment.

farmworker (Jarnail Singh Deol) in Surrey. In October, 1982, Deol was poisoned by a "restricted" labeled pesticide after he drank out of a contaminated container that was improperly discarded.[299] A coroner's inquest into his death in March, 1983 ended in a jury finding that the "death was a 'preventable homicide' and that it was ignorance and lack of government regulation that were to blame."[300] Testimony at the inquest revealed that at the farm where Deol was poisoned, "pesticides were sprayed while workers harvested nearby, poison containers were disposed of haphazardly, there was little protective clothing or washing facilities and workers were transported in vans that carried pesticides."[301] These findings were confirmed by a 1982 federally funded study investigating the health effects of pesticides on farmworkers in British Columbia.[302] In its ruling, the Coroner's jury recommended that both levels of the government take drastic measures to improve the working conditions of farmworkers and the way chemicals were handled on agricultural land.[303] Further, the jury called for farm labourers to be covered under the Workers Compensation Board (WCB) health and safety regulations.[304]

The jury's decision was strongly supported by the Canadian Farmworkers Union because it strengthened the Union's calls for greater protection against pesticides.[305] In

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[299] Interview with a member of the Canadian Farm workers Union, Surrey, B.C. (March, 1995) (Crim. 862 project).

[300] Shields (1988: 89). As the *Globe & Mail* (21 Mar., 1983: 8) indicated, only about 2.3 percent of the farmers in British Columbia received proper training from the Ministry of Environment in 1983.

[301] *The Globe & Mail* (21 Mar., 1983: 8).

[302] Matsqui-Abbotsford Community Services (1982). The findings of this study have been discussed in Chapter 1 of the thesis.

[303] *The Vancouver Sun* (20 Sept., 1983: A4).

[304] *The Globe & Mail* (21 Mar., 1983: 8).

[305] Interview with a member of the Canadian Farmworkers Union, Surrey, B.C. (March, 1995). The Canadian Farmworkers Union is composed of ethnic minorities who represent the interests of seasonal farmworkers in the Fraser Valley (Canadian Farmworkers Union, 1988: 4). Since its formation on April 6, 1980, the Union has concerned itself with the issue of health and safety risks on farms in general and the issue of farmworker exposure to pesticides in particular (p.1). It has been active in fighting for better

contrast, "the provincial government greeted the jury's decision with what amounted to contempt."[306] The government was of the view that the inquest was improperly conducted by the Coroner and that the jury's recommendations were weighted heavily in favour of farm labourers.[307] The government did not respond to the jury's recommendations by introducing measures to improve the working conditions of farmworkers and the way pesticides were handled on farms.[308] The lack of government response was attributed, in part, to the lack of public reaction to the jury's ruling in 1983.[309]

The government's decision not to take measures to protect agricultural workers upset the Canadian Farmworkers Union.[310] Union agitation, however, did not have much impact on the Socred government. Arguably, the lack of influence of the Canadian Farmworkers Union on the government was due largely to the status and demographic characteristics of farm labourers in British Columbia. The agricultural labour force in the province was composed primarily of new immigrants. Approximately 80 percent were East Indians and over 15 percent were Chinese, Vietnamese, and Laotian. Women made up about 75 percent of the workforce.[311] Racial and ethnic minorities were forced to take up farm work mainly because of lack of alternative job opportunities.[312] These farmworkers, especially female workers, generally lacked skills and education, and spoke

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pesticide regulations, and informing farmworkers and the wider public about the health hazards of pesticides (Binning, 1986: 138).

[306] *The Vancouver Sun* (20 Sept., 1983: A4).

[307] Private conversation with a former senior member of the Pesticide Control Branch in April, 1996.

[308] Ibid.

[309] Ibid.

[310] Private Conversation with a representative of the Canadian Farmworkers Union in April, 1996.

[311] Binning (1986). Also see Canadian Farmworkers Union (1988: 4).

[312] Basran et al. (1995: 23, 37) and Bolaria & Bolaria (1994b: 150-2).

little or no English.[313] Usually in desperate need of work, the racial minority workers found it very difficult to protest against dangerous working conditions, even when they suspected that their health was being adversely affected. Illegal (undocumented) agricultural workers were in a weaker position than new immigrant and migrant farmworkers because of their illegitimate status and the threat of deportation.[314] In short, the legal-political status of farm labourers, coupled with their economic and social conditions, rendered them a weak, subordinate segment of the labour force.[315]

In March, 1982, the Socred government had agreed to extend the WCB regulations to all farmworkers in British Columbia.[316] This meant that for the first time, farmworkers would be protected through safety measures such as inspections of farms, enforcement of safety standards, including pesticide control, and protective clothing and equipment. However, the plan to extend the regulations to farm labourers was powerfully resisted by the B.C. Federation of Agriculture (BCFA) "on the grounds that it would be costly, unrealistic, and impractical."[317] During the jury inquest into Deol's death, "the Cabinet announced it had acceded to the wishes of the B.C. Federation of Agriculture": it decided to give the responsibility for farmworkers' health and safety to a voluntary program run by the Federation.[318] "The emphasis in this farmer-based program was not

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[313] Basran et al. (1995: 30), Binning (1986: 72) and Canadian Farmworkers Union (1988: 4).
[314] Bolaria & Bolaria (1994b: 150-1).
[315] *A Report of the B.C. Human Rights Commission on the Farmworkers and Domestic Workers* (1983) revealed that farm labourers experienced social injustice (pp.11-22). The unfair treatment of farmworkers, according to the Commissioners, was a form of racism (p.11). "Rather than responding to this report with progressive proposals for change, the Social Credit Government at the time responded by simply abolishing the Human Rights Commission" (Basran et al., 1995: 30).
[316] Binning (1986: 137).
[317] Bolaria (1992: 242).
[318] *The Globe & Mail* (21 Mar., 1983: 8). Also see Shields (1988: 88). Nevertheless, farmworkers were given partial protection under the Workers Compensation Board legislation. As of April 4, 1983, they would be eligible for the Workers Compensation Board insurance benefits like workers in other sectors

intended to be upon regulation at all, but upon promotion of safety education among farmworkers and farmers."[319] The Cabinet's decision to reverse its plan to cover farmworkers under the WCB regulations clearly suggests that the Socred government was acting in accordance with the needs of agricultural producers rather than the needs of agricultural workers.[320]

During the mid 1980s, the absence of regulations for pesticide use on farms became a major concern of citizens in the province. This concern was taken more seriously than farmworker safety by the government. The pressure to produce high quality crops in great quantities had resulted in a heavy use of pesticides among B.C. growers. Inadequate pesticide application training among farmers (most of whom were pesticide applicators[321]) and farmworkers further contributed to the improper use of chemicals at the farm level. Pesticide abuse on agricultural land, in turn, led to numerous incidents of pesticide poisoning among members of the public, only some of which were reported to government officials.

In early June 1985, between 150 to 200 people in the Lower Mainland and on Vancouver Island became ill after they consumed aldicarb contaminated (greenhouse) cucumbers.[322] Pesticide Control Program staff undertook an investigation of the incident and discovered that the contamination occurred as a result of the failure to use pesticide

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(*The Globe & Mail*, 21 Mar., 1983: 8). In 1984, the Workers Compensation Board developed *Health and Safety Guidelines for the Agriculture Industry* to regulate health and safety conditions on farms. However, these guidelines were "not legally binding" and seemed to be largely ineffective in protecting farmworkers (Canadian Farmworkers Union, 1988: 2, 4).

[319] Shields (1988: 88).

[320] See Shields (1988: 100-1).

[321] Canadian Farmworkers Union (1990: 1, 21) and Denis (1988).

[322] *Report* (1985/86: 42) and *The Vancouver Sun* (3 Aug., 1985: F16).

aldicarb according to label directions.[323] The Socred government responded to the results of the investigation by strengthening the enforcement of the *Pesticide Control Act* and its *Regulation.* "[M]any greenhouse growers were inspected to ensure they were using pesticides according to label directions. In addition, many vendors were checked to ensure they were selling restricted pesticides only to certified applicators."[324] These actions appeared to be an attempt to preserve the government's legitimacy, rather than a concern with clear evidence of adverse pesticide effects on health.

In early July 1985, approximately 150 consumers in the Lower Mainland suffered symptoms of aldicarb poisoning after eating watermelons contaminated by the chemical.[325] This incident brought the Socred government's record into question again. The government addressed the legitimation problem by ordering store owners to immediately remove their watermelons from the store shelves and announcing that steps would be taken to ensure that growers in the province "receive adequate training in the use of toxic chemicals."[326] The President of the Canadian Farmworkers Union, Raj Chouhan, reacted to the government's response by stating:

> The quick response to the watermelon contamination pinpoints a double standard in real or suspected pesticide poisonings: one set of rules for consumers and another for the thousands of farmworkers who toil daily in direct contact with hazardous chemicals. When people get ill eating watermelons, there's an (immediate) order to destroy them .... But when farmworkers work in fields day in and day out and get sick, they [government officials] say they just have the common flu and to keep on working.[327]

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[323] *DLA* (1986: 8719).
[324] *Report* (1985/86: 42).
[325] *The Vancouver Sun* (11 Jul., 1985: C20). The Canadian Farmworkers Union suspected that pesticide aldicarb could also be responsible for many of the pesticide poisonings among farmworkers.
[326] Ibid.
[327] Cited in *The Vancouver Sun* (11 Jul., 1985: C20).

Such incidents of pesticide poisoning led to many criticisms of the government's failure to address the issue of unregulated pesticide use on privately owned land.[328] In response to the criticisms, the Socred government began to develop plans to regulate the use of pesticides on farms.

The government also carried out inspections at the farm level in 1986:

> ... special emphasis was placed on inspections of pesticide storage and handling practices by the structural pest control industry and commercial mushroom growers on the Lower Mainland. Emphasis was placed on inspection of pesticide storage by commercial farmers on Vancouver Island.[329]

The enforcement of the *Pesticide Control Act* was further strengthened in July, 1987 when the government extended the "limitation period" within which it could prosecute offenders from 6 months to one year.[330] It is unclear what events and conditions led to the legislative change.[331] Nevertheless, an informal interview with some government officials reveals that the amendment was a response to difficulties faced by Pesticide Control Program staff in enforcing the *Pesticide Control Act* within the six month limit set by the *Offence Act*.[332] The extension of the "limitation period" from six months to one year appeared to have a positive impact on the enforceability of the pesticide legislation.[333]

Despite the government's attempt to maintain popular support by appearing responsive, its legitimacy with respect to pesticide issues continued to decrease during the

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[328] *DLA* (1985: 6684; 1987: 2067), *The Globe & Mail* (21 Mar., 1983: 8), and *The Vancouver Sun* (28 Sept., 1983: B8; 20 Sept., 1983: A4; 11 Jul., 1985: C20).
[329] *Report* (1986/87: 54).
[330] See R.S.B.C. 1987, c.43, s.68. There was no debate in the House on this section.
[331] I was not able to find any material pertaining to this amendment.
[332] Private conversation with two regional enforcement managers in February, 1996. See *Offence Act*, R.S.B.C. 1979, c.305. s.3(3).
[333] Private conversation with two regional enforcement managers in February, 1996.

mid 1980s. The problems arose mainly because the public was excluded from the process for deciding pesticide use. Citizens' frustration and concern about the lack of opportunity to participate in the decision-making process on pesticide use led to many complaints to the Ombudsman.[334] There were also complaints to the Ombudsman about the hearings and decisions of the Environmental Appeal Board:

> The recurring theme [was] lack of opportunity for meaningful participation .... Some appellants who [had] participated in hearings because of sincere concerns about the safety of pesticide use [had] found their submissions discounted as being outside the jurisdiction of the Board .... The Board [was] perceived as having prejudged the issues, the permit holder [was] believed to have benefited by an illegitimate process and consequently appellants [had] little faith that government authorities [were] adequately discharging their function to prevent unreasonable harm from occurring to the environment and to human health.[335]

As a result of complaints received concerning the Board and the Pesticide Control Program, the Ombudsman (Stephen Owen) undertook a study of British Columbia pesticide regulation in early 1987.[336]

During his inquiry, the Ombudsman found that the decision-making process of the Pesticide Control Program was burdened with serious deficiencies. One deficiency was the lack of standard criteria by which the Pesticide Control Committee decides whether a

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[334] B.C. Ombudsman (1988: overview). The complainants "include[d] members of public interest groups, unions, medial associations, Indian bands, ratepayer associations, municipal and regional district elected officials - in all representing thousands of British Columbians who [were] concerned about the adverse effects of pesticide use" (B.C. Ombudsman, 1988: 18).

[335] Ibid, pp.41-2. An examination of the *Annual Reports* (1982-1987) suggests that the number of appeals upheld by the Board between 1982 and 1987 was small. Also see Rankin and Munro (1989: 10).

[336] B.C. Ombudsman (1988: 4) and Rankin & Munro (1989: 23). The study involved government officials from the Department of Health, Environment and Parks, agriculture and Fisheries, and Forest and Lands, as well as officials from the Environmental Appeal Board. Consultation with these people was carried out to ensure that the study's "recommendations are realistic and supported by the public officials responsible for their implementation and administration" (B.C. Ombudsman, 1988: overview).

pesticide use will not constitute an "unreasonable adverse effect." As the Ombudsman's report notes:

> Some Committee members ask the applicant if alternative methods of pest control other than pesticides have been considered, some do not. Some Committee members have asked for more time to comment on particular applications and permits have been issued without the comments of those members. There have been cases where at least one representative was strongly opposed to an application being granted, but the permit was issued.[337]

The Ombudsman found that "[t]he Committee members lack[ed] the time, the travel budgets or the staff to make site visits, with the result that some applications [were] being evaluated without adequate site information."[338] Another drawback of the Pesticide Control Program was that there was no requirement to notify the public of any permit application.[339] Likewise, the Ombudsman observed, there was no provision for public access to the comments of the Pesticide Control Committee,[340] no requirement for public notification of the statutory right to appeal under the *Regulation*,[341] and no requirement for annual public notification of a multi-year permit.[342] Finally, the Ombudsman's investigation revealed that the unregulated use of pesticides on most private land was a serious limitation of the Program, as "[a]gricultural use on privately owned land account[ed] for approximately 75% of the pesticide use in the province."[343] Further, the public had no right to appeal the use of pesticides on private land.[344]

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[337] Ibid, pp.26-7.
[338] Ibid, p.33.
[339] Ibid, p.32.
[340] Ibid, pp.39-40.
[341] Ibid, p.29.
[342] Ibid.
[343] B.C. Ombudsman (1988: 12). Also see Deol Agricultural Education & Research Society (1990: 7).
[344] B.C. Ombudsman (1988: 12).

In light of these findings, the Ombudsman recommended "[t]hat the Administrator develop and publish written criteria" defining what constitutes an "unreasonable adverse effect" in particular circumstances.[345] He also proposed that the permit evaluation process be standardized to "ensure that all relevant information will be available and evaluated by every member before the pesticide use permit decisions are made."[346] "Such information should include the need for pesticide use, alternative methods of pest control and whether there has been persistent pesticide use for a particular area."[347] Another recommendation was "[t]hat the Pesticide Control Program develop a formal disclosure policy so that any person can have access to the material upon which the Administrator's decision concerning a pesticide use permit application is based."[348] Other suggestions of the Ombudsman included: (i) the amendment of the terms of multi-year permits to provide for "public notification of the pesticide use permit ... at the beginning of every pesticide use season";[349] (ii) the amendment of the *Regulation* to provide for public notification of "the right to appeal the granting of [a] permit, the time period, cost, method and place of appeal";[350] and (iii) the requirement that permit applicants give the public at least 30 days notice of the proposed pesticide use programs.[351]

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[345] Ibid, pp.31-2.
[346] Ibid, p.36. In the Ombudsman's opinion, pesticide use decisions made without considering all relevant information are "wrong or deficient and are subject to public mistrust and questioning" (B.C. Ombudsman, 1988: 33).
[347] Ibid, p.36.
[348] Ibid, p.40.
[349] Ibid, p.39.
[350] Ibid.
[351] Ibid, p.34. The Ombudsman did not make any recommendation for the issue of uncontrolled pesticide use on privately owned land because the Ministry of Environment and Parks, at that time, was "developing plans to regulate agricultural pesticide use on private land" (B.C. Ombudsman, 1988: 12).

In addition to finding defects in the pesticide use permit system, the Ombudsman found deficiencies in the appeal system:

> There [was] no formal mechanism to ensure that the parties to the appeal have equal access to these important background documents [e.g., copies of pesticide use application, map, comments of the Pesticide Control Committee and the permit] and, in fact, the Board [did] not generally disclose their possession to the parties.[352]

The Ombudsman's inquiry revealed that some members of the Environmental Appeal Board were not qualified:[353] "[s]ome members lack[ed] the time to travel, the endurance required for the lengthy hearings, or the confidence in their ability to assimilate the information."[354] Another problem with the Board was its decision-making criteria. In deciding whether a pesticide use will cause an "unreasonable adverse effect", the Board (i) assumed that a federally registered pesticide is generally safe,[355] (ii) inquired whether the proposed pesticide application is contrary to the pesticide label, and (iii) considered the specifics of the local environment and the evidence of whether the permit holder will comply with the permit conditions.[356] "These criteria [had] been criticized as unreasonably narrow."[357]

In response to these findings concerning the pesticide use appeal system, the Ombudsman suggested "[t]hat the Environmental Appeal Board disclose any material

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[352] Ibid, p.43.
[353] Ibid, p.57.
[354] Ibid, p.44.
[355] The Supreme Court of British Columbia had ruled that the Board may assume that a federally registered pesticide is generally safe to use because it has had extensive testing. See Canadian Earthcare Society v. Environmental Appeal Board. (Unreported) 87/361 Kelowna Registry B.C.S.C.
[356] B.C. Ombudsman (1988: 47).
[357] Ibid, p.47. Also see p.58.

which it has independently obtained to use during an appeal, to the parties."[358] It was also recommended that the future appointments to the Board "take into account the specialized work of this agency, particularly with respect to pesticide use."[359] Another recommendation of the Ombudsman was that the Board develop and publish written criteria on which it bases its decisions[360]: "[b]y informing the public of its jurisdiction, the Board can expect that appeals will be focused on the issues that it can decide."[361]

The Ombudsman's findings and recommendations were released in the Public Report No. 11 of March, 1988.[362] The report received widespread support from environmental groups in British Columbia. The Queen Charlottes Islands Protection Society "was pleased with recommendations that give the public more access to information" and with the recommendation that requires the Pesticide Control Committee to consider the need for the use of pesticides and the appropriateness of non-chemical alternatives.[363] The WCELA said:

> [T]he report was 'excellent in reaffirming the validity and importance of public input' .... the report was also astute in noting that most of the pesticides used in B.C. are applied to agricultural lands - where private land owners don't have to get a pesticide use permit and the public no right of appeal.[364]

In short, public interest groups welcomed the report because it strengthened their calls for statutory reforms.

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[358] Ibid, p.56.
[359] Ibid, p.58.
[360] Ibid, p.60.
[361] Ibid, p.66.
[362] B.C. Ombudsman (1988).
[363] *The Vancouver Sun* (4 Mar., 1988: B8).
[364] Ibid.

However, the report received little support from major users of pesticides, such as the B.C. forest industry. "[T]he industry was disappointed that its views on pesticide regulation in British Columbia were not sought by the Ombudsman in preparing Report No. 11."[365] Further, the industry was concerned about recommendations made in the report.[366] In particular, the forest industry was opposed to the Ombudsman's recommendations for annual public notification of multi-year permits and public notification of the right to appeal the issuance of permits.[367] While the industry supported the recommendation for increased public input in the decision-making process on pesticide use, it was concerned that greater public participation could lead to "unnecessary delays for legitimate and safe pesticide application programs."[368] The forest industry was of the view that the existing system for pesticide regulation was working adequately, "as witnessed by the relatively small number of appeals, and the even smaller number of appeals which [had] resulted in the denial of permits."[369]

As for the Socred government, the Ombudsman's report was perceived as a threat to its legitimacy because it confirmed that the existing pesticide regulatory system did not serve the interests of British Columbians. To retain its legitimacy, the government had to respond to the report and did so by implementing some of its recommendations, despite opposition from some corporate pesticide users. On March 25, 1988, the Minister of Environment (Hon. Mr. Strachan) informed the House:

> ... we'd find it difficult to accept all the recommendations or all the opinions, but we are prepared ... to incorporate most of the

[365] Council of Forest Industries of British Columbia (1988: 1).
[366] Ibid, p.i.
[367] Ibid, p.3.
[368] Ibid, p.i.
[369] Ibid.

> recommendations in terms of the Environmental Appeal Board and some of the recommendations related to the pesticide permit system.[370]

One issue the Ombudsman raised - unregulated pesticide use on most private land - was responded to by the government in 1988. On May 17, the Socred government amended the *Regulation* to include a provision that training and certification be required for purchase and application of pesticides in the two most dangerous classes (permit-restricted and restricted pesticides).[371] This requirement meant that, for the first time, a majority of growers and farmworkers in British Columbia would have to be trained and certified to apply toxic pesticides.[372] "Because of the need for training, the effective date of this requirement was postponed to January 1, 1992."[373]

The new regulation was the product of an attempt by the government to recoup its legitimacy, which was eroded by numerous incidents of pesticide misuse on farms. While the new regulation would inconvenience agricultural producers, it would not affect their productivity (and, hence, profitability). As the government itself acknowledged, the regulation applied only to a small percentage of the total pesticides used in the province.[374] In other words, the use of many less hazardous pesticides would remain uncontrolled. In addition to the certificate requirement for toxic pesticide purchasers and

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[370] *DLA* (1988: 4637).
[371] *Pesticide Control Act Regulation*, B.C. Reg. 203/88. Under a new classification system which the government introduced in 1988, pesticides are divided into five classes: (i) permit-restricted (additional requirements for applicator certificate and restricted permit), (ii) restricted (additional requirement for applicator certificate), (iii) commercial (restrictions on vendors and dispensers), (iv) domestic (restrictions on vendors), and (v) exempted (from regulations). Sales records, with names of vendors and purchasers, must be kept for all purchases of permit-restricted, restricted, and commercial pesticides. See *Report* (1988/89: 39).
[372] *Report* (1988/89: 39).
[373] Ibid.
[374] *DLA* (1988: 4657).

applicators, the government also reclassified the pesticides "aldicarb" and "parathion" on May 17, 1988. The decision to transfer aldicarb to "permit-restricted" category, and parathion to "restricted" category, was a response to growing concern about the use of the chemicals which were believed to be the cause of numerous pesticide poisonings.[375] Clearly, the Socred government could not hope to maintain public support if it failed to respond to this public concern.

The Ombudsman's recommendation for a formal disclosure policy was implemented by the Socred government in 1989.[376] This policy allowed the public to have access to the material relied upon by the Administrator in determining the outcome of a permit application. Accordingly, members of the public could see for themselves if the Administrator had fully and carefully considered all relevant factors when making pesticide use decisions.[377] In late 1990, the government revised the *Regulation* to include a provision that the public be notified prior to pesticide use permit issuance.[378] The amendment was a desirable reform for those who were concerned about the safety of

[375] *DLA* (1987: 2067; 1988: 4657, 4659). These regulations became effective in June 15, 1988.
[376] Rankin & Munro (1989: 24).
[377] According to the Ombudsman, a formal disclosure policy would: (i) "prevent arbitrary access", (ii) improve "[a]ccountability of administrative decision makers", (iii) assist "[e]nforcement of the permit system", (iv) enhance "public confidence", and (v) promote "[e]ffective decision making", which in turn "could avoid appeals, delays, and ineffective pesticide use" (B.C. Ombudsman, 1988: 40).
[378] *Report* (1990/91: 47) and *The Vancouver Sun* (30 Nov., 1990). The new provision requires a permit applicant to publish the purpose, method and location of the pesticide application, the pesticide's common and trade names, and the dates of application and project completion. Members of the public will have 30 days to submit their concerns to both the regional manager of the Pesticide Control Program and the applicant. The applicant must then inform the regional manager about the action he or she plans to take in response to the concerns raised regarding the proposed pesticide use. See *Pesticide Control Act Regulation*, B.C. Reg. 439/90, s.1.

pesticide use, as this gave them an opportunity to make submissions prior to a final pesticide use decision being made.[379]

Another response to the Ombudsman's report was the adoption of integrated pest management (IPM) - an approach that integrates biological, mechanical, physical, cultural, and chemical methods[380] - by the government into its pesticide regulatory program in early 1991.[381] "[T]he program's name was changed from the Pesticide Control Program to the Pesticide Management Program to reflect an emphasis on managing the use of pesticides in the province, including promoting reductions in the use of, and alternatives to, pesticides."[382] In the same year, the Socred government also developed and published written criteria by which applications for pesticide use permits were to be evaluated.[383] As the Ombudsman pointed out, these criteria would "act as general guidelines by which permit applications can be judged" and "help set a minimum standard of evaluation for each pesticide use application."[384] The criteria by which the Environmental Appeal Board makes its decisions were developed in 1991 and published in 1992.[385]

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[379] Involving the public in the evaluation process can have several advantages. First, it ensures that health and safety concerns, as well as environmental needs, will be taken into consideration. Second, public confidence in the evaluation process may increase if there is greater public involvement in the process. Finally, "[m]embers of the public may provide useful site specific information that is only available through long term familiarity acquired by living and working in a particular area"(B.C. Ombudsman, 1988: 34).

[380] B.C. Environment (1993: 2). Biological controls involve the use of predatory and parasitic insects to control pests. Examples of mechanical controls are "screens, traps, flame weeders and mulches" (B.C. Environment, 1993: 2). Examples of cultural controls are "resistant varieties, crop rotation, pruning methods, plant nutrition and sanitation" (B.C. Environment, 1993: 2).

[381] See the Minister of Environment and Parks' letter to the Council of Forest Industries of British Columbia (21 July, 1988:2), and the Ombudsman's recommendation #3 (1988: 36).

[382] *Report* (1991/92: 26).

[383] B.C. Environment (1993: 5).

[384] B.C. Ombudsman (1988: 31).

[385] See *Environmental Appeal Board* (1992/93: 5-6).

Clearly, these reforms to the pesticide use permit and appeal systems demonstrate that the Socred government was responsive to some popular demands (represented by the Ombudsman's report). Public pressure groups and citizens, as a source of legitimation problems, were able to make real gains in their struggle for better environmental and health protection against pesticides. The increased influence of citizens and public interest groups (particularly environmentalists) on the government's decision-making process was explicitly stated in the Ministry of Environment and Parks' 1989/90 annual report:

> As the century draws to a close, the need for effective action on the environment has never been more urgent ... environmental factors can no longer be separated from economic decisions.
>
> Both the general public and special interest groups have growing expectations regarding environmental quality, and are seeking more involvement in economic decision-making and conflict resolution. British Columbians are concerned about personal health and safety, and are demanding effective monitoring, regulations and enforcement, greater industry responsibility, and better information on environmental issues.
>
> The most important trend in environmental issues is that they are becoming everybody's business. And the public expects government to take a leadership role, by clarifying responsibilities and motivating all sectors of society toward effective solutions.[386]

Similarly, public interest groups and citizens were able to influence the decision-making process of some major pesticide users. For example, increased public concern about the effects of chemicals on the environment and health has pushed some corporations and farmers to reduce their pesticide use and rely on some non-chemical

[386] *Report* (1989/90: 11).

alternatives of pest control.[387] The Ministry of Environment, Lands and Parks' annual reports reveal that the number of pesticide use permit applications has dropped in recent years.[388] In 1989, a total of 627 pesticide use permit applications were reviewed by the Pesticide Control Committee, an eight percent decrease over the previous year.[389] In 1990, there were 344 applications for pesticide use permits, down 45 percent over the year before.[390] There was only a slight increase in 1991 (372 applications) and in 1992 (380 applications).[391]

Occasionally, public protests have also been successful in blocking plans to pesticide spray programs. For example, in August, 1988, CP Rail decided to cancel its "plan to spray a 40-kilometre railway bed with the controversial herbicide Spike in southeastern B.C." when residents in the area consistently protested against the spray program.[392] In September, 1990, protesters successfully stopped the plan of the Ministry of Forests to spray herbicides in the Sunshine Coast region.[393] These instances clearly illustrate that members of the public can exert some influence on the decision-making process of pesticide users.

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[387] Private conversation with two agricultural producers and a representative of the Council of Forest Industries of B.C. in February, 1996.
[388] The number of pesticide use permit applications increased between 1978 and 1988. See *Reports* 1978-1988.
[389] *Report* (1989/90: 49).
[390] *Report* (1990/91: 48).
[391] *Report* (1991/92: 27) and *Report* (1992/93: 22). The figures for 1993/94 and 1994/95 are not available because the *Annual Reports* 1993/94 and 1994/95 have not been released.
[392] *The Vancouver Sun* (30 Aug., 1988: B1). Also see *The Vancouver Sun* (16 Aug., 1988: B6).
[393] *The Vancouver Sun* (28 Sept., 1990: B5).

Summary

The *Pesticide Control Act* was passed by the Socred government as a response to the recommendations of a Royal Commission of Inquiry into the Use of Pesticides and Herbicides. Response to the Commission's recommendations was required to preserve the government's legitimacy, which was brought into question by the criticisms of public interest groups (particularly environmental groups) about the existing pesticide legislation (ss.66 to 72 of the *Pharmacy Act*). The government's practices aimed at maintaining popular support, however, were constrained by the need to ensure that the demands of business pressure groups (e.g., the B.C. Federation of Agriculture, the Council of Forest Industries of B.C.) for minimal regulatory control over pesticide use were fulfilled. In an attempt to balance these conflicting needs, the Socreds passed a *Pesticide Control Act* that was largely symbolic. The objective of the *Act* was to regulate and legalize, rather than reduce, the use of pesticides in British Columbia. An analysis of the pesticide law suggests that it served the interests of pesticide users rather than the interests of British Columbians: the *Act* provided limited criteria to evaluate permit applications, exempted growers from its requirements, provided no requirement for public involvement in the decision-making process on pesticide use, and imposed modest penalties for violations. The passage of the *Pesticide Control Act*, therefore, satisfied the demands of business interest groups. While the passage of the symbolic *Act* fulfilled corporate demands, it did not have the intended effect of legitimizing the Socred government, as the *Act* was overtly weighted in favor of users of pesticides.

After the passage of the *Pesticide Control Act* in 1977, the government continued to act in the interests of pesticide users. It exempted growers from permit and certification requirements of the *Act*, despite public concern about pesticide abuse by agricultural producers. The government further sought to protect the interests of pesticide users by excluding the public from the process of deciding pesticide use on public land. The lack of opportunity to participate in the decision-making process on pesticide use led to widespread mistrust of government pesticide use decisions. Subsequently, there were many appeals to the Environmental Appeal Board, and many complaints to the Ombudsman, about decisions on the use and control of pesticides. In response to these complaints and other complaints received concerning the decisions of the Board, the Ombudsman conducted a study of pesticide regulation in British Columbia, which was released as Public Report No.11 in March, 1988.

The report confirmed that the decision-making processes of the pesticide use permit and appeal systems had serious problems. It provided recommendations to "address the issues of timely public notice and consultation, public access to accurate information, comprehensive analysis of alternative measures, and procedural fairness in the appeal process."[394] The Socred government immediately responded to the Ombudsman's report by initiating some legislative changes and adopting an integrated pest management programme: an attempt by government to retain its legitimacy which had been eroded by the report. The government attempted to buttress its legitimacy by partially addressing the public and labour's concern over the lack of regulations for

[394] B.C. Ombudsman (1988: Overview).

pesticide use on farms: the *Regulation* was amended in 1988 to include a requirement that farmers and farmworkers be trained and certified before applying toxic pesticides. These reforms to the pesticide regulatory system suggest that citizens and public interest groups, as a source of legitimation problems, were able to secure real gains from the Socred government, despite opposition from business interest groups.

The new understanding of pesticide legislation provided by this thesis has significant implications for Canadian research into pesticide legislation. These implications, as well as the contribution of this thesis to Neo-Marxist state theory, are discussed in the next chapter.

Chapter Four:
Implications for Canadian Research into Pesticide Legislation and Contributions to Neo-Marxist State Theory

Introduction

This thesis was undertaken with the premise that the political and social factors influencing the Canadian state's responses to pesticide use are important for a more complete understanding of the state's responses. The purpose of this thesis was: (i) to provide a better understanding of the evolution of pesticide legislation in Canada, thus contributing to the efforts of those pursuing legal and regulatory reforms, and (ii) to offer empirical support for particular tenets of Neo-Marxist state theory, thereby contributing to this area of theoretical inquiry. This chapter integrates the findings of this thesis with Canadian research into pesticide legislation and with Neo-Marxist state theory. It also notes the contribution made to our knowledge of the field of corporate crime and corporate regulation in Canada, and concludes with some suggestions for further research.

A More Complete Understanding of Pesticide Legislation and Empirical Support for Neo-Marxist State Theory

The shortcomings of Canadian research into pesticide legislation were identified in Chapter One. To recap, much of the Canadian research into pesticide legislation focuses on the adequacy of pesticide regulation.[395] These studies, however, are limited because they fail to examine the political and social factors that influenced the federal and provincial governments to devise particular pesticide laws or policies. Accordingly, these studies cannot provide an adequate explanation for the form, content, and enforcement of

[395] See, for example, B.C. Ombudsman (1988); Castrilli & Vigod (1987); and Ross & Saunders (1993).

pesticide legislation in Canada. This thesis examined the factors that influenced the British Columbia government to enact the *Pesticide Control Act*[396] in 1977, and amend the *Act* from 1978 to 1991. By analyzing the social and political factors associated with the creation of, and amendments to, the *Act*, a more complete understanding of the provincial government's responses to pesticide use is achieved.

This thesis suggests that a modified, structuralist theoretical trajectory provides a better account of the Socred government's responses to pesticide use between the mid 1970s and early 1990s, than other competing interpretations; principally, pluralism and instrumental Marxism. To recap, the modified structural Marxist approach places the actions of the state within an economic framework, while allowing the state a degree of autonomy from the needs of capital and the influence of capitalist factions. In the context of the enactment of pesticide legislation, the Socred government was responding, or being "forced" to respond, to the imperatives of capitalism by: (i) producing and reproducing the conditions necessary for capitalist economic activity to continue; and (ii) preserving the legitimacy (e.g., popular support) of both the state and the existing relations of production. The government attempted to preserve the conditions necessary for continued capital accumulation by avoiding the use of measures (e.g., legislation aimed at minimizing pesticide use) that could disrupt production and, hence, the profitability, of major pesticide users and producers. At the same time, the Socred government also tried to maintain its legitimacy, and the legitimacy of the capitalist economic system, by responding to various public concerns and criticisms about pesticide use in British

[396] *Pesticide Control Act*, S.B.C. 1977, c.59.

Columbia. Government responses to public concerns and criticisms took the form of legislative and policy changes, such as the enactment of the *Pesticide Control Act* and the introduction of the certificate requirement for toxic pesticide purchasers and applicators, as well as increased enforcement of the *Act* and its *Regulation* (e.g., an increased number of investigations and inspections on farms).

The Socred government was able to act with *relative* autonomy, at times making legislative and policy changes which did not appear to meet the needs or reflect the interests of capital (e.g., the adoption of integrated pest management programmes; the development and publication of written criteria to evaluate permit applications and make appeal decisions; and the introduction of a provision for public notification of permit applications). Clearly, these amendments were a consequence of the actions of human agents (e.g., interest groups): a source of significant legitimation problems. It has been shown that corporate interest groups, such as the B.C. Federation of Agriculture and the Council of Forest Industries of B.C., were able to influence the government's decision-making process to their advantage when they could demonstrate that the provincial pesticide legislation and policies were threatening their interests. Their ability to exert influence on the government - a conservative government - derived primarily from the latter's general ties to the business sector and its dependence on corporations for tax revenues, job creation, and campaign funds.

Similarly, public pressure groups, such as the Canadian Farmworkers Union and the West Coast Environmental Law Association, were able to influence the Socred government's decision-making processes whenever they could take advantage of well-

publicized incidents of pesticide abuse. This is evidenced by the various legislative and policy changes that were initiated by the government between 1988 and 1991, such as the provision for public notification of pesticide use permit applications, the formal disclosure policy, integrated pest management programmes, and the reclassification of the toxic pesticides "aldicarb" and "parathion." These real gains won by struggles "from below" clearly indicate that the Socred government was not merely a functional vehicle of the imperatives of capitalism; rather, the government could, at times, be an emancipatory force, capable of responding to the needs of labour and the general public (however, reluctantly), as well as to the demands of corporate pesticide users.

In sum, this thesis found empirical support for a modified, structural Marxist theory that emphasizes the role of both structural (e.g., the economy) and non-structural forces (e.g., human agency) in shaping state actions rather than a pluralist-democratic conception of the state. As noted in Chapter Two, the pluralist perspective asserts that the state is:

> [A] legitimate force which stands above disputing parties, as a neutral forum in which negotiations are arbitrated and policy outcomes are established according to generally agreed upon rules .... the legal and political systems have been hived off from the direct determination of economic interests.[397]

While the theory acknowledges that there are numerous and often conflicting interest groups in the B.C. political arena, it ignores the relationship between economic forces and the Socred government, especially when examining the latter's responses to pesticide use. Accordingly, pluralist theory cannot adequately explain the government's reactions to

[397] Ratner et al. (1987: 90).

pesticide use between the mid 1970s and early 1990s. For instance, the theory cannot explain why the *Pesticide Control Act* was largely ineffective in controlling the use of pesticides in British Columbia; why the public was excluded from the process of deciding pesticide use on public land prior to 1990; and why the Socred government did not take measures to protect farmworkers in light of evidence of their hazardous working conditions.

Likewise, this thesis does not provide empirical support for the instrumentalist view that regards the state as a tool of the corporate elite. While there were close ties amongst the Socred government and corporate pesticide users, the government did not act at the behest of these corporate interests. Rather, the Socred government had considerable relative autonomy to address its legitimation problems by using measures that were criticized by some major pesticide users. Furthermore, the government was responsive to "mobilizations from below", as evidenced by the introduction of some amendments to the *Act* which did not appear to meet the direct needs, or be in the interests, of capital.

A Neo-Marxist approach can be used effectively to protect employees, consumers, and the environment, even though it has little credibility in the state and business sectors. Specifically, the approach can be used by public interest groups (e.g., environmentalists, labour unions, and consumer groups) to criticize the close relationship between the state and the corporate sector, as well as the state's policies concerning worker, consumer, and environmental protection.[398] Public criticisms of the state are effective in forcing the state to adopt more stringent standards and enforcement measures with respect to corporate

[398] Hessing (1993: 32) states: "the relationship between the state and economic forces ... exercises a significant constraint to environmental protection."

regulation, since the state cannot hope to maintain its legitimacy if it fails to respond to these criticisms.[399]

Contribution to Knowledge of Corporate Crimes and Corporate Regulation

As stated in Chapter One, crimes against the environment are a crucial problem facing our society. This thesis represents an attempt to study such crimes, and the reactions to them, more intensively and rigorously by focusing on the abuse of chemical pesticides as a "crime" against the environment. The findings of this thesis make a contribution to our knowledge of how corporate crimes against the environment have been regulated in the past. In addition, the work has produced important insights into corporate crimes against employees and consumers, since pesticide misuse can also constitute a "crime" against these groups of people.

Previous studies of corporate crime suggest that the state's response to corporate wrongdoing is influenced by the structure of the capitalist economic system.[400] Specifically, the state is reluctant to define and deal with corporate wrongdoing as "crime" because of the difficulties it faces in introducing laws that interfere with economic growth and short-term profitability. Laws that affect profitability would attract criticisms from corporations, and these corporations may threaten to close a large plant, or to move to locations where laws are lax or non-existent.[401] The threat of plant closure or relocation often intimidates the affected government, which is usually highly dependent on the corporate sector to provide jobs and tax revenues.[402] Unemployment

[399] Ibid, p.43.
[400] See, for instance, Glasbeek (1984), McMullan (1992), and Snider (1993).
[401] Bolaria & Bolaria (1994a), Hessing (1993: 40), and McMullan (1992: 94).
[402] Hessing (1993: 40); McMullan (1992: 107); and Snider (1993: 108).

and recession that result from corporate relocation or plant closure could, in turn, create a legitimation problem or crisis for the state.[403]

This thesis suggests that the manner in which the state responds to corporate criminality is influenced by factors other than the structure of the capitalist system within which corporations operate. These factors are: (i) a similarity in the beliefs and values of the state and the capitalist class, and (ii) the power of non-capitalist pressure groups. It has been argued that the Socred government acted to protect the interests of corporate pesticide users partly because it held beliefs and values consistent with the capitalist class; the business community was the Socred party's strong ally. It has also been shown that non-capitalist interest groups, such as environmentalists, consumer groups, and labour unions, could influence the state's decision-making process. In the mid 1980s, for example, public criticisms of pesticide misuse on farms compelled the Socred government to conduct investigations and inspections on farms. In the late 1980s, the actions of public pressure groups forced the government to take a stronger regulatory position on pesticide abuse by corporations.

The findings of this thesis indicate that the state's reaction to corporate criminality differs with forms of corporate wrongdoing. In particular, the state appears more willing to take disciplinary actions against corporations when the victims of corporate activities are consumers rather than employees. In the mid 1980s, for example, the Socred government immediately increased its enforcement of the *Pesticide Control Act* on farms following several reported incidents of pesticide poisoning involving consumers. By

[403] Gordon & Coneybeer (1995: 420).

contrast, no measures were taken by the government to improve the way pesticides were handled on agricultural land when farm employees suffered symptoms of pesticide poisoning. One reason for the difference in state response is that crimes against consumers often result in a legitimation problem for the state: public criticisms of the government are usually intense when consumers become victims of corporate practices. Crimes against employees, on the other hand, are less likely to result in public outcry because workplace violence is usually attributed to worker error or accidents by the state and corporations.[404] As for the state's response to crimes against the environment, this thesis suggests that the state is assuming a greater role with regards to regulating corporate practices that damage the environment. Increased public concerns about the environment, and the demands of environmentalists for greater environmental protection have pushed the state towards more stringent regulatory standards and enforcement measures.[405]

Future Research

The limitations of this thesis suggest several additional areas of inquiry for future researchers. This thesis was restricted to an analysis of events during the 1973-1991 period. Future research, therefore, should examine the NDP government's responses to pesticide use between 1992 and 1995, and beyond. Such research would be useful because it allows a comparison of the Socred and NDP governments' responses to pesticide use in British Columbia: a comparison of the governments' responses could

[404] Ibid, p.417.
[405] See *Report* (1989/90: 11).

provide a better understanding of the relative autonomy of the state under political parties with markedly different ideological bases, foundations of support, and reform agenda.

It is worth noting some developments in British Columbia pesticide regulatory system since the NDP came to power in late 1991. During 1992 and 1993, the NDP government carried out various activities to encourage and promote the use of alternatives to pesticides and integrated pest management strategies in British Columbia. These activities included: (i) initiating a newsletter of integrated pest management,[406] (ii) undertaking a comprehensive evaluation of pesticide use in the province for 1991,[407] (iii) producing pamphlets on safe and sensible pest control for domestic pest problems,[408] (iv) incorporating materials and exam questions on integrated pest management methods into training kits for pesticide application certification courses,[409] and (v) developing Integrated Pest Management Information System (IPMIS).[410] The government further addressed the pressing issue of illiteracy (in English) among agricultural labourers by: (i) developing the home study kit for certification of farmworkers and growers in Punjabi

[406] B.C. Environment (1993: 7); *Report* (1992/93: 21).
[407] Norecol Environmental Consultants Ltd. (1993); *Report* (1992/93: 21).
[408] *Report* (1991/92: 26); *Report* (1992/93: 21).
[409] *Integrated Pest Management Initiative Projects: Pesticide Management Program, BC Environment.* A project list for 1993, p.2.
[410] Ibid, p.1. Integrated Pest Management Information System is an electronic library of information on integrated pest management in agriculture, landscapes, buildings, homes, gardens, rights-of-way and other locations.

and Chinese[411] - the native languages of a majority farmers and farmworkers,[412] and (ii) conducting the certification examinations in appropriate languages.[413]

In April, 1993, the government made a significant effort to protect the interests of its labour supporters by extending the WCB regulations to farmworkers[414] - something that was denied to agricultural workers by the former Socred government. This meant that for the first time, farm labourers are protected from pesticides (and other hazardous working conditions) through safety measures such as regular farm inspections, safety standards, washing facilities, and protective clothing and equipment. In the Fall of 1993, after a thorough review of the *Pesticide Control Act* and its *Regulation* (a part of the overall review of B.C.'s environmental legislation, initiated by the former Socred government[415]), the NDP government planned to revise the pesticide provisions and integrate them into a comprehensive environmental protection legislation (*British Columbia Environmental Protection Act* (*BCEPA*)).[416] A primary objective of the revisions was to encourage alternatives to pesticide use and eliminate any unnecessary

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[411] Private conversation with a member of the Canadian Farmworkers Union in October, 1995. Also see *DLA* (1994: 11508). In British Columbia, particularly in the Lower Mainland, many farmers and farmworkers are functionally illiterate in English, which means that they will not be able to understand the home study manual and write English examinations (Basran et al., 1995: 30; Canadian Farmworkers Union, 14 Mar., 1990: 20-2).

[412] Canadian Farmworkers Union (1990); *The Vancouver Sun* (14 March, 1990: C5).

[413] *Report* (1992/93: 45).

[414] *Regulations for Occupational Health and Safety in Agriculture* (April 30, 1993). Issued by: The Workers Compensation Board of B.C.

[415] B.C. Environment (1991: 7).

[416] Interviews with three Pesticide Management Branch personnel in February, 1995. British Columbia is subject to a myriad of environmental statutes which are expected to be consolidated under the *B.C. Environmental Protection Act.*

use of pesticides.[417] A second objective of the legislative changes was to include non-government stakeholders in decisions that affect pesticide management activities.[418]

This thesis focused exclusively on the provincial pesticide law of British Columbia. It would be beneficial to undertake a theoretically informed analysis of the evolution of the federal *Pest Control Products Act*[419] - the principal statute controlling the manufacture and importation of pesticides in Canada - and the evolution of other provincial legislation (e.g., the *Pesticide Act* of Ontario[420]; the *Pesticide Act* of Quebec;[421] and the *Environmental Protection and Enhancement Act* of Alberta[422]). Such analyses would explain the form, content, and enforcement of the pesticide legislation, thus providing a more comprehensive understanding of the Canadian state's reactions to pesticide use.

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[417] Interviews with three Pesticide Management Branch personnel in February, 1995. Also see s.101 of the proposed *B.C. Environmental Protection Act*, which states that before being granted pesticide use permits, applicants must:

> ... (a) demonstrate that the intended pesticide use is necessary, (b) demonstrate that alternatives to pesticide use have been considered, (c) indicate what measures will be used to ensure that the proposed pesticide use will not cause an adverse effect, (d) prove that any public notice requirements prescribed by regulations have been fulfilled, (e) develop and provide an acceptable pest management plan, which demonstrates utilization of integrated pest management methods and which may address subsections (a) and (d) inclusive; (f) supply a manager with any addition information as requested ... (*Part 6: Pest Management* in *Draft: British Columbia Environmental Protection Act*, June 30, 1994).

[418] Interviews with three Pesticide Management Branch personnel in February, 1995. Section 108(2) of the proposed *B.C. Environmental Protection Act* provides for the establishment of a Pest Management Advisory Committee made up of representatives from the Ministries of Agriculture, Environment, Forests and Health; members from Environment Canada and Agriculture Canada; and "six representatives of other organizations as the minister considers appropriate."

[419] *Pest Control Products Act*, R.S.C. 1985, c.P-10. See Appendix II.

[420] *Pesticide Act*, R.S.O. 1990, c.P-11.

[421] *Pesticide Act*, S.Q. 1987, c.29.

[422] *Environmental Protection and Enhancement Act*, S.A. 1992, c.E-13.3 (which repealed the *Agricultural Chemical Act*).

This thesis focused on class struggles as a major factor that shaped the development of the *Pesticide Control Act*, and ignored the role of other modes of domination and struggle (e.g., feminist and anti-racist struggles). It is, however, necessary to inquire into how other modes of struggle also shaped the development of the *Act* because: (i) "[c]lasses ... do not exist apart from other forms of subjectivity and domination based on gender, race, and ethnicity",[423] (ii) British Columbia is "a gendered, racially, and ethnically heterogeneous society",[424] and (iii) the extensive use of pesticides in the province disproportionately affects agricultural workers, most of whom are women, and racial and ethnic minorities.[425] Future studies should examine the evolution of the *Pesticide Control Act* using different interpretive lens (e.g., socialist feminist theory); such studies would offer a more complete understanding of the state's responses to pesticide use in Canada.

[423] Abele & Stasiulis (1989: 269).
[424] Ibid, p.270.
[425] Bolaria (1992: 234) and Shields (1992: 248-9).

Appendix I:
Methodology

Introduction

This thesis is an historical, macro-sociological examination of the B.C. *Pesticide Control Act*, set within the framework of the sociology of law. The analysis focuses on the political and social factors associated with the creation of the pesticide law and amendments to the law, at specific junctures (Gordon, 1988: 560). An historical, macro-sociological approach to the thesis was embraced because it would allow a description of the evolution of the *Pesticide Control Act* and a complete understanding of the changes that have occurred to the statute over a significant period of time. As Gordon points out:

> An untangling of the complex, dialectical interplay between the state, social control strategies, law, structural conditions, and human agency can only be accomplished through a retrospective analysis since the nature and significance of events and relationships between events are usually best understood some time after they have occurred (p.561).

E. P. Thompson (1978: 221) provides six principles or guidelines for socio-historical researchers engaged in the "interrogation" of discrete facts:

(i) examine "historical facts" to determine the circumstances under which they were recorded.

(ii) examine the "facts" at the level of their "own appearance" or "apparent self-disclosure" in order to secure "value-bearing evidence" (i.e., attitudes, ideologies).

(iii) analyze the "facts" as "value-free evidences" (i.e., statistical data).

(iv) adopt a *linear* approach to analyze the "facts", in order to produce a narrative account of the way history "actually happened."

(v) analyze the "facts" in a *lateral* fashion (history as links in a lateral series of "social/ideological/economic/political relations"), in order to determine the nature of a "section" of society in the past and its role in, for instance, the law-making and reform processes.

(vi) seek and secure "structure-bearing evidence"; that is, information concerning the dialectical relationship between human agency and the impact of broader structural conditions.

Thompson's methodological principles were utilized in the course of research for the present thesis. These principles serve to impose rigor and order upon the research.

The Specific Methodology

This thesis examined the evolution of the British Columbia *Pesticide Control Act* through a comprehensive analysis of:

(i) government reports and documents, such as the Ministry of Environment's annual reports (1977-1993), the Environmental Appeal Board's annual reports (1990-1992), the British Columbia Royal Commission's Final Report (1975), the Ombudsman's report (1988), the British Columbia Human Rights Commission's report (1983), and *Hansard* (official report of Debates of the Legislative Assembly) (1977-1991);

(ii) non-government documents, such as documents of the West Coast Environmental Law Association, documents of the Canadian Farmworkers Union, documents of the Council of Forest Industries of B.C., farmworker studies; and

(iii) newspapers, such as *The Daily Colonist* (Victoria), *The Globe and Mail*, *The Province*, *The Vancouver Sun*, and *The Victoria Daily Times*.

The period of analysis is between the 1973 and 1991. In this period, various developments have occurred, including the enactment of the *Pesticide Control Act*, the Ombudsman's inquiry, and the introduction of new regulations. The analysis ended in 1991, rather than 1995, because a complete understanding of the changes to the *Act* can only be achieved some time after they have occurred.

In the course of the analysis, documents and reports were read with a number of questions in mind:

(i) When and why was the *Pesticide Control Act* enacted? How was the *Act* drafted and developed? Who were (or were not) involved in the law-making process? Was there a serious attempt to regulate pesticides?

(ii) What changes have occurred to the *Act* over the years and why? Who initiated such changes?

(iii) Was the *Act* effectively enforced or was it largely symbolic?

(iv) To what extent did the *Act* help to legitimize the provincial government when faced with widespread attacks on its environmental protection policies? To what extent did the statute act to balance pressures from competing interest groups, such as environmentalists, business associations, labour unions, and consumer groups?

(v) Why are governments reluctant to define acts that threaten the environment, such as pesticide pollution, as "crimes against the environment"?

In the final analysis, the author offered a theoretically informed account of the evolution of the *Pesticide Control Act*. The "colour" of the interpretive lens has been specified in Chapter 2. The validity and reliability of the interpretation can be assessed by "examining in particular, the quantity, quality and scope of the materials underpinning their analyses, the rigor with which the research and analysis has been carried out, and the predilections of the [researcher]" (Gordon, 1988: 567-8).

Documentary analysis was undertaken as the investigative method for several reasons. First, the technique is subject to less reactivity (or observer interference) than interactive techniques, since the researcher generally utilizes the method "long after the participants in the behavior have died" (Bailey, 1994: 295). Second, the cost of conducting documentary analysis is lower in comparison to many other research methods (Palys, 1992: 225). Most of the data for this thesis are available, for instance, in the libraries of Simon Fraser University and University of British Columbia. Third, the technique permits longitudinal analysis within the context of historical events:

> [T]he historian has the advantage of hindsight and can, therefore, analyze a larger picture which was inaccessible to actors at the time. The significance of and relationship between simultaneously occurring events only comes to light some time afterwards and the ability to both analyze the "total picture" and then explain events by reference to a body of theory constitutes one of the strengths of historically informed sociological research. Of course, if the research also involves an analysis of current events ... then the closer he or she comes to the present day, the more difficult it is to see the larger picture (Gordon, 1988: 567).

There are limitations to documentary analysis. A major limitation is the problem of interpretation. This arises when a researcher seeks to provide a theoretically informed

account of events, rather than just describe the events (Gordon, 1988: 566). To interpret history through the eyes of participants who have left physical traces (evidence of their behavior) is a difficult task, as the researcher "can never really know 'what it was like'" (p.566). Furthermore, the researcher's interpretation of past events would undoubtedly be influenced by his or her "modern" perspective of the world (p.566).

A second limitation of documentary analysis is the unavailability of archival materials (Palys, 1992: 225). Documents may not be available for several reasons: "information simply was never recorded", "was recorded, but the documents remain secret or classified, or have been destroyed" (Bailey, 1994: 297). In this study, written submissions made by public and business interest groups with respect to the *Pesticide Control Act* in the mid 1970s were not available because they have been destroyed. Similarly, the Ministry of Environment annual reports for 1993/94, 1994/95, and 1995/96 are not available because they have not been published. The unavailability of these government and non-government documents (and, thus, the absence of some potentially useful information) could affect the results and conclusions of the study.

Another problem is document bias. Many documents are written for some purposes other than social research. Accordingly, they may be manipulated by their authors "to convey misleading impression, one that may range from 'minor fudging to towering lies'" (Coneybeer, 1990: 40). Schafer (1974: 75, cited in Coneybeer, 1990: 40) points out that government documents, in particular, must be read critically because they "can, and often do, contain distortion and error ... due to bias." If distorted information is incorporated into a study, the validity of the study would be questioned.

Despite these limitations, documentary analysis remains valuable: it enables the author to conduct historically informed sociological research. Through a critical examination of the events and conditions that led to the enactment of, and amendments to, the *Pesticide Control Act*, in conjunction with the employment of a theoretical trajectory, a full understanding of the state's responses to pesticide use in British Columbia can be achieved.

Appendix II:
The Constitutional Basis of Authority Over Pesticides and An Overview of the Federal and Provincial Legislation

Introduction

This appendix briefly examines the constitutional basis of authority over pesticides and provides an overview of the *Pesticide Control Act* of British Columbia. The power to regulate pesticides in Canada is derived from the concurrent federal and provincial jurisdiction over agriculture under the *Constitution Act, 1867.*[426] *Federal* powers that may be used to control pesticides include the criminal law,[427] "the Peace, Order, and good Government" power,[428] as well as "Trade and Commerce" power.[429] *Provincial* jurisdiction over pesticides is based on "Management and Sale of the Public Lands belonging to the Province",[430] "Property and Civil Rights in the Province",[431] "Matters of a merely local or private Nature in the Province",[432] "Local Works and Undertakings" which are not assigned to the federal government,[433] "Municipal Institutions in the Province",[434] and the power to impose fines, penalties, or imprisonment to enforce provincial law.[435]

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[426] *Constitution Act*, 1867 (U.K.), 30 & 31 Vict., c. 3, s. 95.
[427] Ibid, s.91(27).
[428] Ibid, preamble to s.91.
[429] Ibid, s.91(2).
[430] Ibid, s.92(5).
[431] Ibid, s.92(13).
[432] Ibid, s.92(16).
[433] Ibid, s.92(10).
[434] Ibid, s.92(8).
[435] Ibid, s.92(15).

Generally, the federal government is responsible for the registration, classification, packaging and labeling of pesticides in Canada, while the provincial governments regulate the sale, transportation, application, storage, and disposal of pesticides.[436] A number of laws are designed to regulate and limit the availability, application, and disposal of pesticides. However, only a few of these laws specifically address the use of pesticides. The statutes that have the most direct relevance to pesticides are the federal *Pest Control Products Act* and the British Columbia *Pesticide Control Act.*

The *Pest Control Products Act*

The *Pest Control Products Act*[437] is the principal law governing the use and sale of pesticides in Canada.[438] Pesticides may not legally be imported, exported or sold in the country, with some exceptions, until they are registered by Agriculture Canada under the *Act.*[439] The Minister of Agriculture may refuse to register a pest control product if, in his or her opinion, the use of the pesticide "would lead to an unacceptable risk of harm to ... public health, plants, animals or the environment; .... "[440] The acceptability of a pest control product is determined from safety testing data submitted to the Department by the particular company seeking the registration.

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[436] B.C. Ombudsman (1988: 11). The adoption of provincial legislation to regulate pesticides "results from the recognition of a need for management of this commodity group to meet local concerns and/or conditions (Government of Canada, 1984: 1).

[437] *Pest Control Products Act*, R.S.C. 1985, c.P-10.

[438] For a discussion of the origins of the *Act*, see Castrilli and Vigod (1987: 42-3).

[439] *Pest Control Products Act*, s.4. Even after pesticides are registered, they are subject to re-evaluation (*Regulations*, s.20).

[440] *Pest Control Products Regulations*, s.18(d)(ii). The *Act* is administered by Agriculture Canada. Other federal departments are involved in an advisory capacity: Health and Welfare Canada, Environment Canada, and Fisheries and Oceans Canada.

A pesticide is exempted from registration if it is used for research purposes.[441] The Minister may also grant temporary registration for a one-year period if the applicant agrees to produce additional information on the product, or where the need exists for the emergency control of infestations.[442] "These departures from the *Act*'s full registration requirements, in terms of registration exemptions and less-than-complete data and testing, are meant to meet legitimate objectives, such as the development and assessment of new pest control products or the controlling of emergency pest situations."[443]

The *Pesticide Control Act* of British Columbia

In British Columbia, the *Pesticide Control Act* provides three mechanisms to control the use of pesticides: a permit system,[444] a licence system,[445] and a certificate system.[446] The *Pesticide Control Act Regulation* requires a pesticide use permit only when public lands or public bodies of water are involved.[447] Permits are also required to apply pesticides to private land that is used for forestry, transportation or public utility purposes.[448]

The Administrator of the *Act* can only grant a pesticide use permit if he or she is "satisfied that the pesticide application will not cause an unreasonable adverse effect" to

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[441] Ibid, s.5(b).
[442] Ibid, s.17.
[443] Castrilli & Vigod (1987: 61).
[444] *Pesticide Control Act*, R.S.B.C. 1979, c.322, s.6(a).
[445] Ibid, s.4. According to s.4, no person can operate a business dealing with pesticides unless he or she holds a licence issued under the *Act*.
[446] *Pesticide Control Act Regulation*, B.C. Reg. 319/81, s.5. The certificate system regulates the sales and applications of pesticides by people who have received specific pesticide information training.
[447] Ibid, s.10(2)(a) & (b). Public land is defined as land owned by the provincial Crown, municipality or regional district; as well as land controlled by schools, universities, hospitals and corporations (B.C. Reg. 319/81, s.1).
[448] Ibid, s.10(2)(c).

humans or to the environment.[449] He or she will define what an "unreasonable adverse effect" is, in any given circumstances.[450] The Administrator is empowered to inspect a pesticide, premises, equipment, and records to ensure compliance with the *Act*,[451] and to seize a pesticide where he or she believes that a violation has occurred.[452] The *Act* prohibits the disclosure of information obtained from a record seized under the *Act* to persons not legally entitled to it.[453] The Administrator can suspend or revoke a permit, licence or certificate where the *Act,* its *Regulation*, or a term of the permit is contravened.[454]

The *Act* establishes a Pesticide Control Committee (chaired by the Administrator), which "review[s] applications for permits referred to it by the administrator and perform[s] other duties the minister requires."[455] Members of the Committee cannot be members of the Board.[456] They are provincial government employees, each representing a different ministry: Agriculture and Fisheries; Forests; Health; and Environment, Lands and Parks.[457] An official from Environment Canada also forms part of the Committee.[458] The *Pesticide Control Act Regulation* authorizes the granting of two types of permits which may not be reviewed by the Pesticide Control

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[449] *Pesticide Control Act*, R.S.B.C. 1979, c.322, s.6(a). The provincial Minister of Environment, Lands and Parks is responsible for the administration of the *Act*, but some of his or her functions are delegated to an Administrator.
[450] Ibid, s.12(2)(a).
[451] Ibid, s.9.
[452] Ibid, s.10(a).
[453] Ibid, s.18.
[454] Ibid, s.13(1). See Appendix IV for an overview of the permit application process.
[455] Ibid, ss.17(2)(a) & (3).
[456] Ibid, 17(1).
[457] Ibid, s.17(2)(b).
[458] Ibid, s.17(2)(c) states: "The committee shall consist of ... other persons the minister considers appropriate."

Committee: special use permits used for unregistered pesticides[459] and restricted use permits required for extremely toxic or persistent pesticides.[460] Once a restricted use permit is issued, a use permit is required before the pesticide can be applied on public land and private land used for forestry, transportation or public utility purposes.

The *Act* requires that the public be notified of a pesticide use permit application[461] and of a pesticide use permit that is granted.[462] Any person can appeal a decision of the Administrator to the Environmental Appeal Board.[463] This Board consists of "a chairman and such other members as the Lieutenant Governor in Council determines."[464] The *Act* specifies that an appeal does not prevent the Administrator from carrying out the disputed action, decision or order "unless the board directs otherwise."[465] The *Pesticide Control Act Regulation* states that an appellant must file an appeal within 30 days after the disputed action, decision or order of the administrator.[466] Before hearing the appeal, the Board may require the appellant "to deposit with it an amount of money it considers sufficient to cover the ... appeal expenses .... "[467] The Board is authorized to "make an order it considers appropriate, including an order for costs and disposal of money deposited under subsection (3)."[468]

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[459] The *Pesticide Control Act Regulation*, B.C. Reg.319/81, s.5(b). The Committee may, however, review a special use permit if the unregistered pesticide is going to be used on land that is greater than .5 hectares (B.C. Ombudsman, 1988: 28).
[460] *Pesticide Control Act Regulation*, B.C. Reg.319/81, s.8.
[461] *Pesticide Control Act*, R.S.B.C. 1979, c.322, s.16.
[462] Ibid, s.18.
[463] Ibid, s.15(1).
[464] Ibid, s.14.
[465] Ibid, s.15(5).
[466] *Pesticide Control Act Regulation*, B.C. Reg. 319/81, s.45(1). This means that members of the public who wish to appeal a pesticide use permit must be aware of the issuance of the permit.
[467] *Pesticide Control Act*, R.S.B.C. 1979, c.322, s.15(3).
[468] Ibid, s.15(4).

The *Act* and its *Regulation* impose fines and terms of imprisonment for violations and for intentionally making a false statement or misleading or attempting to mislead the Administrator.[469] A violator of the provisions of the *Act* is liable to a maximum fine of $2,000 or imprisonment for six months or both. For a subsequent similar offence, the fine is "not less than $1,000 or more than $2,000" and the term of imprisonment is 6 months.[470] In an emergency, the Lieutenant Governor in Council is empowered to exempt or limit the application of the *Act*.[471]

[469] Ibid, s.22(2).
[470] Ibid.
[471] Ibid, s.2.

Appendix III:
The *Pesticide Control Act Regulation*, B.C. Reg. 172/78

The *Pesticide Control Act Regulation*

The *Pesticide Control Act Regulation* (B.C. Reg. 172/78) spells out the details of how the *Pesticide Control Act* (S.B.C. 1977, c.52) will operate. Section 2 of the *Act* states that no person can operate a business dealing with pesticides unless he or she holds a licence issued under the *Act.* Parts 2 to 5 of the *Regulation* specify the requirements that anyone must carry out before such a licence is granted to him or her. Section 3 of the *Act* requires any person who sells or applies pesticides to get a certificate authorizing the activity. Part 7 of the *Regulation* provides for the issuance of pesticide applicator and dispenser certificates to applicants on successful completion of examinations.

Part 9 of the *Regulation* provides exemptions from the licencing, certification, and permit requirements of the *Act*. One exemption is that no licence, certificate, or permit is required from any person applying a pesticide (other than one in schedule I or II) to private land or premises. Any person applying or selling a Schedule V pesticide is also exempted from the requirements of the *Act* and its *Regulation*. Part 6 of the *Regulations* prohibits (i) the application of an unregistered pesticide without a special use permit, (ii) the application of a pesticide to public lands or public water bodies without a pesticide use permit, and (iii) the application of a restricted pesticide without a restricted use permit.

The *Regulation* divides pesticides into five categories, set out in separate Schedules. Schedule I contains the most dangerous pesticides, such as the persistent

organochlorine pesticides (i.e., chlordane, DDT, dieldrin, endrin, heptachlor) and highly toxic pesticides (i.e., calcium cyanide, sodium fluoroacetate). Anyone wishing to purchase or use this class of pesticides must obtain a restricted purchase or use permit. The sale of these pesticides must be entered in the hazardous pesticide purchase register and signed for by the customer and certified pesticide dispenser. Schedule II contains restricted pesticides, such as aldicarb, antimycin, and ethylene dichloride. Pesticide vendor or pest control service licence and applicator certificate are required to purchase and use restricted pesticides. All sales must be recorded and signed for by the customer and the certified dispenser. Schedule III pesticides are those designed and packaged for use in industry or agriculture, such as acrolein, carbofuran, and fenthion. The sale of these pesticides must be recorded, and the names of the customer and certified pesticide dispenser must be listed. Schedule IV includes "pesticides registered under the *Pest Control Products Act* ... and fertilizers containing pesticides registered under the *Fertilizer Act* ... other than those listed in Schedules I, II, III, and V of this regulation." Schedule V contains pest control products which are the least hazardous to applicators or the environment, such as disinfectants, fabric softeners, and insect repellents. This category of pesticides may be sold and applied by unlicenced or uncertified persons.

Part 8 of the *Regulation* prescribes the requirements and conditions respecting the handling, storage, and transportation of a pesticides. Part 10 prescribes requirements and conditions in regard to the disposal of a pesticide or container used to store or mix a pesticide. Part 11 forbids (i) the use of a faulty or unsafe apparatus to apply a pesticide,

and (ii) the application of a pesticide from an aircraft without a pesticide applicator certificate.

Part 12 of the *Regulation* deals with the subject of appeal. It provides that notice of the appeal must be given to the administrator who, in turn, must "direct the appellant as to the manner in which the appeal is to be made." The appellant must notify the Administrator of the appeal within 15 days after the disputed order or decision of the Administrator. After receiving the notice of appeal, the Administrator is required to notify the board of the appeal. The board is empowered to determine its own procedure in conducting the appeal; it must "notify the appellant and other interested parties of procedures to be taken."

Part 13 of the *Regulation* requires the owner of any material, land, or premises that an inspector is authorized to inspect, to assist the inspector in carrying out his or her duties and responsibilities under the *Act* and the *Regulation.* Part 14 of the *Regulation* imposes fines and terms of imprisonment for violations of its provisions and for intentionally making a false statement or misleading or attempting to mislead the Administrator. Anyone who violates the provisions of the *Regulation* is liable to a maximum fine of $2,000 or imprisonment for six months or both. For a subsequent similar offence, the fine is "not less than $100 and not more than $1,000."

Appendix IV:
Pesticide Use Permit Application Process

Permit Application Process

A person wanting to obtain a pesticide use permit must fill out an application form. On the form, the applicant is required to state: (i) his or her name and address, (ii) the time period, location and purpose of the pesticide application, (iii) the common and trade names of the pesticide to be used and proof of its registration, (iv) the total quantity of pesticide to be used and the method of application, (v) the name of the applicator and proof of his/her certificate of training in pesticide use, and (vi) the proximity of the area of proposed pesticide use to water bodies. In addition, a map of the area must be supplied (B.C. Ombudsman, 1988: 23).

The permit applicant must notify the public of his or her application by publishing "a notice of the contents of the proposed application in a newspaper circulated in the place where the site of the proposed application of pesticide is located" (*Pesticide Control Act Regulation*, B.C. Reg. 319/81, s.16(2)). The notification of the pesticide use permit application must be done "within 45 days of the issue of the application number by the administrator" (s.16(3)). In the advertisement, the permit applicant must state (i) the application number, (ii) his or her name, address and phone number, (iii) the location, method, and purpose of the pesticide application, (iv) the common and trade names of the pesticide to be used, (v) the dates of proposed pesticide application and project completion, and (vi) the location where the permit application and map may be available for public view (s.16(4)).

Once the form is completed, seven copies of it, along with the map, are submitted to the relevant regional office of the Pesticide Management Program (*Pesticide Control Act Regulation*, B.C. Reg. 319/81, s.16(1)). The regional office gives a copy to each of the members of the Pesticide Control Committee, who then reviews the application individually (B.C. Ombudsman, 1988: 24). On some occasions, a member of the Committee may request for more information from the applicant or conduct an on site inspection (p.25). After examining the application, each member of the Committee submits his or her comments and recommendations to the relevant regional manager. The regional manager takes these comments into account in deciding whether to issue the pesticide use permit. He or she will grant the permit if he or she is satisfied that the pesticide use will not result in "unreasonable adverse effect" (*Pesticide Control Act*, 1979, c.322, s.6(a)). If the regional manager decides to grant the pesticide use permit, he or she may issue the permit as requested or issue it "with conditions attached that reflect the Committee's comment" (BC Ombudsman, 1988: 28). The conditions may demand that the applicant employs a different method of pesticide application, excludes some areas from pesticide use, or uses the permit under "particular weather conditions" (p.28).

Once the permit has been granted, the permit holder must notify the public of the permit before it becomes effective. Public notification can be given by posting a copy of the permit "in a conspicuous place where the pesticide is to be used", publishing in the local newspapers or "in the Gazette", or providing a copy of the permit to "any person whose rights may be affected by the use of the pesticide authorized by the permit" (*Pesticide Control Act Regulation*, B.C. Reg. 319/81, s.18(2)). The whole process of

pesticide use permit application (that is, from the time the application form is submitted to the regional office to the regional manager's decision) will take about two months.

Note: In 1990, "[p]rocedures for handling permit applications were modified so that review of applications, public response and Pesticide Control Committee response is now conducted by Regional Pesticide Control Program staff" (*Report*, 1990/91: 47). Prior to this, it was the responsibility of the Pesticide Control Program director to evaluate permit applications and review the Committee's comments. In 1991, a procedure was developed which allows permits to be formulated and issued by regional managers instead of the Pesticide Management Program director (*Report*, 1991/92: 38).

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