"Avoiding Unnecessary Interference:" The Coal Fields Inspectorate in New South Wales and British Columbia 1854-1912.

By Don Dingsdag and Henry Lee*

Introduction

This comparative paper of New South Wales (NSW) Australia and British Columbia (BC) Canada is the result of a larger project concerned with the complete relationship between state and capital in the coal mining industry of NSW from the 19th century until the present. We chose 1854 for this paper because that was the year of the first enactment of any coal mining legislation in NSW even though non-alluvial coal mining had been conducted there since the 1830s: We selected 1912 because that act was the first NSW Coal Mines Regulation Act (CMRA) in the 20th century not a complete reenactment of 19th century legislation. The CMRA also remained the base act in NSW until 1982/84 even though it was seriously flawed, despite numerous major amendments, and contained several 19th century remnants until its extinguishment in 1984. British Columbia, although having different earlier legislative antecedents, from 1877 passed similar legislation to that enacted in NSW in 1876; again in 1897 (1896 in NSW) and another principal CMRA in 1911.

This first objective informs a major goal of this paper which is to elucidate a duality of state functions in coal mining common to each jurisdiction's Department of Mines which *a priori* constrained the very enforcement of safety legislation. Also, these dual functions have remained in place beyond the 19th century and continue to influence safety in coal mines. Although we recognise and discuss the influence of parliamentarians who, invariably, owing to economic or class interests, vitiated coalmining regulation legislation, this paper seeks to highlight the conflict of interest created for state instrumentalities[1] which are charged by parliament both to promote the coalmining industry commercially and simultaneously to enforce safety legislation. In our opinion this particular contradiction of state functions has not been addressed in any other analysis of NSW (nor of BC) coal mining. Rather coal mining literature generally has attributed the blame for poor safety in coal mining to legislation weakened by class bias in parliaments, inept and collusive government inspectorates, greedy coalowners and/or "careless" coalminers. In our view these were individually and collectively significant contributors to the poor safety performance of coal mining over time. However, the inherent inhibition of the enforcement of legislation this paper identifies enabled a shared culture of carelessness among managers, inspectors, and miners alike to flourish. In other words, the normalisation of danger common in coal mines in BC and NSW labelled by one author as the "conspiracy of complacency,"[2] was consciously or unintentionally countenanced by government inspectors. Consequently, owing to the dangerous environment of the coalmining workplace and the hazardous nature of coalmining production and work tasks, this disregard of danger has created and perpetuated what an other author has termed a "fools' paradise."[3]

*Corresponding author, Dr Don Dingsdag, School of Social and Workplace Development, Southern Cross University, Lismore New South Wales 2480, Australia; ph 61 66 203866; fax 61 66 224171; email ddingsda@scu.edu.au.

*Dr Henry Lee, Department of Industrial Re lations, University of Wollongong, New South Wales, Australia, 2500.

British Columbia and New South Wales Legislation and Enforcement

From an examination of the Canadian primary sources such as the British Columbia annual *Reports Of The Minister Of Mines* and the BC coal mines regulation legislation, the similarities of the legislation, the language and objectives of the BC sources to those of NSW were striking. The sameness of the provisions the acts shared, down to wording, is not entirely surprising as they both had their antecedents in the British CMRA of 1874. Yet there were differences: For example, NSW had coal mining legislation of sorts, outlined below, from as early as 1854 and another act was legislated in 1861. However, the 1877 CMRA was the first piece of legislation for BC: Although the New South Wales CMRA of 1876 was in many respects identical, the British Columbia CMRA of 1877 was far more comprehensive and many significant sections that had been excoriated in the NSW parliament were not enacted until 1896. One of the missing portions related to certification and examination of managers: In the 1876 New South Wales CMRA the position of manager is not even defined in the preamble and the safety functions of the person in charge of the mine's safety is relegated to the owner or the nebulously defined position of agent: As a result there were many under qualified managers in NSW who had become managers through an "old boy" network with its origins in Great Britain: The inspectorate was often appointed from the same pool of managers in Great Britain or in NSW; their relationships formed one of the cornerstones of the "conspiracy of complacency."[4] The evidence suggests that similar appointments and relationships occurred in BC.

Considering these significant omissions from the 1876 NSW CMRA the expectation should be that the safety record of BC should have been superior to that of NSW, at least until the 1896 CMRA was enacted. Yet it was not so. The brief synopsis below of disasters with high multiple deaths demonstrates that, irrespective of the superiority of legislation on the BC statutes, NSW had by far the better safety record before and after 1876. These contradictions bring us to a tension in our discourse, that the quality of legislation on the statutes carries no force unless there is the will and wherewithal to enforce the legislation irrespective of the duality of state functions we have identified. Central to the former proposition is an adequate inspectorate staffed by competent inspectors. As we shall discover, for many years BC had neither.

Notwithstanding the preoccupations of the NSW inspectorate with its geological functions, enforcement in NSW resulted in a better safety record especially when calculated on the number of disasters with high multiple deaths. For example, NSW had "only" two numerically large disasters before 1912: Bulli in 1887, when 81 men and boys were killed and Mt. Kembla when 96 lives were lost. To date Mt. Kembla remains Australia's largest land disaster even though Bulli and Mt. Kembla remain isolated disasters for Australia. The safety record in BC was poor in comparison in terms of concentrations of loss of life; although we need to compare the incidence of single fatalities and injury rates over time to make an adequate comparison: Focusing on spectacular disasters distorts the real extent of injury, death, and safety enforcement. The following short overview of British Columbia statistics illustrates the point; 1879, Wellington 11 deaths due to explosion; 1881, Wellington, 65 deaths due to explosion; 1884, Wellington Colliery, No. 4 level of No. 3 Pit, 23 deaths; 1887 No. 1 Pit, Esplanade, Nanaimo Colliery, 149 deaths due to explosion; 1888, Wellington No 5 Pit, 77 deaths; 1901 in the Union Mine 64 men and boys died in an explosion and 19 in the Extension pit; in 1902 there were 102 deaths as a result of an explosion in the Fernie mine of the Crow's Nest Pass Coal Company Collieries; in 1909 32 died in the Extension Mine.

Although we do not wish to belabour the point, too many multiple death incidents occurred in the same mines: Also there were too many deaths in those associated with the dominant coal owners on Vancouver Island, the Dunsmuir family, not to indicate a serious disregard of safety by the government inspectorate, mines management as well as miners themselves. Consequently, to take as a brief comparison for one year, 1902, when the fatality rate of NSW was a particularly high 2.65 per 1000 employees, remembering that Mt. Kembla and Fernie occurred in 1902, the rate in BC was 4.15, and Nova Scotia's rate was 3.32 per 1000 employees. Of course

legislation, as in NSW, was seriously wanting as this paper demonstrates.

The Duality of State Functions and its Consequences

The necessity for labour historians to revisit the shibboleths of history based on previous work of fellow social scientists as well as their own work became particularly clear for the research conducted for this paper. The necessity for academic rigour became even more obvious as a result of the comparative nature of this research. One author of this paper has been conducting research on NSW coalmining in general for some 19 years, the other 20 years with a particular focus on the state's regulatory and enforcement functions for the largest portion of those years. Yet until a few years ago, like many labour historians, we were convinced of the culpability of the Department of Mines inspectorate in the high number of deaths that occurred at Bulli and Mt. Kembla in particular, but also in the general safety record of NSW coal mining. However, our more mature recent considerations behooved us to investigate the role of the state in coal mining more closely to discover the duality of state functions, an investigation that has not yet been conducted by other Australian labour or coalmining historians. The NSW Department of Mines' geological functions, designed to explore and chart the minerals of NSW to attract investment capital, preferably British, to develop the Colony's wealth, was as much a part of the department's objectives as the enforcement of safety in mines. British Columbia's and the other Canadian provinces' mines' departments fulfilled similar dual functions.

The geological function of the NSW Department of Mines was the key to understanding the success or failure of safety enforcement, an observation we did not grasp in our earlier developmental phase of research. On the one hand, the "state", consisting for our purposes mainly of the colonial parliament and its minuscule representative, the Department of Mines, wished to attract capital to develop the Colony's mineral wealth: For these purposes accessible coal reserves were surveyed, prospected, and made available on cheaply or freely alienable land preferably close to state funded transport infrastructure close to the coast: No coal mining company paid any government royalties until 1884[5] and no systematic pattern of working coal reserves was imposed on any coal mining company until World War Two by which time existing coal reserves could not be mined profitably owing to more than a century of unregulated "rip and tear" mining;[6] the Department of Mines also tested the quality of coal mined in individual mines for free and published its findings to stimulate demand for particular types of coal.[7] Yet, notwithstanding these attractions, mines also had to be safe or at least needed to appear as if they were safe to attract investment, especially when the cost-intensive developmental phase for non-outcropping seams produced no returns (although arguably developmental costs were minuscule until large British capital was attracted from the 1880s or so and mines became deeper and more complex due to improved (and more costly technology): For investment to continue there was a need for measures to protect a mine's coal reserves from fall-ins, inundations, spontaneous combustion, and explosions; there was also the investment in underground and pit-top equipment. Consequently, some form of safety legislation needed to be in place. Also, but perhaps not so necessary, the safety of workers needed to be protected but not so as to disrupt production, while also ensuring that "work practices" did not endanger the capital investment tied up in mines. For these reasons inspectors were prepared to declare mines safe and to overlook management's and miners' malpractices.

Consequently, the enactment of safety legislation and its enforcement was a double edged sword in NSW coal mining and remains an irresolvable contradiction of capitalist relations of production: On the one hand, the state through its various departments regulated the employment relationship in favour of employers principally via Masters and Servants legislation; the state promoted immigration of British coal miners thereby swelling the ranks of coal mining labour reserves; it provided free infrastructure and services, and at times, during severe industrial confrontations, brought out armed militia to protect private property: On the other hand, safety regulation imposed the will of the state on private investors/employers and this state "interference" was frequently a cause for friction and resistance. Yet, with-

out safety legislation, investment would not come to NSW nor stay there, but the application of safety regulation always appeared to impede the production process, oddly enough both to employers and miners in a manner described below. Consequently, the safety/production dichotomy remained a contested terrain for coal owners in the process of capital accumulation: In parliament, for example, by employer parliamentarians representing conflicting capitalist interests; there were also those who were employer liberals representing predominantly coal miner electorates or well-meaning reformist liberals and eventually labourist and Labor parliamentarians.

Another tension in our discourse is that, although at the workplace too the safety/production dichotomy was (and remains) a contested terrain under Coal Mines Regulation legislation in NSW and BC, there was also a great deal of collusion between managers, miners, and inspectors. After the passage of the 1876 and 1877 legislation managers and miners had to observe the safety requirements of the CMRA. Because the production process was frequently based on payment by piecework for hewers, in particular, they worked largely unsupervised. Consequently, owing to overproduction and intermittency of trade experienced in NSW and BC as well, hewers frequently cut comers in safety procedures to make up for income lost when the mine was idle: For example, not timbering as frequently as they should or not putting up brattice (temporary ventilation erected with wood or canvas) close enough to the face causing poor ventilation and allowing flammable accumulations of "firedamp" (methane gas) not withstanding that there was a compulsory requirement under the 1877 CMRA to bring brattice, ". . . within three yards of the face."[8]

On the other hand, managers did not always supply sufficient timber, even though under the 1896 NSW CMRA there was a requirement to do so, or they allowed the mine's ventilation to fall below the legal minimum. Owing to the competitiveness and intermittent nature of the markets for NSW and BC coal, parsimony characterised each industry. Consequently, safety requisites such as timber were frequently considered an onerous expense by managers and this attitude suited the hewers' dislike of having to erect it even though a shortage of timber was often the cause of industrial unrest.[9]

Government inspectors, who frequently had been coalmine managers, nevertheless had to invoke the CMRA. They did so accommodating the production imperative generally. Even today in NSW coal mine workers always know when the inspector is going to visit by the flurry of activity to "clean the mine up." This was a common practice in the 19th century and remains a legacy of the past which does not prevent inspectors from announcing visits. At other times, even though coal mining industrial relations have been characterised as abrasive,[10] managers and hewers conspired against inspectors by sealing off entire sections of mines with brattice. In this way, the "brattice trick" "fooled" the inspector who then measured the minimum 100 cubic feet of air per minute necessary under the 1876 CMRA for every man, boy, and animal: Otherwise the mine would have had to be shut down, temporarily interrupting production, an outcome neither manager, hewer, off-hand worker (nor inspector) would have wanted. This level of collusion between managers and miners indicates a class collaborationist tendency that persists even today (for example, participation in clean ups before the inspector's visit) and is a serious and durable manifestation of the conspiracy of complacency.

Although not everyone who worked in New South Wales coalmines were active participators, anyone who actively opposed the conspiracy of complacency was publicly and officially dealt with. For example, in 1887, James Crawford, a deputy at the Bulli Mine shortly before the 1887 explosion refused to fire a shot because there was too much gas. Crawford left Bulli and as deputy at another mine was asked by the manager and government inspector, ". . . if he found any yards of gas now."[11] John May, who had been appointed to the coal mines inspectorate, had his commission withdrawn after he publicised these and other incidences. May was dismissed from the public service because of this publication. In 1899 a parliamentary enquiry under G. C. Wade investigated the dismissal of deputy Bailey from the Newcastle Coal Company mine three days after he had detected firedamp. Wade (later a NSW Premier) found that the deputy had been instructed not to report firedamp, but was not able to establish that Bailey had been dismissed because of it. In 1903 a Royal Commission investigated deputy Joseph Lowe's alle-

gations concerning his dismissal after reporting gas at the Seaham colliery.[12]

On the other hand, there were also honest brokers. Active participation in covering up potential "powder keg" situations explains why the Chief Inspector of Coalmines Alfred Atkinson, having inspected the Mt Kembla Mine "five times" before the 1902 disaster could pronounce it gas free. Although the sudden and unexpected materialisation of gas were common occurrences in "gassy" mines a "body" of gas large enough to cause the explosion that blew up Mt. Kembla could only have been the result of a volume of gas which had accumulated over an extended period and should have been detected under CMRA procedures. Yet it was a large accumulation of gas that caused the explosion. Atkinson, the scion of a famous British coal mining family, other than being fully imbued with the duality of his Department's functions would have had no reason to pronounce any mine safe. In our view, the contradictions of the geological and safety functions of government departments responsible for both had and continue to have severe implications for coal mining safety. So far there is no evidence that indicates that the relationship between state and capital in British Columbia produced different outcomes in coal mine safety in BC; in fact, we suggest that the relations of production in coal mining are a microcosm of capitalist relations of production, in general. We suggest that, even though the state furthers the interest of capital or the capitalist class, the state maintains a certain degree of relative autonomy. Inadequate coal mining safety legislation and its poor enforcement in British Columbia and New South Wales is not the result of a conspiracy between capitalism and the state, but a function of a shared and implicitly accepted ideology.

The Record of Death and Injury to 1912

New South Wales

Detailed reports of surveys of coal deposits, the optimum properties of the coal found therein and the tonnages mined abound in the early official coal mining records of NSW and BC. However, official figures relating to death and injury in the coal mines of NSW before the mid-1870s are scarce and apparently non-existent for BC. Scarcity gradually yielded to surfeit from 1874 on for NSW, when coal and metalliferous mining had become sufficiently important elements in the Colony's economy for the government to create a separate Department of Mines to oversee their development. Prior to 1874 data on injuries and death had been a major responsibility of the Department of Lands.

From 1875, with the publication of the first annual report of the Department of Mines, an increasingly detailed set of statistics and reports dealing with death and injury in the coal mines of New South Wales became available. Before 1875 annual statistics of production and the value of production were published faithfully by the government in the *Statistical Register* and its predecessors, constituting a series stretching back to the 1820s. In a colony devoted to economic progress, neither government officials, nor the private sector paid much attention to fatal and non-fatal mine incidents, but were more concerned with profit.

Before 1875 for NSW the number of mine workers, essential for calculating the "accident rate", is available for only five years—1856, 1861 and 1869-1871, inclusive (We prefer to refer to incidence rate rather than accident rate as we do not support the notion of "accident" which in our opinion is an explanatory device which disguises contributory negligence by the government inspectorate, managers and mine workers; our usage of accident is for reasons of congruity with 19th and 20th century custom). Fatality figures are available for 11 years—1856-60, 1863, 1869, 1870 and 1872-1874, plus the first six months of 1861 and 1864. Figures for non-fatal injuries are available for only six years—1863, 1869, 1870, and 1872-1874, plus the first half of 1864. Consequently, very little is known about the accident rate before 1856. The record for the period, 1856-1874, is fragmentary, having to be reconstituted from figures in censuses, parliamentary select committee records and the few surviving reports of the inspectors of the Coal Fields Branch established in 1863—for 1863, the first half of 1864, 1869, 1870, and 1872-1874, and which were inconsistent in their reporting of employment, injuries, and deaths.

A continuous official annual series of the number of fatal and non fatal injuries in NSW coal mines can

be established from 1872. A similar series for the "accident rate" (accidents per thousand employees) can be constituted from 1875 on when regular annual employment figures began to appear in the reports of the Department of Mines. The fragmentary figures available for the period 1856 to 1871 indicate that around four mine workers were killed every year and another 15 or so were seriously injured. Between 1872 and 1912 776 workers died in NSW coal mines and at least another 3039 were seriously injured—an average of 19 deaths and 74 serious injuries a year.

British Columbia

As indicated above, figures for injuries and fatalities in British Columbia are far more scarce for the earlier years of coal mining and not as detailed from 1877, under the first CMRA, as they were in NSW for the next two decades or so for reasons explained below. However, annual tonnages of coal mined, dating back to 1836 to the infancy of coal mining when alluvial coal was gathered or mined and rudimentary mines with Indians as employees or owners produced coal, are readily available in the annual *Report of the Minister of Mines*. Before 1882, details of injuries do not appear to be available and for the first five years after the enactment of the CMRA in 1877 the number of miners injured were as follows; 1878, 7; 1879, 18; 1880, 13; 1881, 11: Fatalities were, 1878, 3; 1879, 12; 1880, 3; 1881, 1. The categorisation of serious and non-serious injuries was not available until 1887.

There was only one inspector until 1897 whose sole judgement decided the seriousness of reported injuries. Better detailed and accurate analyses of injuries are not available until after the enactment of the 1897 CMRA, although the same comparison is made of injury rates and type retrospective to 1889 in the *Report of the Minister of Mines* in 1897. The veracity of these and later retrospective figures is doubtful. To compare as closely with the injury and death rates of NSW as possible; from 1878 until 1881 more than four mine workers were killed every year and approximately 12 were injured. Between 1882 and 1912, 926 mine workers died in BC coal mines, and approximately 1095 were seriously injured; in other words, there was an annual average of nearly 30 deaths and more than 35 serious injuries during the period. In NSW, on the other hand, there was an average of 19 deaths and 74 serious injuries annually from 1872 to 1912.

These figures reveal the extreme hazards and potential loss of life for mine workers in BC. The rate of injury and death in fact was unacceptably high for both jurisdictions. Also, the poor reporting of injury and death in BC, as in NSW, should hardly be surprising considering the preoccupation with prospecting, assaying and "talking up" the coalmining industry as safe and a sound economic investment.

The Legislative Framework

New South Wales

Mining began at Newcastle with convict labour in the early years of the nineteenth century. From the 1820s, immigrant miners from Britain began to dominate the mining workforce. Production remained on a small scale for several decades. To 1829, a modest total of 50,780 tons had been raised; in the 1830s, annual average production stood at just over 11,000 tons, rising to about 35,000 tons in the 1840s.

The discovery of gold in NSW and Victoria in 1851 brought an end to convict transportation and attracted hundreds of thousands of gold seekers and immigrants to the Australian Colonies over the decade. Throughout the nineteenth century and into the twentieth, NSW enjoyed a virtual monopoly of Australian coal production and the growing national market. In addition, from the 1850s NSW coal was exported throughout the Australian and Asia-Pacific regions (in particular to San Francisco) as Britain and other European imperial powers consolidated and expanded their colonial possessions. During the early 1850s annual average production was nearly 84,000 tons, with output first exceeding 100,000 tons in 1854.

Until 1854 there were no government regulations for safety, leaving the matter up to the discretion of the coal owners and their workers. The expansion of investment and production, however, led to concerns about the potential for major "accidents" in larger and increasingly complex mines. In November 1854, recognising that "the Coal deposits of New South Wales are now being actively sought after and many of the known seams are now extensively worked to

satisfy the increasing demand for Coal," the NSW government passed an Act providing for the registration and inspection of the Colony's coal mines.[13]

Although the Act's preamble stated that one of its major aims was to "prevent accidents," its five short sections imposed only the mildest form of regulation on coal proprietors and their managers. Only one officer, an Examiner of Coal Mines, was appointed to implement the Act which, apart from the solitary reference in the preamble, was silent on safety. In fact, the Act specified inspection of mines only for the purpose of allowing the examiner to draft plans of their workings.

Assurances that the government was anxious to preserve the property rights of the Colony's emerging capitalists did not assuage the conservative minority. Robert Campbell, a wealthy merchant and Member for Sydney, asserted that "a very harsh species of supervision was to be exercised over persons dealing in coals."[14] He opposed any regulation of coal owners and particularly disliked what he perceived as interference from a government official empowered "to inspect at his pleasure the coal-fields throughout the country."[15]

Nonetheless, the government's intention was less the regulation of mining practice for the preservation of mine workers' lives than the attraction of mining, capital to the Colony. This was made clear by the duties assigned to the first Examiner of Coal Mines, William Keene. Keene was a geologist by profession and had managed mines in Britain and France. He was first employed by the NSW government in 1853 to survey iron ore deposits. Appointed Examiner in December 1854, his duties changed little. In 1862, as the NSW Parliament was about to enact a new coal mines Act, Keene reflected on his eight years as Examiner. "My position," he stated, "is not so much that of an inspector of mines as to advise the Government on the value of its mineral lands-industrial geology."[16] Consequently, Keene's work and reports dealt exclusively with the extent and quality of the coal seams of NSW, information essential for acquainting, mining investors with the Colony's potential for profit, not for understanding the dangers to miners.

The 1862 Act, which arose from pressure placed on the government by the Newcastle miners' union, shifted the emphasis to safety. The Act contained specific provisions—"General Rules" to be observed in all mines—relating to mining practice, including ventilation and the operation of machinery, among others. Inspectors were empowered not only to inspect mines thoroughly, but to issue defect notices and require proprietors to rectify defects or dangerous practices. Financial penalties could be imposed on recalcitrant mine owners and managers, including any who attempted to obstruct an inspector in the carrying out of his duties.

This shift toward safety considerations was an outcome of the strength of the miners' union, supplemented by the fact the NSW Parliament was one of the world's first to extend the franchise to propertyless adult males, in 1858. Even so, the new inspectors' duties remained split between safety and fostering investment in mining. Section 4 of the 1862 Act, which set out the duties of inspectors, gave equal emphasis to their responsibility for ensuring a safe working environment as to their responsibility for reporting "every discovery relating to the existence of coal or other minerals on Crown Lands."[17]

Other provisions of the Act served to weaken the power of inspectors to enforce safety. Where an inspector believed that management's mining practice had even the potential to "threaten or tend to the bodily injury of any person," he could require management to modify that practice. Management, however, retained the right to take the matter to an independent arbitrator appointed jointly by the responsible Minister[18] and the proprietor concerned; otherwise, each party could appoint their own arbitrator.[19] Inspectors could inspect, recommend, and warn, but could not, on their own initiative, demand that unsafe practices and equipment be corrected. This concession to property rights was instituted less to protect proprietors from tyrannical and arbitrary inspectors than to reassure potential investors that they were not at the mercy of state regulators.

This arbitration provision remained the single greatest weakness in the capacity of inspectors to eliminate dangerous practices in coal mines, and remained the core of subsequent coal mines acts after 1862-1876, 1896, 1902 and 1912. Those of 1876 and 1896 included more aspects of mining practice within the General Rules to be observed at all collieries and increased the penalties for breaches of the law. The duties and powers of the inspectorate, how-

ever, were unchanged. The Acts of 1902 and 1912 were not fresh. The 1902 Act was the 1896 Act with a table of contents added and the 1912 Act incorporated the provisions of a few minor amending acts passed after 1902.

The Bulli and Mount Kembla explosions of 1887 and 1902 generated pressure to increase the inspectorate's powers, particularly in relation to compelling management and men to replace naked lights with safety lamps. The Bulli disaster did inspire the passage of a new Coal Mines Regulation Act; this law, however, was a much diluted version of a bill prepared in 1887 which was delayed by conservative owners of capital in the Colony's Legislative Council. They gave way in 1896 only after a series of select committees and a royal commission produced a compromise bill acceptable to them.

The Mount Kembla disaster produced no legislative change. A royal commission and the Coal Fields Branch recommended a complete overhaul of the 1896 Act. In particular they argued that inspectors should have power to compel management to remedy defects and dangerous practices on the spot; the proprietors' resort to arbitration was to remain but could not be used to delay corrective action required by an inspector. The commission and the Branch also wanted any mine giving off gas, in any quantity, to be classified as "gassy" and for the Act to require such mines automatically to be worked with safety lamps. This requirement was too radical for the industry. The proprietors, who did not want the additional expense of buying and maintaining safety lamps, and the miners, who would have to work longer or harder under the poorer light of the safety lamp to maintain their piece rate earnings, joined to force Parliament to reject the proposal. Naked lights were not prohibited in NSW coal mines until 1941.

British Columbia

In many respects early coal mining in British Columbia shared antecedents with the experience in New South Wales. As in NSW, initially the regulation of safety was a private matter between coal owners and miners not overseen by the state. The fact that coal mining safety legislation was mooted later than in NSW was due to the later development of the industry in BC. Otherwise, the alienation of coalmining land to primarily British private capital, the introduction of British miners, management expertise, methods of mining and technology were almost identical. Similarly, parliamentary processes due to Liberal/Labor collaboration and miner agitation resulting in mining legislation,[20] mirrored those of NSW.

Production although beginning in 1836, was negligible at a total of 36,000 tons for the period 1836-1859. This and all other coal mining was conducted on Vancouver Island until 1897 when coal mining commenced in BC's southeastern region adjoining the border with Alberta. There was no convict labor on Vancouver Island, but, as indicated above, aboriginal labour was used in the earlier rudimentary outcrop mines until 1850, when the Hudson Bay Company hired a group of Lanarkshire miners after having begun mining with Amerindian labour in 1848.[21]

The proposed location of a British naval depot on Vancouver Island (VI) brought new opportunity as did the proximity of VI coal to the San Francisco market on the heels of the Californian goldrushes. Despite the geographic advantage of VI, NSW coal remained a significant competitor in the San Francisco market until the opening of the Panama Canal. Annual production of 100,000 tons in BC was not reached until 1875 and prior to 1874 in only one year, 1868, 44,000 tons was produced. By 1875 there were six mines on VI belonging to two major mining companies, - the Vancouver Coal Mining and Land Company operating five mines and the Dunsmuir family owned Wellington Colliery (although later some of the coal mines described as belonging to these owners were in reality no more than workings at different levels or seams with separate or common adits). There were 623 miners by 1875. The hewers were almost exclusively British and the off-hand (secondary) underground and pit-top labour were Amerindians and Chinese (and from 1892 Japanese.)[22] This facet of employment practice in BC was entirely different from that in NSW where nearly all labour was British or native-born European and, to our knowledge, no Aborigines were employed in NSW coalmines during the 19th century.

As in NSW, when legislation was first mooted and enacted, it had the dual concerns with attracting investment to expand the industry and the protection of investment offset by the necessity to protect life

and limb. Victoria Island miners were instrumental in getting safety legislation drafted in parliament, not by having a workingman elected, but by instead opting to put John Bryden, the manager of most of the Vancouver Coal Mining and Land Company's Nanaimo Collieries mines, in parliament in 1875 two years before the formation of the first union, the Miners' Mutual Protective Society at Nanaimo.[23] Clearly, VI miners, like their NSW counterparts, were not archetypal working class radicals. As in NSW, the bill was opposed in parliament. When it appeared that the act was going to pass, Bryden, even though he had been elected on a platform promising legislation like the British CMRA, ". . . moved quickly to have the act emasculated,"[24] according to John Douglas Bellshaw, apparently at the behest of coal mine proprietors who petitioned the British Columbia House of Assembly.[25]

The 1877 CMRA was like the NSW 1876 CMRA, "an Act to make Regulations with respect to Coal Mines." In other words, legislation intended to enforce safety. However, there was a significant difference between the acts relative to the inspectors' duties. In the NSW Act, the Department of Mines' dual functions were specified[26] as part of inspectors' duties as they had been in the 1862 Act. Significantly no mention was made in the 1877 CMRA of inspectors' geological functions.[27] Yet, in almost every report, the Minister of Mines made detailed comments to the Lieutenant-Governor of British Columbia on the success of the coal trade and prices. The minister's annual expectations of improvement and exhortations to achieve better trade and production was based on the inspectors' reports distributed throughout the *Reports of the Minister of Mines*. The content and direction of the CMRA and the minister's reports seem to assume the geological functions implicitly and are probably indicative of the mines inspectorate's and their department's ideological disposition.

There was only one inspector assigned to the entire province for the duration of the Act and the practice of "talking up" the industry was inherited from the pre-1877 era. The second annual *Report of the Minister of Mines*, 1875, recorded with apparent satisfaction the steadiness of the coal trade and the introduction of a diamond drill imported from the United Kingdom to prospect the coal seams of Vancouver island. The *Report* devoted approximately eight pages of its coal mining section to the exploration and drilling for coal and described the workings and machinery of the individual mines: Only a few lines for the then working colliery groups addressed the number of mine workers employed and there was no mention of safety requirements or of any death or injury. The first annual *Report of the Minister of Mines*, 1874 which we have not sighted gives full detail of the Vancouver Island "Coal Fields" based on ". . . copious extracts published from the Geological Reports of the Dominion of Canada."[28]

The first inspector appointed under the 1877 CMRA, Edward Gawler Prior, who later became Minister for Mines and then briefly Premier, was far less pre-occupied with the trade and test drilling and devoted much of his portion of the 1877 *Report of the Minister of Mines* to reporting poor safety practices by managers and safety deficiencies in the mines he inspected. Under the 1877 CMRA (as under the 1862 and 1876 NSW Acts) inspectors could "require" managers to "remedy" any "matter, thing or practice" deemed "to be dangerous or defective" but only in writing, and managers could object in writing for up to twenty-one days to the Minister even if the matter were to "threaten or tend to the bodily injury of any person."[29] In other words, even if an inspector found life threatening defects or practices, managers did not have to rectify the dangers immediately.

In addition to recourse to the Minister, managers also had extensive arbitration provisions at their disposal. The arbitration procedures under the 1877 CMRA were well defined and not reflected in NSW legislation until the 1896 CMRA because, as with the provisions for certification of managers' competencies, these had been successfully extirpated in Parliament from the 1876 Act. These potential limits to his powers, initially at least, did not deter Prior, who in his first report notified several managers of serious contraventions of the Act and returned some two weeks after the required twenty-one days to ensure that these notifications had been acted on.[30] Some of the obvious contraventions such as insufficient ventilation had been remedied, but for example Prior noted that,

. . . at none of the pits proper attention had

> been paid to clause 46, article 9, paragraph D, 'Coal Mines Regulation Act, 1876 [sic];' although in my notices to the Managers of the said Collieries, I had particularly requested them to see that by 30th November, 1877, the tools described in the said clause should be in general use.[31]

The infractions which caused Prior's concerns in this instance were particularly serious contraventions of shotfiring safety practice because the proper tools were not used and unsuitable implements heightened the likelihood of gas explosions and circumstances resulting in injury and death to individuals. In mines such as these, owing to faulting in the coal seams of VI, methane gas was always known to appear suddenly and in large quantities. In fact, the association of methane with faults or "dykes" was well known in Great Britain and in NSW too and was part of practical mining "know-how."[32] Yet, the Bulli explosion occurred because management and mine workers had disregarded safe shotfiring practice in a seam known to be particularly "gassy" and "dusty."[33] Similarly, it was well known that unsuitable tools such as iron or steel ramming rods prohibited under the Act "to drive home" the gunpowder charge in shotholes instead of a wooden, brass tipped rod were often associated with the unintended explosions of the unprimed shot causing the (six foot) iron rod to be propelled out of the shothole like a cannon projectile capable of killing or maiming the miner "charging the shot." Shotfiring, even when applied systematically, often did not always produce the desired effect, which owing to the exigencies of piece work and the intermittency of trade, was to bring the coal down in as large a quantity and as quickly as possible. Especially if a mine was "gassy," firing a shot was perhaps the most hazardous moment of the coalmining production cycle. Yet, using the wrong tools and resorting to other dangerous practices were commonplace. Other than mentioning that the managers had not attended to the notification of infringements Prior did not indicate that he would take additional action even though that he noted, "No 'special rules' have, as yet, been submitted to me, but I am informed that they are in course of compilation."[34] Owing to the unique geology of each mine special rules were (and are) essential to safety, and not compiling them was also a serious contravention of the Act and potentially endangered lives.

This lack of action was in part due to the impreciseness and ambiguities of the inspectors' powers as well as ambiguous and contradictory portions of the 1877 CMRA. For example, only willful obstruction of an inspector performing his duties was constituted a direct offence under the Act's Inspection Section. However, our research of coalmining primary sources over almost twenty years has not produced one instance of willful obstruction of an inspector by a manager; delaying tactics such as those described by Prior were the usual way. As under the NSW legislation, inspectors did not have power to prosecute managers, owners, or their agents; matters could only be referred to the convoluted arbitration process in court via the Minister's office. There were many ambiguities inherent in this and subsequent legislation. Rather than containing escape clauses like, "as soon as possible" or "whenever deemed necessary," the 1877 CMRA had ambiguous, contradictory, and imprecise phrases. Even so, evasion was provided by the arbitration process. We argue that as a result, in many respects, the legislation of BC and NSW was stillborn irrespective of the unevenness of their comprehensiveness on paper.

We have not yet been able to determine the length of Prior's incumbency nor the circumstances why he left because of the unavailability of 1877 *Report of the Minister of Mines.* By 1882, Archibald Dick became BC's only inspector for coal mines until 1897. Dick was not inclined to take on managers as Prior had. In fact, not in a single report of his was any manager even notified under either the 1877 or the 1897 act. Instead, Dick devoted much of his reports to "talking up" the industry, describing the condition of mines and machinery (which he was required to do), and declaring mines safe or attributing blame for "accidents" to miners, but never managers. For example, in the 1882 *Report of the Minister of Mines* he quoted verbatim portions of the hyperbole of "His Excellency the Marquis of Lorne, Governor-General of Canada" who during his stay at Nanaimo was fêted with a banquet.[35] Dick himself commented with satisfaction in another part of the *Report* ". . . on the prospecting done at Comox, by Mr. T. D. Jones, of Nanaimo, during the past year . . . it is to be hoped he will be successful in

finding such a seam of coal as will be a reward for his labour and outlay, and a boon for the district and country at large."[36]

Dick was, what has been described relative to the contemporary NSW coal mining context referring to one inspector, a "Mr Half-Safe", because he would never declare any deficiency in a mine unsafe, but rather when pressed he would say it was half-safe; nor would he cite any manager's malpractices as unsafe. In fact, the mines Dick inspected were always safe, unlike our contemporary inspector who declared them half-safe. Perhaps he was more like another 20th century NSW inspector who was known as Basenji because, as the safety watch-dog, he never barked. Perhaps, considering the inherent contradictions of legislation we have examined, the sobriquet is more apt than its original intention, because basenjis are unable to bark. In Dick's case this is highly unlikely. Three of the mines that he declared safe from "firedamp" and having good ventilation, had explosions which were the result of large accumulations of gas and caused multiple loss of life. For example, at the No. 3 Pit of the Wellington Colliery owned by the Dunsmuir family, where an explosion killed 23 men on June 30, 1884 Dick claimed in his report for 1884 on February 4, 1885, that,

> Great care has been taken here to prevent accident, either from an inflow of water, gas, or otherwise. Ventilation here is very good. . . The most of the air is taken up to the faces. . . I have often tested the current of air, and never found less than from 500 to 600 cubic feet per minute of air for each person working in the mine. . . This mine gives off a considerable quantity of gas, but it does not give much trouble. This is the mine where that terrible explosion occurred on the 30th of June; but since that time it has been very free from gas, so that with ordinary care on the part of all parties connected with this mine, this place should be free from accidents by explosion of gas, as the manager spares no expense to have the mine safe.[37]

Elsewhere in this report Dick absolved himself and management from blame and confirmed either an implicit belief in his own abilities in a fools' paradise or that he was inured to the normalisation of danger. The latter suggestion is less likely as Dick frequently throughout his reports spoke disparagingly of dangerous practices by workmen, but never by managers. A likely conclusion then is that Dick was a complicit actor in the conspiracy of complacency. His following claims seem to support this contention;

> All the above-mentioned works I have frequently inspected during the year. I found them generally in good order, with plenty of timber and every other thing that was necessary; and I may here say again, that on my inspection of No. 3 Pit Wellington colliery, previous to that memorable explosion, I never saw a mine in better order, and it did not appear in want of anything that was necessary.[38]

There are several inconsistencies in these excerpts from Dick's report; first, if all care had been taken to prevent "accidents" then the explosion would not have occurred; second, even though Dick conceded that the mine gave off considerable gas, if the ventilation was as strong and as well distributed as he reported, then the explosion could not have occurred. Similarly, Dick's claim that the manager spared no expense must be regarded with suspicion. Further, he regularly described ventilation as good; for example, every working mine in the 1884 Report had ventilation several times greater than the 100-cubic-feet per minute for every man and animal required under the Act,[39] yet there were nineteen more gas explosions that year: One of these resulted in two deaths, the others in either slight or serious injury.[40] One point is clear; there was always gas at the working faces, so that the ventilation could not have been as good as Dick claimed. The other point is that this frequency of gas explosions indicates a high potential for explosions with numerically high deaths. The number of deaths in explosions are really accidental; they are determined by the amount of gas, and the amount of dust, which if present magnifies the size and force of an explosion: The factor that ultimately determines the magnitude of life lost is the number of men who may or may not be in the pit at the time.

Even so, in performing their duty, inspectors in BC and NSW found themselves caught between the right of workers to leave their workplaces alive and

uninjured and the demands of profit. This fundamental aspect of the question was put nicely in an exchange at the royal commission into the Mount Kembla disaster between Bruce Smith, legal counsel for the Department of Mines and Charles Murray, the president of the commission. In the discussion of the recommendations submitted by the miners' unions the following exchange resulted;

> 4406. Mr. Bruce Smith.] . . . They appear to have taken into consideration all possible precautions for protecting the miners' lives but I think it is also necessary to think of the circumstances, and whether the industry might not possibly be strangled under these recommendations . . .
>
> 4407. His Honor.] What you say is, that in attempting to save life you may sacrifice the bread and butter which supports life.
>
> 4408. Mr. Bruce Smith.] Yes.[41]

Or, as the report of the royal commission appointed in 1895 to draft a coal mines bill acceptable to the conservatives in the Legislative Council who had stymied all proposals to change the 1876 legislation after the 1887 Bulli disaster, put it:

> The object and intention of an Act of Parliament regulating an industry are to ensure as far as possible the safety and well-being of the persons engaged therein, at the same time avoiding unnecessary interference with its managements.[42]

This was the question that lay at the heart of all attempts to deliver to the coal miners of NSW and BC their basic right of leaving their workplace each day with their bodies intact. This recurrent tension between the safety/production dichotomy became a contested terrain from the first attempts at regulatory legislation and remained so: After promoting investment in the industry how far would the state be allowed and be prepared to go in regulating the behaviour of owners of mining capital and (indeed of mine workers) yet maintain safety (and investment)? It is a question that addresses the issues of 1895, 1911 or 1912, and even today.

NOTES

1. By instrumentalities we mean any of the separate depar t-ments and other entities which are part of the state b u-reaucracy.
2. D. Dingsdag, "The Restructuring of the NSW Coalmining Industry 1903-1988" unpublished PhD Thesis, University of Wollongong, 1989 (Dingsdag PhD).
3. S. Piggin & H.Lee, *The Mt. Kembla Disaster*, Oxford University Press, Melbourne, 1992.
4. *vide* for example, Dingsdag op. cit.; D. Dingsdag, *The Bulli Mining Disaster 1887, Lessons from the past*, St Louis Press, Sydney, 1993 (Dingsdag Buili); and Piggin and Lee, *op. cit.*, p. 18.
5. Dingsdag PhD, pp. 51, 52.
6. *vide ibid.*, pp. 184-218.
7. *ibid.*, pp. 57, 58.
8. An Act to make Regulations with respect to Coal Mines, 40 Vic Ch 122, Section 40, [18 April 1877] (1877 CMRA).
9. *vide ibid.*; Dingsdag Buili.
10. The conventional acceptance of the disputatious nature of industrial relations in NSW coalmining literature is disputed by Dingsdag who claims that in fact the basis of rel a-tions between managers and mine workers was collabor a-tionist owing to mutually beneficial economic (and social) interests (*vide* Dingsdag PhD).
11. J. May, *Colliery Explosions, their cause and their prevention*, [nd, *circa* 1903].
12. Dingsdag Bulli, p. 82.
13. An Act for the Registration and Inspection of Coal Mines in the Colony of New South Wales, 18 Vic No 32 [Assent: 30 November 1854]. The quotation is from the Pr eamble to the Act.
14. Quoted in *Sydney Morning Herald*, 23 November 1854.
15. Quoted in The *Empire*, 23 November 1854.
16. Quoted in *Report From Re Select Committee On The Coal Fields Regulation Bill; Together With The Proceedings Of The Committee And Minutes Of Evidence*, Government Printer, Sydney, 1862, p. 35.
17. Coal Fields Regulation Act of 1862, 26 Vic No 17 [Assent: 20 December 1862].
18. In the NSW and Australian context, since the advent of "responsible govermnent" for the colonies in 1854, mini s-

ters were appointed to "cabinet" from the ranks of "popularly" elected members of parliament belonging to the government. Since Federation in 1901, when the colonies became states, appointments still occur usually after governments are elected when the Premier in conjunction with the Governor make them. In other words, ministers are only eligible for appointment after election to parliament unlike the USA practice. Their appointment generally gives them the responsibility for one government department in this particular instance, Department of Lands until its Coalfields Branch became a separate department in 1874. During the nineteenth century ministers were also known as secretaries and at times both terminologies were used simultaneously and interchangeably. British Columbia follows a similar practice in the appointment of ministers.

19. Coal Fields Regulation Act of 1862, 26 Vic No 17 [Assent: 20 December 18621, section 14.
20. vide for example, J. D. Belshaw, 'The British Collier in British Columbia: Another Archetype Reconsidered', *Labour/Le Travail*, (Bellshaw Le Travail).
21. J. D. Belshaw, 'Mining Technique And Social division On Vancouver Island, 1848-1900', *British Journal of Canadian Studies*, Volume 1, Number I, June 1986, p. 48, pp. 53, 54 (Bellshaw Canadian Studies); H. K. Ralston, Miners and Managers: The Organization of Coal Production on Vancouver Island by the Hudson Bay Company, 1848-1862, E. B. Norcross (ed), *The Company on the Coast*, Nanaimo Historical Society, 1983, pp. 43 -46.
22. *Report of the Minister of Mines* 1875, p. 621; viz . 396 Whites [*sic*], 176 Chinese and 51 Indians [*sic*]: As an indication of the rapid expansion (but see-sawing employment levels) of the industry there were 200 more mine workers than in the previous year, *vide* p. 621.
23. Bellshaw *Le Travail*, pp. 18, 22.
24. *ibid.*, p. 22.
25. *loc. cit.*
26. An Act to make better provision for the Regulation of Coal Mines and Collieries, 39 Vic No 31, Section 4. [11 May 1876].
27. vide 1877 CMRA, Section 38-43.
28. *Report of the Minister of Mines for the year 1875*, p. 616.
29. 1877 CMRA, Section 41.
30. *Report of the Minister of Mines for the year 1877*, pp. 410-412.
31. *ibid.*, p. 412.
32. *vide* Dingsdag Bulli for example.
33. *vide* Dingsdag Bulli.
34. -
35. *Report of the Minister of Mines for the year 1882*, p. 364.
36. *ibid.*, p. 368.
37. *Report of the Minister of Mines for the year 1884*, pp. 429, 430.
38. *ibid.*, p. 431.
39. *ibid.*, pp. 426-431.
40. *ibid.*, pp. 432-434.
41. Quoted by Piggin & Lee, *op. cit.*, p. 229.
42. *Coal-Mining Regulation Bill. Report of the Royal Commission*, Government Printer, Sydney 1895, p. 2.