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**'A System of Industrial Hygiene': The
Commonwealth Government and Occupational Health, 1921-1932**

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Declaration

**Except where otherwise indicated
this thesis is my own work.**

May 1990

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Any errors of omission and fact are of course entirely my own.

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Introduction

With regard to industrial hygiene, it is, I think, correct to say that ... until this Department established a system of industrial hygiene the field was practically untouched.¹

In recent years occupational health has emerged as a major public issue. Specific problems such as repetition strain injury (RSI) and asbestosis have received widespread media attention; unions have been more active in addressing health and safety issues; and the escalating financial and human costs of work-related disease and injury have led the Commonwealth and many State governments to overhaul health and safety and workers' compensation legislation. Perhaps most significantly, in 1984 the Hawke Labor Government established the National Occupational Health and Safety Commission (NOHSC) to co-ordinate a national strategy for improved occupational health.²

These moves have rightly been seen as initial steps in remedying a long neglect of occupational health in Australian social policy. Gunningham for one has suggested that until recently little has changed in terms of public regulation of occupational health since the introduction of factory legislation in the late nineteenth century: 'Not until the 1970s was any attempt made to reassess the nature and role of safety legislation in Australia'.³ Similarly, Bates and Linder-Pelz in their overview of health services in Australia assert that occupational health 'did not become a political issue in Australia until after World War Two'.⁴

There was a period, however, when occupational health did become a political issue for both Commonwealth and State governments. In the 1920s there were major occupational health achievements in a number of areas. Vast strides were made in cleaning-up the dust diseases which had been rampant in many sectors of the mining industry for the past twenty years; supervision of the health of Commonwealth employees was introduced for the first time; and in the maritime industry a comprehensive system of Commonwealth regulation of health and safety was put in place. Attempts were also made to address the issue of the health of women workers and to co-ordinate State and Commonwealth approaches to national standard setting for occupational health. At the State level there were improvements in compensation for occupational disease and injury and the regulation of workplaces.

¹J.H.L. Cumpston, Permanent Head, Commonwealth Health Department, *Royal Commission on Health, Minutes of Evidence*, Canberra, 1926, Qu. 152.

²A good summary of the recent rise of union and government action on occupational health is provided in J. Matthews, *Health and Safety at Work: Australian Trade Union Safety Representatives Handbook*, Sydney, 1985, pp. 11-31.

³Neil Gunningham, *Safeguarding the Worker: the Role of the Law*, Sydney, 1984, p. 71.

⁴E. Bates and S. Linder-Pelz, *Health Care Issues*, Sydney, 1987, p. 144. Precisely when, after World War Two, they do not indicate.

Commonwealth intervention was critical in facilitating many of these changes. In 1921, with the approval of the States, the Nationalist Government led by W.M. Hughes created a Commonwealth Department of Health. One of the inaugural functions of the new Department was the 'investigation of all factors affecting health in industry'.⁵ In order to carry out this work the Industrial Hygiene Division (IHD) and a number of occupational health laboratories were set up.⁶ The Division and the laboratories were not the only elements of the Health Department with occupational health responsibilities. A Marine Hygiene Division was instituted to enforce sweeping health and safety provisions for Commonwealth shipping and a Tropical Hygiene Division was formed with a vague charter to improve public health in the tropical north so as to ensure its development by a 'working white race'.

Both these latter measures, however, largely built on previous Commonwealth activity and policy. The IHD, on the other hand, represented an entirely new direction for the Commonwealth. For the first time the Commonwealth was actively involved in promoting occupational health in Australian industry - an area of responsibility assumed to be a prerogative of the States. This Commonwealth role was to persist until 1932 when, as a Depression economy measure, the IHD was abolished and other Commonwealth occupational health activities scaled down.

This thesis is a study of the reasons for the Commonwealth's decision to intervene in the field of occupational health in 1921 and of the scope and results of that intervention up until the the IHD's untimely demise in 1932. As such it is essentially a study in public policy. I have examined the forces and events which were responsible for a particular form of government intervention and I have also examined the consequences of that intervention in terms of the original objectives behind it.

It is my conclusion that there were valuable reforms and that the Commonwealth played an important role in facilitating them.

My focus is on the Commonwealth role in occupational health. I do not consider in any detail the States' extensive health and safety responsibilities, through their factory inspection and workers' compensation systems. State activity is only touched on insofar as it influenced or involved the Commonwealth. To date, the States' role in occupational health has received negligible attention from historians and it would be a major task to redress this situation.

Nor is my study intended to be a social history of occupational health. Although the problems of some groups of workers - e.g. miners - are considered at length, the emphasis is on Commonwealth policy and

⁵*Commonwealth Gazette*, 3 February 1921.

⁶A note on terminology - in the period in question, the term 'industrial hygiene' was usually understood to mean the prevention of sickness and accidents at work. As such it signified basically the same set of practices covered today by the term 'occupational health and safety'. The latter term has generally been used throughout this thesis. See D.G. Robertson, *The Scope of Industrial Hygiene*, Melbourne, 1922.

activity. It must be said however, that the social impact of work-related illness and injury has also received little attention. There is clearly a need for studies of health problems in particular industries and of the various means of dealing with occupational health problems such as friendly societies, out-patients services and workers' compensation.

Finally, it should be noted that this is not a history of all Commonwealth occupational health activities during the 1920s. In order to concentrate on the most distinctive aspect of Commonwealth activity - the Industrial Hygiene Division - other areas of Commonwealth involvement have not been dealt with. Chief among these is the changing attitude to health and safety issues in the work of the Commonwealth Arbitration Court - a development which I mention but do not explore at any length. Nor do I consider the implementation of new health and safety provisions in the maritime industry, administered by the Health Department's Marine Hygiene Division (a brief outline of the development and subsequent implementation of this ambitious scheme is provided in *Appendix A*). Despite these omissions I believe that an examination of the work of the IHD provides the best insight into the state of occupational health activity during the 1920s.

Chapter One deals first with Commonwealth and State responsibility for occupational health before 1921. The bulk of the chapter considers the familiarity of the medical profession with occupational health issues and its role through the public health lobby in persuading the Commonwealth Government to create the Health Department. The activities of Dr J.H.L. (John) Cumpston, the top Commonwealth Health official, and of the Rockefeller's International Health Board (IHB), receive particular attention here as both were critical in ensuring Commonwealth action.

Chapter Two examines the role of the long-standing dust disease problem in the mining industry in prompting Commonwealth intervention. While the massive Broken Hill dispute of 1919-20 was the primary impetus behind Commonwealth intervention, there were also dust disease problems in Western Australia and Victoria which needed to be addressed. It will be seen that the 'progressive' Collins House companies, troubled by health problems at their Port Pirie lead smelters and Broken Hill mines, also appear to have played an important part in eliciting Commonwealth action.

The first part of Chapter Three investigates the development of government concern about the health of working women and the influence of the National Council of Women on the establishment of the IHD. The second part considers how war-time research into occupational health and the growth of interest in industrial welfare work facilitated greater government and employer interest in health at work after the First World War.

In Chapters Four and Five the policy framework and activities of the IHD are outlined and analysed. The successful tackling of health problems in the metal mining industry is dealt with separately in Chapter Six.

That chapter covers the work at Broken Hill, Kalgoorlie, Bendigo, among Sydney's rockchoppers and in Tasmania.

In Chapter Seven, the gradual winding up of the IHD is outlined and reviews of the IHD's performance over the past decade are examined. An Epilogue places the work of the IHD in the perspective of subsequent Commonwealth involvement in occupational health, i.e. during the 1940s and 1980s.

This study relies principally on four sets of sources. First, and most important, are the records of the Commonwealth Department of Health. Most of the files of the IHD are extant. Next in importance are the minutes of evidence of the Royal Commissions on Health (1925) and National Insurance (1923-7). These are invaluable sources of information on health services and activities during the 1920s and include a significant amount of material on occupational health.

Thirdly there is the Health Department's own bulletin, *Health*, published from 1923 which provides further material on Health Department activities as well as a range of articles by doctors and industrial hygienists.

Finally there are the Department's own Service publications, which included a series issued by the IHD, covering such things as the concept of industrial hygiene and the results of specific investigations carried out by the Division.

These sources, of course, have been supplemented where possible with Parliamentary Papers, newspapers, journals and other material.

There is little secondary material dealing with occupational health in Australian history,⁷ let alone the Commonwealth role in the 1920s. However, there are some accounts of the work of the IHD which were of assistance in defining the the scope of this study. Most notable are those of Smith, Gandevia and Thame.⁸ More recently, Richard Gillepsie has published a survey of the Commonwealth role in occupational health from the creation of the IHD up until the Second World War.⁹

⁷For a useful overview of such literature see L. Layman, 'The Study of Occupational Health', *Labour History*, no. 52, May 1987, pp. 1-14.

⁸G.C. Smith, 'Some Historical Developments in Occupational Health in Australia', *Medical Journal of Australia (MJA)*, 1 March 1969, p. 477-9; B. Gandevia, 'Occupation and Disease in Australia since 1788', *Bulletin of the Postgraduate Committee in Medicine*, vol. 27, no. 9, December 1971, pp. 217-9; C. Thame, 'Health and the State: The Development of Collective Responsibility for Health Care in Australia in the First Half of the Twentieth Century', Ph.D Thesis, ANU, 1974, pp. 242-9.

⁹R. Gillepsie, 'The Limits of Industrial Hygiene: Commonwealth Government Initiatives in Occupational Health, 1921-1948', in H. Attwood and G. Kenny (eds), *Reflections on Medical History and Health in Australia*, Melbourne, 1987, pp. 101-20.

Chapter 1

The Public Health Lobby and Occupational Health

It was largely through the efforts of the public health lobby that a Commonwealth Health Department with specific occupational health functions was created in 1921. The First World War was an important catalyst in this process. The need to provide military medical services on a scale never before contemplated had a significant effect on the medical profession and the Commonwealth Government. Both became more sympathetic to the notion of state intervention in public health in the interests of national welfare. In the post war period health bureaucrats seized on this mood and sought to canalize it into support for an extended health role for the Commonwealth. Action on occupational health was deemed an important part of this extended role.

This chapter will examine the familiarity of the medical profession with occupational health issues, with particular focus on the attitudes and activities of Dr John Cumpston. Cumpston had considerable experience of occupational health issues and played a critical role in the creation of the Health Department. The process behind the creation of the Commonwealth Department of Health will then be considered. To begin with, however, it is necessary to outline provision for occupational health prior to Commonwealth intervention in 1921 in order to place the Commonwealth's initiative in historical context.

Provision for Occupational Health Before 1921

Before the establishment of the Department of Health in 1921, Commonwealth involvement in the field of occupational health had been sporadic at best. This limited role was in the main a consequence of the relative lack of Commonwealth constitutional power over health and industrial conditions. The States, on the other hand, had explicit powers under their Constitutions for public health, industrial conditions, and social welfare. They were responsible for the regulation of the majority of the nation's workplaces through their various combinations of factory inspectorates, arbitration courts and wages boards. They were also responsible for the conduct of workers' compensation schemes, friendly societies and medical services. It is only in the context of these significant State responsibilities that the distinctive aspects of the Commonwealth role from 1921 can be assessed.

Colonial action on occupational health was limited until the latter part of the nineteenth century which

saw a quickening of industrial development.¹ The first colonial Factory Act was introduced in 1873 to deal with abuses of women in the clothing industry of the Victorian provincial centre of Ballarat. This legislation was gradually refined and extended in subsequent decades.² Following the lead of Victoria, similar legislation had been introduced in all States by 1910.

The basic function of factory legislation was to regulate conditions of employment. The legislation covered such things as the provision of basic information, safety measures including machinery guards, sanitary conditions, the hours of certain workers, and notification of certain injuries including all fatal accidents. These provisions were enforced by state inspectorates with inspectors able to visit workplaces at will, order improvements and prosecute employers for breaches of regulations under the Act.

Overview literature is lacking on the record of the State factory inspection systems, but almost certainly they suffered most of the problems experienced by their British counterpart.³ Under the British factory inspection system fines were low, the courts unsympathetic, and the powers of inspectors minimal. The general attitude of the inspectorate was to persuade, not to punish, and a relatively small number of inspectors were usually responsible for a large number of workplaces.⁴ Indeed, Bartrip and Burman have argued that the factory inspection was not critical in the decline in the fatal accident rate towards the end of the nineteenth century. They conclude that a combination of factors including protective legislation, inspection, improved education, and increasing investment in human capital explain the decline.⁵ Nevertheless, despite its inadequacies, factory legislation and inspection did gradually ensure the establishment of a certain minimum level of conditions in industry. An examination of factory inspectors' annual reports in say New South Wales and Victoria reveals that a similar process took place in Australia.

While Australian factory legislation followed British precedents fairly faithfully, it did differ in a couple of important respects. For a start there was no provision for medical regulation of the workplace. In Britain during the 1890s a Chief Inspector of Factories with medical qualifications had been appointed and

¹Early provision for occupational health is well-covered in Bryan Gandevia's pioneering essay, 'Occupation and Disease', *Bulletin of the Postgraduate Committee in Medicine*, vol. 27, nos. 8-9, November-December 1971, pp. 157-228.

²On early Victorian legislation see E. Fry, 'The Condition of the Wage Earning Class in Australia in the 1880s', Ph.D Thesis, ANU, Canberra, 1956, pp. 155-64; see also J. Hagan, 'Employers, Trade Unions and the First Factory Acts', *Labour History*, no. 7, 1964, pp. 3-10; the best overview of the development of nineteenth century factory legislation is contained in N. Gunningham, *Safeguarding the Worker: The Role of Law*, Sydney, 1984, pp. 65-74.

³See Gunningham's discussion in *Safeguarding the Worker*, p. 71, and pp. 88-9; also, the instructive account of the conditions encountered by the NSW inspectorate as its jurisdiction was progressively extended throughout the State in *NSW Industrial Gazette*, February 1913. Unfortunately there have been no studies of the effectiveness of Australian factory inspection systems since they were put in place by the first decade of this century. There have been no analyses of prosecution rates, effects on conditions, accident rates, or the attitudes of the inspectors, labour and employers. The only work that may be of relevance has been that on enforcement practice during the 1970s which appears to show that the situation, in some respects, has not changed much; see J. Braithwaite and P. Grabovsky, *Occupational Health and Safety Enforcement in Australia*, Canberra, 1985.

⁴On the inadequacies of the British system see for example P.W.J. Bartrip and S. Burman, *The Wounded Soldiers of Industry: Industrial Compensation Policy 1883-97*, Oxford, 1983, chapter 3; and W.G. Carson, 'The Conventionalisation of Early Factory Crime', *International Journal for the Sociology of Law*, vol. 7, no. 1, 1979, pp. 31-60.

⁵Bartrip and Burman, *Wounded Soldiers of Industry*, p. 53.

later, a special position, Medical Inspector of Factories, was created to serve as the basis for an extensive Factory Medical Service.⁶ Medical officers were not used by any Australian factory inspectorates until the 1920s. At most a public health officer would be asked to examine a specific problem. The other important difference was the linking of factory inspection systems in the colonies with wage determination mechanisms which commenced with the creation of Wages Boards in Victoria in 1896. These tribunals could set wages and conditions in selected industries. In 1901, New South Wales set up an Arbitration Court to exercise similar functions. Other States followed one or other and sometimes even both of these models over the next decade. The factory inspectorates were also responsible for enforcing the Awards governing wages and conditions handed down by these tribunals.

Regulation of conditions in the mining industry more or less proceeded apace with factory legislation, again mostly modelled on British precedents. Commencing in the 1870s, regulatory legislation was developed to cover metal (e.g. gold, silver) and coal mines. Inspectorates under State Mines Departments were instituted to police conditions and conduct inquiries.⁷ In some States, conditions in a few other industries were also the subject of regulation under specific legislation. The most obvious example is the the pastoral industry.⁸

Complementing legislative regulation of the workplace were the various State workers' compensation systems. Workers' compensation was largely introduced to give employers an added financial incentive for safety consciousness and to provide income support for those injured at work.⁹

Legislation, based variously on the British Acts of 1897 and 1906, had been introduced in all States by 1914. Western Australia legislated in 1902, Queensland in 1905, New South Wales and Tasmania in 1910, South Australia in 1911 and Victoria in 1914.¹⁰ In some States legislation was only passed after long struggles on the part of the Labor Party. In many cases effective legislation was not in place until after the

⁶See Wohl, *Endangered Lives: Public Health in Victorian Britain*, London, 1983, pp. 260-4; D. Hunter, *Health in Industry*, Harmondsworth, 1959, pp. 48-51.

⁷On NSW metal mines see J.H. Burford, 'Mining and Legislation and the New South Wales Department of Mines', in M. Radmanovich and J.T. Woodcock (eds), *Broken Hill Mines - 1968*, Melbourne, 1968, pp. 510-1. On the development of coal-mining legislation in NSW see R. Gollan, *The Coal Miners of New South Wales*, Melbourne, 1963. For a study of the role of coal mining accidents as catalysts for legislative reform see A. Hopkins, 'Why Coal Mines Regulations are not Enforced', in R. Tomasic (ed.), *Business Regulation in Australia*, Sydney, 1984, pp. 351-68.

⁸See 'Labour Laws - Table of Statutes in Force in Australian States, 1917', *Commonwealth Yearbook*, no. 11, 1918, pp. 991-2.

⁹The world's first worker's compensation legislation, the British Act of 1897, was the result of a sustained campaign to circumvent the restrictive approach of the courts to common law suits for damages for injury at work. Employer's liability legislation, introduced in 1880, gave an employee a right to claim damages in certain circumstances. The 1897 Compensation Act went one step further in introducing the concept of 'no fault' compensation which entitled the injured worker to a certain level of income support. For detailed studies of this legislation see A. Wilson and H. Levy, *Workmen's Compensation: Volume One: Social and Political Developments*, London, 1939; Bartrip and Burman, *Wounded Soldiers of Industry*; D.G. Hanes, *The First British Workmen's Compensation Act, 1897*, New Haven and London, 1968.

¹⁰Employers Liability Acts, modelled on the British legislation, preceded compensation legislation in all States - NSW (1882), South Australia (1884), Victoria and Queensland (1886), Western Australia (1894) and Tasmania (1895); Fry, 'The Condition of the Wage Earning Class in Australia', p. 201 and 'Laws Relating to Conditions of Labour', *Commonwealth Yearbook*, Melbourne, 1922, pp. 857-8. A succinct discussion of the development of employers' liability legislation is contained in A. Merriitt, *Guidebook to Occupational Health and Safety Laws*, 2nd edition, North Ryde, 1986, pp. 44-52.

First World War.¹¹ Generally coverage was inadequate, only half wages were paid for non-fatal injury, payment was usually only made if incapacity lasted for more than a certain number of days (in some cases a minimum of a week), and then there were medical, insurance and legal procedures to deal with.¹²

Despite the income support available through workers' compensation, it must be remembered that provision for work-related injury and illness remained, for the most workers, an individual responsibility. Friendly societies were a significant source of care, if mainly for the better off worker. In 1921 approximately 500,000 workers belonged friendly societies with nearly one third of the total population of some five and a half million being eligible for benefits.¹³ They provided basic medical care from a lodge doctor (i.e. engaged on a contract basis) in return for a weekly contribution. Individuals or families could be covered.¹⁴ In some occupations accident and/or sickness benefits were available on a contributory basis. These schemes were usually conducted by unions but in some instances employers contributed. Some employers also assisted with friendly society dues or subsidised a bed for employees in the local hospital. The poorer worker without access to such services had to make do with charity from a local doctor or public hospital (e.g. out-patient services).

Commonwealth involvement in occupational health before 1921 stemmed largely from its arbitration and conciliation power. The Commonwealth Arbitration Court, established in 1904, had the power to deal with all aspects of working conditions provided an interstate dispute was involved. Like its State counterparts, the Court was mainly concerned with disputes about wages. However, its wage determinations were made in the context of careful consideration of actual working conditions and many awards laid down in detail the working conditions which were to apply. Nevertheless, before the 1920s, awards appear to have contained few specific health and safety provisions. The Commonwealth Arbitration inspectorate, which policed awards, was in fact another factory inspectorate superimposed at points over those of the States. Its role as an arbiter of working conditions became progressively more important as Commonwealth coverage of the workforce increased.

Commonwealth attempts to extend its control over working conditions nationally through referendums in

¹¹See J. Hull, 'The Development of the Need and Desire for Workers' Compensation in England, New South Wales and Victoria, 1837-1915', BA(Hons) Thesis, ANU, Canberra, 1973, pp. 51-67 and on NSW specifically, G. Cass, *Workers' Benefit or Employers' Burden: Workers' Compensation in New South Wales, 1880-1926*, Sydney, 1983.

¹²Provisions of early legislation for all States are set out in 'Conspectus of Workmen's Compensation Acts in Australia', *Commonwealth Yearbook*, no. 15, 1922, pp. 860-3. So far as I can determine, apart from Cass and Hull and a number of legal summaries nothing has been written on the historical experience of workers' compensation systems in Australia.

¹³*Commonwealth Yearbook*, no. 16, 1923, p. 447.

¹⁴A valuable insight into the activities of friendly societies can be gained from evidence submitted to the Royal Commission on National Insurance, *Royal Commission on National Insurance, Minutes of Evidence, Casual Sickness, Permanent Invalidity, Maternity, Old Age*, Melbourne, 1925 (hereafter *National Insurance*, Qu. 5-1027. See also D. Green and L. Cromwell, *Mutual Aid or Welfare State: Australia's Friendly Societies*, North Sydney, 1984.

1911 and 1913 were unsuccessful.¹⁵ As a result, Commonwealth ability to address occupational health and safety issues, outside the jurisdiction of the Arbitration Court, was generally only possible through the use of legislation in specific instances. The Navigation Act of 1913, for example, required conditions of employment better than those in most other countries' merchant fleets (although the Act was not brought into force until after the War due first to British merchants' opposition and then the War itself).¹⁶ Earlier, in 1909, the Federal Labor Government had enacted the Commonwealth Government's first workers' compensation legislation, the Seamen's Compensation Act, which provided for compulsory insurance against industrial accident and disease for employees on ships under Commonwealth jurisdiction. This measure was invalidated in 1910 by the High Court because it purported to cover intra-state shipping which was deemed outside Commonwealth jurisdiction. The legislation was re-enacted in 1911 and confined to inter-state and international shipping.¹⁷

The Commonwealth was also responsible for the health of its own employees. Regulation of working conditions was addressed in the the Posts and Telegraph Act, 1901, and the Commonwealth Public Service Act, 1902. In 1912 a system of workers' compensation was introduced in respect of all Commonwealth employees and all employees in Federal territories.¹⁸

Although Commonwealth ability to regulate industrial conditions was limited, it did, however, have a significant role in providing income support for many who had been incapacitated by their occupations. Responsibility for the payment of old age pensions was assumed in 1908 and invalidity pensions in 1910. Both these pensions assisted many who were either worn out or injured by their occupations.¹⁹ With these payments, especially the latter, the Commonwealth acquired its first direct financial interest in the level of public health and the provision of health services (aside from control of its territories), both of which were pre-eminently State functions.²⁰ The cost of invalidity benefits was to be a continuing concern for the Commonwealth and played some role in generating interest in better occupational health practices.²¹

The 1912 Maternity Allowances Act, introduced by the Fisher Labor Government, was another step by the Commonwealth towards direct responsibility for the health of the population. The £5 grant was not

¹⁵G. Sawyer, *Australian Federal Politics and Law, 1901-1929*, Melbourne, 1956, pp. 98-9.

¹⁶*Ibid.*, p. 93.

¹⁷*Ibid.*, p. 95, 108.

¹⁸*Ibid.*, p. 93.

¹⁹New South Wales, Victoria and Queensland had introduced age pensions in 1900, 1900, and 1907 respectively. New South Wales had introduced invalidity pensions in 1908. All of these schemes were subsumed in the Commonwealth schemes. On the Commonwealth assumption of old-age and invalidity pensions see Kewley, *Social Security in Australia*, Sydney, 1965, pp. 64-83, 90-5.

²⁰A.H. Birch, *Federalism, Finance and Social Legislation in Canada, Australia, and the United States*, Oxford, 1955, p. 206.

²¹This concern was first manifest in an inquiry in 1913 by the Commonwealth Statistician into the 'disturbing increase in the number of recipients'; Kewley, *Social Security*, p. 93; see also A. Jordan, *Permanent Incapacity: Invalid Pension in Australia*, Research Paper No. 23, Department of Social Security, Canberra, 1984, for a history of the administration of invalidity benefits.

means-tested and was meant to assist with medical attention at the birth of the first child.²² In years to come, the trend towards smaller families continued to focus attention on women's reproductive capacities and the aspects of the home and working environment which appeared to affect them. This direct Commonwealth grant relied on Section 81 of the Constitution which permitted expenditure from consolidated revenue for 'the purposes of the Commonwealth'.²³

The Maternity Allowance itself was part of a broader interest in the introduction of a comprehensive social insurance system which would cover accident, sickness, maternity and unemployment. The Liberals had commenced inquiries in 1909 and had advocated a scheme in 1910. In September 1911, just after Lloyd George's National Insurance scheme had passed through the British Parliament, Labor said it too was considering a scheme. At the January 1912 Labor Party Conference there was considerable debate on the subject.

Following the introduction of the Maternity Allowance legislation the Liberals committed themselves to a comprehensive insurance system which would include provision for sickness and medical benefits.²⁴ However, any further consideration of such schemes was effectively scotched by the outbreak of war.

The only explicit Commonwealth health power provided for under the Constitution was a concurrent one over quarantine. The Commonwealth only assumed the quarantine power in 1908 with the passing of the Quarantine Act. Up until this time the States had had the field to themselves. It was largely through the quarantine power that the Commonwealth managed to extend its role in the health field to the point where it was able to address the issue of occupational health.

The Medical Profession and Occupational Health

The most important figure in the public health lobby for the extension of the Commonwealth's health role was Dr John Cumpston, Director of the Quarantine Service from 1913. In this position he was the most senior Commonwealth health official and as such he became the Director-General (Permanent Head) of the new Commonwealth Health Department in 1921.²⁵

Cumpston confronted the issue of occupational health a number of times early in his career. Perhaps his

²²Dickey, *No Charity There: A Short History of Social Welfare in Australia*, Melbourne, 1980, pp. 126-7; Kewley, *Social Security*, pp. 103-9.

²³R. Mendelsohn, *The Condition of the People: Social Welfare in Australia, 1900-1975*, Sydney, 1979, p. 38.

²⁴Covered in Kewley, *Social Welfare*, pp. 99-110.

²⁵Cumpston's father was a commercial traveller in soft goods and a lay Methodist preacher, his mother a noted philanthropist who was involved in establishing one of Australia's first kindergartens. On Cumpston's career see 'Obituary', *MJA*, 9 October 1954; A.G. Cumpston (his son), *The Life and Work of Dr John Howard Lidgett Cumpston*, Address delivered before the Royal Australian College of Physicians, 15 July 1981 [Held in Commonwealth Department of Community Services and Health Library]; M. Roe, *Nine Australian Progressives*, Melbourne, 1984, pp. 118-54; the biography by his daughter M. Spencer, *J.H.L. Cumpston 1880-1954: A Biography*, Tenterfield, 1987; and M. Lewis, 'Editor's Introduction', to J. Cumpston, *Health and Disease in Australia: A History*, Canberra, 1989, pp. 1-23.

first experience of the subject was as a visitor to close family friends the Walpoles while a medical student. George Walpole was a general practitioner in the copper town of Queenstown in Tasmania. Walpole's practice revolved around the Mount Lyell miners and their families.²⁶ After graduating from the Melbourne Medical School in 1904 Cumpston signed on as a ship's surgeon for a trip through South East Asia to Japan; thus began his intimate knowledge of maritime working conditions which was to be put to good effect later in his career.

The trip was, in fact, a turning point for Cumpston. During a stop at Manilla he observed the sanitary work of the new United States administration (the United States had wrested control of the Philippines from the Spanish in the Spanish-American War of 1898). He was extremely impressed with the work of United States Public Health Service officials, Dr Richard Story and Dr Victor G. Heiser, especially in relation to the prevention of cholera and smallpox. Cumpston became convinced at this time that prevention and even eradication of disease were attainable goals.²⁷ He was also aware of the preventive health work of General William Gorgas in Cuba. Gorgas had been prominent in a campaign against yellow fever in Cuba after the Spanish-American War, and in 1904 had been brought in to conduct a similar campaign in Panama to facilitate the building of the Panama canal. Although the full extent of his success in Panama was only to become apparent later (the Canal was opened in 1914), his work was already considered to be an impressive demonstration of the economic benefits of preventive health measures.²⁸

Cumpston returned to Australia only to sign on again as a ship's surgeon; this time in order to travel to London. There, in 1906, he obtained his Diploma of Public Health. He apparently interested himself in occupational diseases during his studies.²⁹ Afterwards he spent some time at the Western District Fever Hospital at Fulham to improve his knowledge of preventive medicine. He then visited the Continent briefly. He was fortunate in being able to attend the International Conference on Infant Welfare in Brussels and the 14th International Conference of Hygiene and Demography in Berlin which was attended by 3000 leading specialists from all over the world. While at the latter he attended an exhibition 'designed to teach the working classes how to take care of their health'.³⁰ On his return from Europe Cumpston was appointed a Medical Officer with the West Australian Board of Health. There he remained for three years carrying out the full range of public health duties.

In January 1910 he was told by the Secretary to the Premier's Department that he would chair a Royal

²⁶Spencer, *Cumpston*, pp. 42-3, 46, 59-60.

²⁷Cumpston, *John Howard Lidgett Cumpston*, p. 6; Spencer, *Cumpston*, p. 72; both A.G. Cumpston's paper and Spencer's biography are based in large part on Cumpston's own papers and letters.

²⁸For a short account of Gorgas' achievements and reputation see H.H. Scott, *A History of Tropical Medicine*, vol. II, London, 1939, pp. 1037-57.

²⁹Spencer, *Cumpston*, p. 87.

³⁰*Ibid.*

Commission into miners' lung disease, then prevalent in the gold mining industry (he was appointed by the Newton Moore Liberal ministry). It was expected that a larger Commission would then be appointed to examine appropriate preventive measures.³¹ The Labor Party suggested Cumpston be responsible for both investigations but the Minister for Mines, Henry Gregory, preferred that Cumpston conduct a more limited preliminary investigation. Given a choice, Cumpston opted for the more manageable, limited approach. His terms of reference required him to inquire into: the prevalence amongst miners of pulmonary diseases; the nature of such diseases; and the extent to which they were associated with or consequent on mining.³² Cumpston travelled throughout the State's mining areas examining hundreds of men and making extensive observations underground. He did not, however, have the benefit of X-ray as there was no adequate plant in Western Australia at that time.

Cumpston's report demonstrated that miners' lung disease was related to dust inhalation and that the disease had preventable stages. He later wrote:

This simple explanation of a truism now universally recognized, and then well known to overseas scientists created some sensation. It was known and accepted that certain miners, after years of work, were forced to cease work because their lungs were badly dusted, but the fact that this disease had preventable beginnings had not been recognized, much less admitted.³³

His findings disconcerted the Minister for Mines, who had persistently denied a connection between mining and fibrosis despite the contrary assertions of Labor Members of Parliament.³⁴

Following his mining report Cumpston was sent with a generous travelling allowance and the hint that 'he need not hurry back' to examine preventive measures in mines in the Eastern States.³⁵ He visited Bendigo and Newcastle examining mines and miners. Although Cumpston was expected to participate in the subsequent Royal Commission on preventive measures, there appears to have been some dispute about terms and remuneration which led to he and some other public service candidates being passed over.³⁶

Tiring of the limited scope of work in Western Australia (and perhaps a little disenchanted with his recent treatment), Cumpston joined the Commonwealth Quarantine Service at the end of 1911. Within two years he was Director of Quarantine and as such the most senior Commonwealth health official. The outbreak of the First World War in 1914 provided him with important new opportunities. Claudia Thame has observed that the war proved to be an important boost to Commonwealth intervention in the health field. It necessitated the compulsory imposition of preventive health measures, drew the bulk of the medical profession into a state co-ordinated exercise (the Army Medical Service), increased Commonwealth

³¹*Ibid.* p. 104.

³²*Ibid.*, pp. 105-6.

³³As cited in Cumpston, *John Howard Lidgett Cumpston*, p. 13.

³⁴Spencer, *Cumpston*, p. 111.

³⁵*Ibid.*, p. 115; Cumpston, *John Howard Lidgett Cumpston*, pp. 14-5.

³⁶See *Western Australian Parliamentary Debates (WAPD)*, vol. 1, 1911, pp. 274-6.

responsibility for convalescence, rehabilitation, and provision for the permanently invalided and diseased, and, for a time, heightened the purely utilitarian aspect of medicine at the expense of the moral element.³⁷

Wartime medical administration also revealed a disturbing degree of unfitness amongst the supposed cream of the male population. During the war 36 per cent of volunteers were rejected for (admittedly fairly stringent) medical reasons.³⁸ This problem and the difficulties arising from the fact that the Commonwealth had supreme power in military affairs (including health) but not in the civil jurisdiction led to a number of discussions between Cumpston and Frank Tudor, the Minister for Trade and Customs whose responsibilities included quarantine.³⁹ Tudor subsequently appointed a committee of senior medical officers, including Cumpston to consider these problems and to make further suggestions.

Perhaps as a means of focusing Government attention on the issue of public health, Cumpston himself in 1915 had made a study of the medical reasons for granting invalid pensions. He examined the medical certificates for some 22,979 invalid pensions out of the 27,484 invalid pensions granted since 1910. He estimated that 32.3 per cent of cases were due to preventable diseases. He noted that the Commonwealth had paid £2 million for invalid pensions since 1910 but could not act to prevent causes of invalidity.⁴⁰ He suggested that 'a comprehensive scheme of national insurance would offer ... a means of alleviating distress' and that a co-ordinated scheme of public health research would save public money and human life.

The Committee Concerning Causes of Death and Invalidity in the Commonwealth gave Cumpston the opportunity to consider public health in a national context. The Committee, or in effect Cumpston, as he drafted most of the specific recommendations,⁴¹ produced reports on a number of health problems including the risks of middle age, tuberculosis and maternal mortality.⁴²

Occupational health was addressed on a number of occasions. In its preliminary report the Committee noted that:

the subject of industrial disease is vast and complicated. Many of its problems are included among the conditions favouring or preventing tuberculosis. But the group of dust diseases needs special treatment, and within this group attention is chiefly called to the nature, prevalence and prevention of Miners' disease'.⁴³

The influence of Cumpston's Kalgoorlie experience and perhaps even his subsequent mining investigations in New South Wales and Victoria are clear.

³⁷Thame, 'Health and the State', pp. 28-9.

³⁸*Ibid.*, p. 29; see also A.G. Butler, *Official History of the Australian Medical Services in the War of 1914-18*, Canberra, 1943.

³⁹Spencer, *J.H.L. Cumpston*, p. 159.

⁴⁰J.H.L. Cumpston, *An Analysis of the Causes of Invalidity in respect of claims under the Invalid and Old-Age pensions Act*, Melbourne, 1916, p. 13; Spencer, *Cumpston*, pp. 161-2.

⁴¹Spencer, *Cumpston*, p. 159.

⁴²The full list is as follows: 'Preliminary Report', 'Risks of Middle Age', 'Tuberculosis', 'Typhoid Fever', 'Venereal Disease', *CPP*, vol. 5, 1914-17; 'Infant Mortality', *CPP*, vol. 2, 1917; 'Maternal Mortality in Childbirth', 'Diphtheria' and 'Final Report', *Commonwealth Parliamentary Papers (CPP)*, vol. 5, 1917-19.

⁴³'Preliminary Report', p. 4.

The recommendations of the report on middle age included a comparative inquiry into tension in certain occupations, for example the ironworker and miner with the agricultural worker; provision to prevent industrial workers of both sexes returning to 'arduous work' after serious illness until convalescence was satisfactory; and most ambitiously:

That there should be a system of oversight of the health of industrial workers, correlated with provision of temporary relief, when necessary, by an insurance scheme, or by temporary invalidity pensions, or otherwise.⁴⁴

The report on tuberculosis devoted considerable attention to the link between occupation and the prevalence of tuberculosis amongst the population. No conclusive judgements could be made from the scanty data available, but it was noted that clerks, labourers and miners generally seemed to have higher rates of death. While the Committee could not be certain about the precise influence on these death rates of occupation as opposed to other factors, it nevertheless recommended that 'industrial factors' be carefully studied. Two possible topics in this respect were the long debated question as to whether quartz mining could be carried on without tuberculosis and a proposition of the Victorian Government Statistician that factory employment was responsible for tuberculosis amongst young girls.⁴⁵ The Committee also stressed the need for strict enforcement of sanitary principles in the factory and proposed that, as the Commonwealth had 'extensive' financial responsibility for tuberculosis sufferers under the Invalid Pensions Act, it should:

co-operate with the State Government concerned in a vigorous campaign against tuberculosis in a selected locality in which it is more than ordinarily prevalent. The mining centre of Bendigo offers an exceptionally suitable field for such a campaign, affording as it does opportunities for attacking not only the general problem of tuberculosis in a municipal community, but also the special problem of tuberculosis in mines.

⁴⁶ A laboratory, hospital and perhaps a sanatorium would also be required. The exercise would serve as a 'practical experiment' which would indicate measures useful for elsewhere.

The report on maternal mortality emphasised the large expenditure on the Maternity Bonus and the lack of control over the conditions of its recipients. English evidence on the ill-effects of work during the later stages of pregnancy was cited. The Committee favoured the introduction of restrictions on women's work just prior to and after confinement as was the case in many other countries.⁴⁷ It also considered that 'release' from employment would be desirable and observed that 'insufficient attention' had been paid to the 'strain upon the wife whose weekly household budget is so limited that she must herself do all the household work. Perhaps there are already other children, and the strain is frequently severely felt'.⁴⁸ The only practical suggestion the Committee could come up with for these women was that they receive

⁴⁴'Risks of Middle Age', p. 8.

⁴⁵'Tuberculosis', p. 36

⁴⁶*Ibid.*, p. 38.

⁴⁷'Maternal Mortality', p. 17; 'Final Report', p. 6.

⁴⁸'Maternal Mortality', p. 17.

assistance from voluntary Health Visitors.⁴⁹

In its final report, the Committee referred to the example of the United States where the Federal Quarantine Service had gradually been expanded into a Public Health Service. While still basically a quarantine service it had also developed a role as a bureau of information on sanitary matters and statistics.⁵⁰ Attention was drawn to the fact that the Service had made numerous inquiries into occupational diseases, mine sanitation and the employment of women amongst other subjects. With this example in mind the Committee stressed that the Commonwealth had an 'essential interest and essential duties in regard of public health', a role of 'definite responsibility' which presented a wide field of opportunities. While not expressly calling for a Department of Health, the Committee argued that the Government should proceed by further assisting the States in extending their public health activities, particularly by contributing to the cost of medical services and through encouraging co-ordination among the States.⁵¹

The Committee's observations and recommendations are indicative of a general awareness of occupational health within the public health movement, though it is also possible that they reflected Cumpston's views more than those of the other members of the Committee (see above).

Occupational health was raised by Cumpston on other occasions during the war. In his contribution to Melbourne University's series of War Lectures he suggested 'a co-ordinated scheme for the preservation of national health', and spoke of the need to expand the purview of public health to include 'the proper regulation of the particular environment in certain trades'.⁵² His economic rhetoric was strong. A national health scheme would entail 'organization for the conservation of human energy and the preservation of human life', and the hospital system 'dominated by the idea that these hospital patients are the human capital of the nation' and the hospital the means of safeguarding it.⁵³

In 1917 a group connected with the Melbourne *Herald* published a number of articles on post-war policy. Cumpston contributed two.⁵⁴ In one he stressed the tremendous losses sustained during the War and the domestic losses attributable to preventable diseases, including those relating to occupation:

The effects of the environment in Australia have been barely considered. Evil results will chiefly be found in the occupational sphere. Nothing is known for example of the effects upon young girls of factory or shop employment or of occupational strain in manual labour too early after convalescence from acute illness. Much remains to be known in these directions, and without doubt scientific study of the effects of various industries upon health would lead to the conservation of health in many small ways.

⁴⁹'Final Report', p. 7

⁵⁰*Ibid.*, pp. 7-8.

⁵¹*Ibid.*, p. 8; see also M. Roe, *Nine Australian Progressives*, p. 126.

⁵²'The War and Public Health', in University of Melbourne, *War Lectures*, No. 7, Melbourne, 1915, p. 187.

⁵³*Ibid.*, p. 197.

⁵⁴Spencer, *Cumpston*, p. 162.

He went on:

The problem of the future is to study the health of the community. Economically this is of the utmost importance, as the loss of two or three, or ten days work by each individual worker through sickness amounts in the course of years to a very material loss to the nation.⁵⁵

He concluded by noting that the Prime Minister was devoting much money to the co-ordination of science and industry; surely he should also 'look at co-ordination of science and health'? In his second article Cumpston discussed the advances in research on industrial fatigue and how health and working conditions could affect output. He felt these were sound reasons for extending the Commonwealth Government's power to cover such factors.⁵⁶

In many respects, Cumpston was merely echoing sentiments that were finding favour amongst the medical community in general at this time. Influenced in particular by its experience during the War and by the example of Britain (which set up a health department in 1919), the medical profession was keen on a more active program of preventive medicine with greater state involvement.⁵⁷ Increased attention to occupational health was part of this program. Government neglect of the subject was frequently attacked in the *Medical Journal of Australia*.⁵⁸ A reviewer of the first issue of *The Journal of Industrial Hygiene* (Massachusetts, 1919), after noting the pre-eminence of Great Britain in the field of occupational health, asserted that:

Up to the present no attempt has been made in the Commonwealth to handle the whole scope of industrial hygiene. Certain aspects have been dealt with, both by departmental committees and by individuals. Much more could be done to safeguard the health of the factory worker and to eliminate unnecessary risks to life and limb.

⁵⁹ Later in the year an editorial was devoted to the subject of public medical officers and occupational health practices. Again it was pointed out that in Australia preventive measures for occupational health 'lagged' behind those of Britain, the authorities of which had, '[f]or many years ... recognized that industrial hygiene is a living subject and that the health of the industrial worker should be properly safeguarded'.⁶⁰ After praising the medical branch attached to the British factory inspectorate the editor observed:

It is to be regretted that hitherto the conditions of factories and mines in Australia are subjected only to technical and general control. Important questions connected with industrial hygiene have been investigated by medical men in the Commonwealth from time to time, usually at the request of a government department. There is, however, no medical branch of our departments of labour and industry and the work of inspection is exclusively non-medical. The work necessitates prolonged and intense study of the conditions of labour in factories, of the processes used, of the available means for reducing risk of accident, poisoning and occupational diseases and of the special pathology of these diseases.

He concluded by suggesting that medical officers of health be appointed to do this work.

⁵⁵Press clipping (no date) in National Library, Cumpston Papers, MS613, Series 4, parts 3 and 4.

⁵⁶Press clipping (no date), Cumpston Papers, MS613, Series 4, parts 3 and 4.

⁵⁷As Thame has observed, there was a noticeable increase in support for state action in the pages of *MJA* from 1918 (see editorials from this period); 'Health and the State', p. 34.

⁵⁸The *MJA* was the organ of the British Medical Association (Australia) and as such represented the greater part of the medical profession.

⁵⁹*MJA*, 1919, p. 240.

⁶⁰*MJA*, 29 November 1919, pp. 400-1.

An item on industrial nursing also stressed the neglect of occupational health arguing that the sporadic efforts to date were 'incapable of replacing the permanent control which can be exercised by the medical officers of the responsible [factory] departments'.⁶¹ Regarding industrial nursing itself the writer referred to the work of Anne Strong in the United States who was encouraging demobilized army nurses to re-train for industrial nursing for private firms. The writer suggested that the Department of Repatriation could assist Australia's own returning nurses to retrain in this field and that if the Commonwealth or a State government were to give a lead, private firms themselves would probably engage medical officers and nurses. Another item about industrial rashes noted that occupational health had hitherto 'attracted but little attention in Australia', largely because there was 'no special authority whose business it [was] to study the hygiene of the workshop and of the factory and the particular dangers attaching to individual trades'. Accordingly it was not surprising that the Australian medical profession had so little interest in the development of industrial rashes.⁶²

There was clearly a growing awareness amongst the medical profession in the post war period of the importance of better occupational health practices. As can be expected, the *MJA* fully supported the decision to include occupational health among the initial functions of the Commonwealth Health Department.⁶³

The Creation of the Commonwealth Department of Health

The factors behind the creation of the Health Department are now fairly well known.⁶⁴ These include the problems arising from Commonwealth-State co-ordination of quarantine measures during the 1919 influenza pandemic; fear of the introduction of exotic diseases by returning troops; the issue of medical control of Australia's newly acquired Mandate over German New Guinea; the experience of a centrally administered military medical service staffed by hitherto civilian doctors; and finally, the activities of the Rockefeller Foundation's International Health Board (IHB). Cumpston, and to a degree, the medical profession, did their best to turn circumstances to advantage and persuade the Commonwealth to extend its powers in the field of public health.

The Premiers' Conference of January 1919 was held against the ominous backdrop of the Spanish influenza epidemic which had not yet reached Australia. W.A. Watt, who chaired the meeting, as Hughes

⁶¹*MJA*, 20 March 1920, pp. 264-5.

⁶²*MJA*, 22 May 1920, p. 492.

⁶³It commented that the occupational health function was 'hardly of less importance' than the tropical health function (the latter was more topical at the time); *MJA*, 12 February 1921, p. 133.

⁶⁴See M. Roe, 'Establishment of the Australian Department of Health: Its Background and Significance', *Historical Studies*, vol. 17, no. 67, October 1976, pp. 176-92; P.D. Abbott and L.O. Goldsmith, 'History and Functions of the Commonwealth Health Department, 1921-1952', *Public Administration*, vol. 11, no. 3, September 1953, pp. 119-28; and an account by Cumpston himself, 'Public Health Administration', *Public Administration*, vol. 12, no. 1, pp. 1-10.

was in Britain attending the peace negotiations, told the Premiers that the Director of Quarantine had put up a submission to the Government on the need for greater Commonwealth action on public health. Early in January Cabinet had decided to discuss further the issue of co-ordination of Commonwealth and State powers in relation to quarantinable and other diseases.⁶⁵ In his submission Cumpston gave an outline of what he considered to be the major post-war public health problems.⁶⁶ He asserted there was a 'supreme necessity for raising the standard of health to the highest practicable level and maintaining it at that level'. He cited defence and economic reasons for this view. As human health controlled both defence capability and 'working efficiency' and, therefore, the 'national wealth', control of the human population as a whole was necessary. Increase in 'human capital and human efficiency' depended on a successful program of preventive health. He cited examples of preventable diseases such as venereal disease, diphtheria, tuberculosis, and hookworm, and also adverted to the costs of invalid pensions and the Maternity Bonus. Cumpston proposed two options for such a program: total Commonwealth control of health on Defence Department lines or 'the American system' where a Commonwealth Department of Health would, in addition to quarantine functions, concern itself with the investigation of causes of disease and death, methods of prevention of disease, collection of sanitary data, education of the public in matters of public health, assisting and subsidizing State programmes and promoting and co-ordinating public health measures generally.⁶⁷

The Commonwealth followed up the Premiers' Conference discussions by writing to the States in February informing them that it had selected the the second of Cumpston's two options, the 'American system'. It wanted their agreement to proceed (consent of the States was of course one constitutional means whereby the Commonwealth could gain the powers it sought).⁶⁸ The issue of Commonwealth responsibility was brought forcibly to the Premiers' collective minds by the news of the occurrence in Melbourne of the first pneumonic influenza case, which arrived while the Conference was in session. The Conference immediately broke up as the Premiers raced home to their respective States. The inability of the States, over the following months, to co-ordinate with each other in order to deal with the epidemic no doubt added weight to the Commonwealth's proposal. The epidemic took the lives of 10,000 people and severely disrupted industry and everyday life.

Against this background, Cumpston and some of his medical colleagues continued to press the Government to take the initiative. In the course of 1919 Cumpston put two minutes to his Minister, Walter

⁶⁵Meeting of 9 January 1919, Australian Archives, Hughes Cabinet papers, CRS A2717 folder 1, vol. 4.

⁶⁶Report of the Conference of Commonwealth and State Ministers held at Melbourne, 22-27 January 1919', *CPP*, vol. 4, 1917-19.

⁶⁷*Ibid.*, p. 78.

⁶⁸Letter, Watt to to all State Premiers, 16 February 1919, Australian Archives, Department of Health, A1928 433/11, Creation of Health Department, 1919-24 (unless otherwise indicated all files referred to are from the Health Department series located in the Australian Archives ACT repository).

Massey Greene, urging the establishment of a Health Department. Neither of these were acted upon.⁶⁹ In July, a month before Hughes' return from the Paris peace negotiations, a British Medical Association (BMA) deputation met with the Acting Minister for Repatriation, Senator Edward Millen, and submitted a set of resolutions relating to the establishment of a Health Department. He was informed that many medical men had served with the AIF 'and they were very much impressed with the measures taken by the British Government and the Medical Profession in Great Britain to bring about an improvement in the general health of the community'. The BMA had resolved that there was a need for a 'central authority' and the incorporation of the medical profession as 'an integral part of the machinery of public health'.⁷⁰ It saw a place for doctors in a new system of public health administration. The state would have to supply 'a Health Organisation which would command the confidence of the profession in its own domain, and would have to provide the necessary laboratories, whole-time advisory health officers, and similar accessories'. Millen said he would discuss the issue with Cumpston and bring it before Cabinet.⁷¹

Hughes expressed support for a greater Commonwealth role in health in his Bendigo election speech (he had announced a December election soon after his return from Europe in August 1919); but despite his successful re-election there was no progress.⁷² The BMA next approached the Government in February 1920 but again to little effect. According to his biographer, Cumpston was so dispirited with the lack of headway at this point that he seriously contemplated resigning as Director of Quarantine. Apparently the proposed health department faced stiff opposition from senior management in his Department, Trade and Customs, the Public Service Board and from the Secretary of the Treasury.⁷³ These senior administrators were skeptical about the ability of medical professionals to function as administrators. At least one very senior State medical official, Sir Harry Allen of Victoria, also actively opposed Cumpston's proposal. Although Spencer argues that the medical profession itself was not necessarily keen on the creation of a Commonwealth health body, if the views of the *MJA* at this time are representative of most of the profession, it would seem that on the whole the medical profession supported a Commonwealth role in public health administration.⁷⁴

⁶⁹Dated 7 April 1919 and 15 May 1919, A1928 443/11. Occupational health was not mentioned specifically in these minutes but the proposed functions of the department were broad enough to cover the subject. The proposed functions were: administration of the Quarantine Act; investigation of causes of disease and death; public health education; administering subsidized State programs; conducting campaigns involving more than one State; collection of sanitary data; administering the Australian Institute of Tropical Medicine and dealing with infectious diseases amongst discharged soldiers.

⁷⁰31 July 1919, A1928/11a, Conferences, Federal and State Ministers, 1919, Co-ordination of Commonwealth and State Powers with Respect to Quarantine and other Diseases, 1919-20.

⁷¹*Argus*, 2 August 1919.

⁷²*Argus*, 31 October 1919.

⁷³Spencer, *Cumpston*, p. 187.

⁷⁴Indeed, it appears to have supported a more extensive role than the one Cumpston envisaged. When Cumpston met with BMA members after the announcement of the establishment of the Health Department, they expressed hope for transfer of the relevant States' powers to the Commonwealth to create a more unified system of medical administration; *Argus*, 12 February 1921.

In the absence of apparent Government action many hopes were pinned on the major medical event of the year, the Australian Medical Congress, which was held in August in Brisbane. The Congress had originally been scheduled for 1917 but had been delayed, first by the War and then by the influenza pandemic. It was attended by most of the leading medical figures in Australia for whom it was an opportunity to discuss and absorb the experiences of the War.⁷⁵ It also appeared to be Cumpston's last opportunity to press the Government into action.

The Congress as a whole supported some form of Commonwealth action. It called for control of public health by a 'central [Commonwealth] Authority', and resolved that the Commonwealth Government be approached and requested to appoint a Royal Commission into the means of carrying out a campaign of preventive medicine.⁷⁶ These resolutions were subsequently forwarded to the Prime Minister by the Executive Committee of the BMA. But the resolutions which best served the interests of the advocates of Commonwealth action, surprisingly enough, were those relating to tropical health.

Although Pacific islander labour had been excluded from Queensland as part of the federal compact in 1901, the medical community and many politicians had remained unconvinced of the physiological suitability of white workers for the tropics. This concern lay behind the establishment of the Australian Institute of Tropical Medicine and its research program into the effects of the tropical climate on white workers.⁷⁷ At the Congress there was a special Tropical Australia Discussion devoted to the results of this research and its implications for the settlement and development of the north of Australia. Cumpston was a prominent speaker in the discussion and it is clear he saw the issue as another means of demonstrating the need for a greater Commonwealth role in public health.

The overall verdict of the assembled medical experts was positive: the permanent settlement of the north was possible.⁷⁸ However it was possible subject to one condition - that it was accompanied by an adequate public health program. A number of resolutions were passed covering the research and legislation necessary for such a program, including one calling for a Commonwealth Ministry of Health to organize these tasks.⁷⁹

The Tropical Australia deliberations came at an opportune moment for Cumpston. Australia was in the

⁷⁵Occupational health was raised at a number of sessions. There were papers on the health of women munition workers in Britain, the health and safety provisions of the new Navigation Act, and one which addressed, among other things, hookworm in mines; Dr Ethel Osborne, 'Industrial Hygiene as Applied to Women Munition Workers', Australian Medical Congress, *Transactions of the Eleventh Session Held in Brisbane*, Brisbane, 1921, pp. 339-42; Dr. C.L. Park, 'Developments in Australian Maritime Hygiene under the Navigation Act 1912-20', *Transactions*, pp. 285-90; and Dr. W.A. Sawyer, 'Hookworm in Australia', *Transactions*, pp. 290-95.

⁷⁶For the full resolutions see *Transactions*, pp. 32-7.

⁷⁷On this debate and the activities of the AITM see R.A. Douglass, 'Dr Anton Breinl and the Australian Institute of Tropical Medicine', part 1, *MJA*, 7 May 1977, pp. 713-6; part 2, *MJA*, 14 May 1977, pp. 748-51; part 3, *MJA*, 21 May 1977, pp. 784-90.

⁷⁸The Tropical Australia discussion is recorded in *Transactions*, pp. 39-69.

⁷⁹*Ibid.*, p. 467.

process of securing a mandate over German New Guinea as part of the Versailles settlement. One of the conditions of such a mandate was the provision of public health services. The Commonwealth would naturally be responsible for the provision of such services. The securing of this mandate had been a particular obsession of the Prime Ministers and there is little doubt Cumpston was alive to the potential in this situation.

Cumpston played the tropical health card assiduously over the next few months. He was ably assisted by officials of an organisation which had been helping Australian governments combat the menace of hookworm disease. This was the Rockefeller Foundation's International Health Board (IHB). One of the resolutions of the Congress had dealt with the activities of the IHB:

That this Congress views with appreciation the nationally valuable work of the Hookworm Campaign, and is of the opinion that its methods and scope could, with substantial advantage to Australia, be extended to include other diseases capable of control by measures of sanitation and education of the people.⁸⁰

The Australian Hookworm Campaign had its origins in the Commonwealth Government's invitation to the IHB to conduct a survey of hookworm infestation in the Territory of Papua. This investigation was conducted from June to August 1917. The following year the investigation was extended to Queensland where cases had been reported in the medical literature since 1889. The State Government and the IHB conducted a joint hookworm campaign which found the prevalence of infection to be 'greater than had been supposed'. In October 1919 the Australian Hookworm Campaign was begun as a collaborative effort of the IHB and the Commonwealth and State Governments.⁸¹ During the next five years over £100,000 was spent by the IHB and the Governments involved. In 1924, deeming its work done, the IHB withdrew leaving the Commonwealth and States to continue the campaign as they saw fit.⁸² Although the hookworm problem was less severe than its publicists would have cared to admit, the Australian Hookworm Campaign garnered the support it did in public health circles because it was seen by both IHB and Australian officials as a means to other ends. Essentially the Hookworm Campaign was seen as a means of convincing the Commonwealth Government of the need for a Department of Health.

The IHB was a body set up and funded by the Rockefeller Foundation to promote international awareness of the benefits of public health measures. The men behind the IHB viewed it as a means of improving industrial efficiency and the stability of the capitalist system on a world-wide basis.⁸³ The means of achieving this objective was through the use of public health demonstration projects. A campaign against a specific disease would be conducted which would demonstrate the efficacy of investment in preventive health measures.

⁸⁰*Ibid.*, p. 35.

⁸¹*Commonwealth Yearbook*, no. 15, 1922, pp. 1009-10 contains a brief account; see also Roe, 'Establishment of the Department of Health', p. 180.

⁸²In this section I have drawn upon Jim Gillespie's, 'The Hookworm Campaign and a National Health Policy in Australia, 1911-1930', unpublished paper, 1988.

⁸³E.R. Brown, *Rockefeller Medicine Men: Medicine and Capitalism in America*, Berkeley and Los Angeles, 1979, pp. 113-7.

Hookworm was chosen as a suitable disease for this purpose as it was relatively easy to diagnose and eradicate. Hookworm enter the body via food or, more commonly, by burrowing directly through the skin. Their path to the human bloodstream is complex but is usually made possible by contact with human faeces. Once in the bloodstream they multiply rapidly eventually causing anaemia. Hookworm was particularly common in areas where sanitation was lax. It was also fairly common amongst miners. The medical treatment for hookworm infestation at this time relied on purgatives. Preventive measures included the provision of better latrines, the wearing of shoes and greater personal cleanliness.⁸⁴

The ultimate goal of the hookworm demonstration projects was to encourage countries to invest more money in public health and especially, to set up health departments. Hence the attack on hookworm was important, not so much because of the debilitating effects of the disease but because it demonstrated the importance of preventive health measures:

It [the Hookworm Campaign] was an advance agent of preventive medicine. It served at once as an end in itself and as a convenient means to a larger end. In its nature, causes, and cure it was easily understood by the average citizen, and its effects upon his own health and the health of the community were plainly demonstrable. When he had seen this one disease treated and brought under control, he was prepared to support the control of other diseases that were less simple and less tangible.⁸⁵

The IHB set about demonstrating these lessons worldwide. The strategy of the IHB was to 'build up the health departments of countries needing assistance in dealing with their own diseases'. In time, it was hoped, these health departments would be able to function efficiently by themselves. In order to achieve this end 'an opening wedge had to be driven by teaching control and preventive measures against hookworm, malaria and yellow fever'.⁸⁶ The Board contributed initial funding and research but only on the understanding that government appropriations would continue the work. The Board pursued this 'pump priming', as this activity was termed, in dozens of countries over the next few decades.⁸⁷

Dr Victor Heiser was Director of the IHB for the East (which included Australia). He had been the top U.S. public health administrator in the Philippines from 1905 to 1914. In that capacity he had developed contacts with Australian public health officials. He notes their pre-war visits to the Philippines in his memoirs, and it will be recalled that Cumpston had observed Heiser's public health work in Manila in 1905.

In 1916 Heiser visited Australia to seek Commonwealth Government involvement in a hookworm campaign.⁸⁸ While here he discussed with some public health officials the hopes they 'entertained for a Federal Ministry of Health'. However, he did not make as much progress as he would have liked. He

⁸⁴D. Hunter, *Diseases of Occupation*, third edition, London, 1968, pp. 725-31.

⁸⁵R.B. Fosdick, *The Story of the Rockefeller Foundation*, New York, 1952, p. 37.

⁸⁶V.G. Heiser, *An American Doctor's Odyssey: Adventures in Forty-five Countries*, New York, 1936, p. 275-6.

⁸⁷Fosdick, *Rockefeller Foundation*, pp. 38-41.

⁸⁸Gillepsie, 'The Hookworm Campaign', pp. 8-10.

notes in his memoirs: 'I could do little at Sydney in 1916. The Federal authorities were not sufficiently powerful to compose state differences and embark on a national health program.'⁸⁹ Nevertheless, by the end of his stay he had gained the support of an initially cool Cumpston and the two had privately agreed that a pre-condition of full-scale IHB hookworm funding would be the establishment of a Commonwealth health department.⁹⁰ The Commonwealth Government also agreed to the preliminary hookworm surveys in Papua and Queensland thus providing the IHB with its 'entering wedge'.

Cumpston and Heiser remained in close contact over the next few years and were clearly conducting a joint campaign to draw the Commonwealth Government further into the field of public health administration.⁹¹ In October 1920 Cumpston and Wilbur Sawyer, the IHB Hookworm Campaign Director, met with Hughes to discuss the resolutions of the Tropical Australia Discussion.⁹² Cumpston and Sawyer agreed to develop further proposals for the extension of the Hookworm Campaign. Then, in November, with the Hookworm Campaign in full swing and obvious public pressure for some form of Commonwealth action on public health, Heiser announced he intended to visit Australia to investigate the public health activities being carried on by the representatives of the IHB and to 'ascertain in what further ways the Board could co-operate with the Government in promoting public health'.⁹³

In the interval before Heiser's arrival Cumpston submitted the Tropical Australia Discussion together with another proposal for the creation of a health department to the head of the Department of Trade and Customs. He also advised him that at last all the States had agreed to the proposal for a Commonwealth Health Department originally put to them in 1919 (the Premier of New South Wales had finally given his assent on 22 November 1920).⁹⁴

In January 1921 Heiser arrived and Cumpston arranged a meeting with Hughes. The meeting took place on the 17th and was attended by Hughes, Heiser, Cumpston and Sawyer. The ostensible purpose of the meeting was to discuss the extension of the Hookworm Campaign to German New Guinea and a number of other diseases. Heiser advised Hughes that the IHB was not prepared to sanction further expenditure on expansion of the Hookworm Campaign as the Australians desired unless 'the Commonwealth was prepared to assume responsibility for control of policy from one dependable centre' and establish a Health

⁸⁹Heiser, *An American Doctor's Odyssey*, p. 351.

⁹⁰Gillespie, 'The Hookworm Campaign', p. 9.

⁹¹For example in a 1919 letter to Heiser, Cumpston laments the fact that the influenza pandemic 'fizzled out just one week too soon', i.e. for a Commonwealth controlled public health system to be established - cited in Gillespie, 'The Hookworm Campaign', p. 11.

⁹²5 October 1920, A1928 443/11.

⁹³Colonial Secretary to Governor General, 22 November 1920, A1928 443/11.

⁹⁴Cumpston to Comptroller-General, 3 December 1920, AA 1928 443/11.

Department.⁹⁵ In return, not only would the IHB agree to the extension of the Hookworm Campaign, it would also provide for not less than one year, three specialists in key aspects of public health. Additionally, a number of Rockefeller fellowships for study abroad would be given for training Australians to meet the needs of the new Department.⁹⁶

According to Cumpston, Hughes accepted the offer with alacrity.⁹⁷ In return Hughes promised Heiser that the Commonwealth would spend between £20,000 and £30,000 annually in making it possible for full value to be obtained from the services of the Board's experts.⁹⁸ Heiser asked Hughes to let him know the Government's decision before he left Australia at the end of the month.

Hughes instructed Cumpston to draw up a proposal and bring it before Cabinet. Hughes raised the proposal in Cabinet on 3 February and it was approved. The proposal endorsed was similar to the one put up by Cumpston in 1919; however the prominence of occupational health is relatively surprising. The proposal went as follows:

It is proposed that the Ministry of Health shall be designed to be evolutionary in character, aiming in the first stages towards the accurate investigation of disease, and the education of the public in matters of public health.

It shall also devote particular attention to certain phases of industrial hygiene, especially in respect of designing the means for control of industrial disease associated with mining and with the employment of women. In addition, tropical diseases - which are important in the development of Australia and its dependencies - shall be attacked.

At commencement, in addition to existing Commonwealth Health activities, it will take over the Quarantine Act, and shall be concerned with the following activities:

- Industrial diseases associated with mining.
- Investigation of disease, including tropical diseases, and the application of preventive measures thereto.
- Investigation into the influence upon health of housing and domestic conditions, climate, industrial employment, and environment generally.

⁹⁹ Ten public health laboratories were proposed; the States' agreement to the proposal was noted and the Rockefeller Foundation's offer set out.

It is obvious that occupational health, particularly that of miners, was to be a priority issue for the new Department. The siting of three of the laboratories so as to deal with specific occupational health problems - those at Port Pirie, Kalgoorlie and Bendigo - reinforces this impression.

Heiser makes it clear that the impetus for the inclusion of occupational health came from the Australian Government and not the IHB. After his meeting with Hughes he wrote to IHB head office in New York in

⁹⁵Cumpston, 'Notes on Creation of Health Department', June 1921, A1928 443/11.

⁹⁶Heiser to Hughes confirming verbal offer, 19 January 1921, A1928 443/11.

⁹⁷M. Spencer, *Cumpston*, p. 188. Heiser, in his account of the meeting, claims Hughes was initially hostile to the suggestion of a Health Department ('Make it a Division'), but that he was eventually won over by the good sense of Heiser's arguments. I suspect that Hughes was more susceptible to IHB generosity than Heiser's persuasive ability. Heiser's account of this meeting is in his autobiography, *An American Doctor's Odyssey*, pp. 353-5.

⁹⁸Memorandum, Cumpston to Prime Minister (Bruce), 23 August 1923, A1928 443/11.

⁹⁹Minute and financial schedule attached to memo, Cumpston to Treasurer, 10 March 1921, A571 21/13702, Creation of Ministry of Health, 1921.

the following terms: 'It is the desire of the government to provide better and more healthful working conditions in the mining industry'. Accordingly, a specialist with the following qualifications was needed to advise the Australian Government on occupational health: experience in mine sanitation, the housing of miners, and diseases incident to mining. The expert would then be expected to develop 'the other branches of industrial hygiene'.¹⁰⁰

It is likely that the views of Cumpston were important in determining this outcome. He had considerable experience of problems in the mining industry and an awareness of the problems faced by women at work. Nevertheless, it is surprising that these issues were not singled out at all in his earlier submissions. The fact is that by the this time both issues had become subjects of considerable debate. In the case of mining, it is probable that Hughes himself was the key mover, in response to pressing problems in the industry. Regarding women, it is more than likely that Cumpston was the main advocate. He, like Hughes, was responding to pressures from certain groups for Commonwealth action. The offer of the Rockefeller Foundation came at an opportune moment for the Government, enabling it to address both problems in a relatively cost-effective manner.

¹⁰⁰Heiser to IHB, New York, 2 February 1921, A1928 443/11.

Chapter 2

Occupational Health as an Industrial Issue for the Commonwealth

The immediate post war years were ones of considerable turmoil in Australian industry. In 1919 the number of working days lost as a result of strikes rose to a record level.¹ Much of this unrest was a consequence of the steady decline in the standard of living during the War, which had been caused by a combination of rapid inflation and minimal movement in wages.² While many workers were tired of these straitened circumstances, some were also tired of ignoring poor working conditions 'for the duration'.

Health and safety issues were at the core of the biggest industrial upheaval of the period in question - the Broken Hill miners' strike of 1919-20. The dust disease problem which fuelled the Broken Hill dispute had been widespread in the Australian mining industry for many years. Yet little had been done by State governments or employers. Commonwealth intervention in 1921 was partly in recognition of the need to act before the situation worsened.

Dust Disease in the Mining Industry

By the end of the second decade of this century, there was abundant evidence of occupational health problems in the Australian mining industry. Notwithstanding an array of regulatory legislation, the rates of death and injury were still high relative to other industries. In 1920, 68 (63 per cent) of the 108 reported fatal industrial accidents in Australia occurred in mining.³ Of non-fatal accidents, exclusive of those in New South Wales, mining was responsible for 959 or just under one-third of the 2,763 reported.⁴ From data compiled under the New South Wales Workmen's Compensation Act, the average percentage of injuries (including some diseases) for the period 1920-22 was estimated at 6.8 per cent for the workforce as

¹See table of disputes by year in Scott, *Australia During the War*, Sydney, 1937, p. 665.

²See D.B. Copland, 'The Economic Situation in Australia, 1918-23', *The Economic Journal*, no. 133, vol. 34, March 1924, pp. 45-7.

³*Commonwealth Labour Report*, 1920, p. 175.

⁴These were only accidents which incapacitated the victim for over 14 days. In 1919 there were 127 fatal accidents reported of which 76 (60 per cent) were in mining. Mining also accounted for 1,072 non-fatal accidents out of the 2,419 reported (again exclusive of those which occurred in NSW). *Commonwealth Labour Report*, 1919, p. 167.

a whole.⁵ Mining had an average of 19 per cent, second only to the related occupation of smelting which had an average of 19.03 per cent (though it must be remembered that the latter employed far fewer people).

But this comparatively high accident rate was not the chief health problem troubling the industry in 1921. Legislative provisions aimed at preventing and dealing with accidents were extensive, particularly for coal mining, and compensation for accidents was available in every State. While there was always room for improvement, the basic infrastructure was in place: an agreed minimum standard on the basis of which unions, employers and governments could negotiate for any further changes in work practices or conditions. The problem which was focusing concern was the far more insidious one of occupational disease: more specifically, dust-related lung disease. The problem was recognized as afflicting metal mining in particular - the lead-silver mines of Broken Hill and gold mining throughout Australia. It was also causing severe damage amongst the sewer miners, rockchoppers and other sandstone miners in New South Wales. It was not until the late 1930s (and thus beyond the scope of this study) that it was accepted that the non-metal dust of coal mines could also result in lung disease.

The dust disease problem began to manifest itself in the first decade of this century. It was the direct result of the introduction of new technology in the form of the pneumatic drill, a process which began in Australia in the 1870s. These drills generated a cloud of fine dust which easily penetrated the lung tissue when breathed in. Blasting, of course, had always generated a certain amount of dust, but only at intervals; the new drills produced a constant supply. Exacerbating the problem was the increasing depth of mines over time. Miners were underground longer and ventilation problems were increased.

In the period under consideration, miner's dust disease was known by a number of names, reflecting a degree of uncertainty about its causes.⁶ The first was miner's phthisis. Phthisis referred to any wasting disease and was the customary name for tuberculosis. Miner's phthisis could thus cover dust-related lung disease, lung disease caused by tuberculosis or, as was frequently the case, a combination of both.⁷ The association of the two conditions naturally caused problems when there was a need to define who or what circumstances were responsible for a particular condition. While it does seem to be the case that dust disease did predispose a miner to tuberculosis, the latter was of course a social disease, as likely to be spread at home as in the mine.

A more precise term is pneumoconiosis (lung dust) which covers all lung disease caused by dust or fibres.

⁵Table in D.G. Robertson, *Industrial Accident Prevention*, Melbourne, 1924, pp. 8-15; the table was issued by the NSW Department of Labour.

⁶Definitions and medical aspects of miner's dust disease are drawn from Hunter's encyclopaedic *Diseases of Occupation*, chapter xiv (Pneumoconioses).

⁷Tuberculosis was a major cause of adult mortality in this period. The tubercle bacillus is highly infectious being spread through the air or food. The bacillus causes lesions in the lungs and/or other parts of the body eventually leading to heart failure. It struck families from lower socio-economic groups disproportionately; see F.B. Smith, *The People's Health, 1830-1908*, Canberra, 1979, pp. 287-94.

The most important of the pneumoconioses, for the purposes of this study, is silicosis, as the vast majority of 'dusted' Australian miners were victims of silicosis often complicated by tuberculosis. Silicosis is a lung disease caused by silica dust. Most of Australia's metal was taken from rock with a high silica content (e.g. quartz and sandstone). Once silica dust accumulates in the lung tissue it reacts chemically with the surrounding tissue causing lesions or scarring and thickening of the tissue (the term 'fibrosis' is also often used to describe the condition where these thickened tissues or fibrous masses are present). Gradually lung capacity is reduced as evidenced by continued shortness of breath and/or a persistent cough. Eventually lung and heart failure result. Silicosis could kill a miner very quickly, say in five years from first exposure, or take ten to twenty years, depending on the person, the period of exposure and the silica content of the rock.

Although dust had been linked to lung disease in a number of trades from the early part of the nineteenth century, it was not until the turn of the century that international attention was drawn to the issue of miner's phthisis in a sustained fashion. In South Africa in 1902 an inquiry was appointed to examine a special form of lung disease that had flared up in the Rand gold mines during the Boer War.⁸ The Commission found that the death rate from miner's phthisis was so high that measures for preventing dust were an urgent necessity. The Commission linked the wave of deaths with the introduction of pneumatic drills. In the investigation X-ray was used for the first time to diagnose miner's lung disease.

The first South African preventive regulations - requiring the use of water with drills, the damping of rock with water and better ventilation - were introduced in 1906. The following year a Mines Regulation Commission was set up which investigated further means of preventing dust and the medical aspects of miner's phthisis. In 1911 a sanatorium for miner's phthisis patients funded by the companies and the Government was opened. In the same year a voluntary Miner's Phthisis Prevention Committee was created and a second Miner's Phthisis Commission was appointed by the Government. The latter's report revealed that 32 per cent of the 3,136 miners examined were affected by miner's phthisis. It recommended that the condition should be compensable, that sufferers of tuberculosis and fibrosis (meaning silicosis) be refused employment and that new employees be medically examined before engagement. Compensation was provided for by the 1912 Miner's Phthisis Act.

In 1916 compensation arrangements were refined and a permanent Medical Bureau set-up to conduct periodical medical examination of miners and to supervise the withdrawal of dusted and tuberculosis-carrying miners from the industry. With the establishment of the Medical Bureau and the continued investment of the companies in related medical research and dust-sampling techniques, the number of cases

⁸The following account of South African measures draws on: *ibid.*; R. Sayers and A. Lanza, 'History of Silicosis and Asbestosis', pp. 6-7; NSW Board of Trade, *Interim Report of the New South Wales Board of Trade on the Prevalence of Miner's Phthisis or Pneumoconiosis in Certain Industries*, vol. 1, Sydney, 1919, chapter iv; and B. Kennedy, *A Tale of Two Mining Cities: Broken Hill and Johannesburg, 1885-1925*, Melbourne, 1984, pp. 49-65.

of miner's phthisis declined significantly. As Kennedy has observed, '[b]y the end of the First World War the South African gold-mining industry provided a model to the rest of the world of how to conquer phthisis'.⁹

There were also important inquiries in Britain. The 1902-4 Royal Commission into the Health of Cornish Tin Miners linked dust with the miners' high rates of lung disease. The 1905 Departmental Committee on Compensation for Industrial Diseases also examined the issue and in 1914 a Royal Commission into Health and Safety in Mines emphasised the role of silica in causing miner's phthisis. As a result of the Royal Commission the Workmen's Compensation (Silicosis) Act was passed in 1918. This Act provided for the setting up of special compensation schemes for industries where silicosis was prevalent. The first scheme was set up in 1919 for the refractories industry (this industry involved the making of special bricks for steel casting, high firing kilns etc.).

Both the South African and British initiatives influenced Australian approaches to the dust disease problem.

Australia itself, with the rapid development of its mining industry in the second half of the nineteenth century, had a reasonable history of inquiry into mining health and safety.¹⁰ But, as in other countries, concern about dust disease only became widespread at the turn of the century. Thereafter, a number of inquiries followed in rapid succession, all of which linked dust and lung disease. Some of these studies were influential overseas including in South Africa and the United States.¹¹

In 1902, a New South Wales Board of Inquiry examined the conditions under which miners were employed (rockchopping and tunnelling) in sewerage works in and around Sydney. A Royal Commission on the Ventilation and Sanitation of Mines in Western Australia was conducted in 1904. In 1906, Dr Walter Summons, in what is generally acknowledged as a pioneering study, investigated the relationship between mining and the prevalence of tuberculosis in Bendigo. In 1907 there was another inquiry into the health and working conditions of Sydney's rockchoppers and sewer miners. There were Royal Commissions into mining in Western Australia in 1910 (Cumpston's) and 1911, and in Queensland in 1911. In 1912, Dr W.G. Armstrong, New South Wales Senior Medical Officer of Public Health, made a study of the occurrence of pneumonia at Broken Hill, relating its prevalence to the work and habits of the silver miners in particular.¹² A Royal Commission on Mining in Broken Hill was conducted in 1914 which

⁹A *Tale of Two Mining Cities*, p. 65.

¹⁰For a useful historical review of some of these inquiries and the hazards associated with early gold-mining see B. Gandevia, 'Occupation and Disease', pp. 199-208; G. Blainey, *The Rush That Never Ended*, third edition, Melbourne, 1977, pp. 296-301.

¹¹A brief summary of the major inquiries can be found in D.G. Robertson, 'Industrial Hygiene in Australia', *Commonwealth Yearbook*, pp. 523-5.

¹²His report was printed many years later in *Health*, September 1931, pp. 85-91.

concluded that miners, more than any other class of workers, were subject to pneumonia and tuberculosis. Detailed preventive measures were recommended. Aside from these major inquiries there were the regular investigations of the various State mining inspectorates.

This burst of inquiry may be partly explicable in terms of the booming condition of the mining industry, particularly gold, from the early 1890s and into the 1900s.¹³ From the Depression of the 1890s until the late 1900s massive British investment underpinned a period of keen exploration and increased scale of operations.¹⁴ Mines were driven deeper and with greater mechanization the speed of work increased. Mines became dustier and the effect on health more noticeable.

As is usual in a booming industry, the voice of scarce labour was also stronger. Therefore it is not surprising that many of the health inquiries were the result of pressure from miners' unions as they became aware of the increasing human toll of progress. Importantly too, the various Labor parties were now forces to be reckoned with, frequently holding the balance of power and occasionally office itself at the State and Commonwealth levels. The Labor parties were generally strong advocates of action on miners' health. Some non-Labor governments were also supportive of action if of a more limited nature than that proposed by Labor. In some States, however, non-Labor Upper House members relentlessly blocked legislation which would have improved health and safety in mines.

The results of this period of intense inquiry into the dust disease problem were limited. By the eve of the First World War the problem was generally acknowledged and a few dust prevention measures had been included in regulatory legislation. But in no case had there been agreement on comprehensive preventive measures or compensation for the victims. And up to 1915 no State recognized miner's phthisis as a compensable disease. It was not until after the War that the States and mining employers began to grapple with the dust-disease problem in a serious fashion, and even then, in some cases, mostly as a result of industrial pressure. By this time of course it was too late for the thousands of miners who had already died of dust related disease. Importantly, however, dust disease was now recognized as a national problem; after all, who could say where a miner had acquired his disease - Kalgoorlie, Bendigo, or the Rand? As a national problem it was one which could logically, as some argued, be addressed by the Commonwealth government. The establishment of the IHD in 1921 appears to reflect a degree of Commonwealth acceptance of this reasoning.

In terms of Commonwealth action, it was the dust disease problems at Broken Hill, Kalgoorlie and Bendigo which did most to focus the Government's attention.

¹³For example in the 1900s the value of mineral exports exceeded that of wool for the first time in a number of decades; E. Boehm, *Twentieth Century Economic Development in Australia*, Canberra, 1971, pp. 67-8, including table 19.

¹⁴Blainey, *The Rush that Never Ended*, pp. 248-56.

Miner's Phthisis in New South Wales

Concern about health problems on the Broken Hill field came to a head in the immediate post-war years. At the same time, the New South Wales Government was also being pressured about the prevalence of lung disease amongst the sewer men, rockchoppers and other sandstone miners of the Sydney region. Although the latter was an issue with less national profile, one which was eventually relegated to the sidelines by the upheaval at Broken Hill, the Commonwealth was ultimately involved in the resolution of both issues.

The 1914 Royal Commission on Mining at Broken Hill, appointed by the Holman Labor Government, had conducted a wide-ranging inquiry into working conditions on the field. A pneumonia epidemic over 1910-13, the 29 fatal accidents in 1913 (compared with 17 in 1912) and lobbying by the Amalgamated Miners' Association (AMA) were all factors behind the Government's decision to appoint the Commission.¹⁵ Chaired by Bernard Wise, it reported in November 1914 - an inopportune moment in view of the outbreak of war. The Commission noted that 'considerations of hygiene and safety were the bases of every claim [by the Amalgamated Miners' Association (AMA)] for alteration in the existing conditions'.¹⁶ The Commission recommended that tuberculosis sufferers be excluded from working underground, that all underground workers be examined medically every six months by a government medical officer, that persons unable to read and speak intelligible English be excluded from underground work, that lead-poisoning and its related conditions be compensable under the Miners' Accident Relief Fund, and that measures be taken to determine whether pneumonia should be compensable and conditions improved to prevent it, and to regulate temperature and air in the mines.¹⁷ While the Commission found tuberculosis and pneumonia to be severe among miners, it concluded that pneumoconiosis was 'practically unknown' in the Broken Hill field.¹⁸ This finding was later proved to be entirely unfounded.¹⁹ The Commissioners did, however, take a sympathetic attitude to the occupational disease issue:

Your Commissioners find no difficulty in making a recommendation on this question in general terms. The community, which benefits from the labour of men in a dangerous industry, ought to compensate their benefactors for its inevitable risks. Certain diseases are known to be produced by the conditions of certain industries, and the community, which enjoys the products of these industries, ought to compensate those who produce them for the risks which cannot be avoided in their production. For example, men who work in the lead mines are specially exposed to Plumbism. Rock-choppers and quartz miners can hardly avoid certain affections of the lungs produced by inhaling dust. Your Commissioners are of the opinion that these and all other diseases of occupations are proper subjects for compensation by the community. Therefore, they recommend that a scheme be prepared to compensate sufferers from Industrial Diseases, for the same reason that compensation is given now for accidents.²⁰

With the onset of war, the Government declined to act on the Commission's recommendations, but the

¹⁵Kennedy, *Silver, Sin and Sixpenny Ale*, pp. 124-27.

¹⁶*Report of the Royal Commission on the Mining Industry at Broken Hill*, Sydney, 1914, p. v.

¹⁷*Ibid.*, p. vi.

¹⁸*Ibid.*, p. xix.

¹⁹Blainey, *The Rise of Broken Hill*, Melbourne, 1968, pp. 140-1.

²⁰*Report of the Royal Commission on the Mining Industry*, p. xvii.

miners were not to be deterred and proceeded to pursue their claims through industrial and political means. In 1916 a dispute occurred between the Broken Hill unions and mining companies over hours and conditions to apply under a new Award. In June, after the personal intervention of the acting Prime Minister, Senator George Pearce, the Commonwealth Arbitration Court (H.V. Higgins) granted a 44 hour week, largely on the basis of the association of working conditions and the incidence of pneumonia and tuberculosis.²¹

In November State Parliament passed a revised Workmen's Compensation Act which extended coverage of the workforce and which, for the first time, provided for compensation of a number of occupational diseases.²² However, miners' phthisis, the key disease affecting miners, was not included. In contrast, Queensland in its Compensation Act of that year had included miners' phthisis. Coverage of miner's phthisis was not a significant issue in the debates on the amending Act. In the concluding stages one member, Thomas Boston, noted the omission and said that he hoped the Government would eventually follow the example of South Africa in providing relief to the sufferers of the disease.²³

The inadequacy of the 1916 Act prompted Broken Hill members of the Labor Party to apply concerted pressure through their branches for the inclusion of miners' phthisis within the Act. The position of the miners was strengthened when in 1917 a Broken Hill militant, Percy Brookfield, won the seat of Sturt on a platform which included occupational health and compensation reforms.²⁴ In 1918 George Beeby, the Minister for Labour and Industry, finally bowed to AMA pressure and directed the newly created Board of Trade to investigate health problems in the mining industry.

The Board of Trade was set up under the Industrial Arbitration (Amendment) Act 1918, to regulate apprenticeship, declare adult male and female living wages, advise upon conditions in industry and to encourage the spread of co-operation and profit-sharing (termed 'improving the industrial relationship').²⁵ The Board, of necessity, had to deal with a range of occupational health issues over the next few years.

In addition to mining at Broken Hill, the Board was also expected to investigate the existence of dust disease amongst Sydney's rockchoppers, sewerminers and stonemasons (Sydney's sandstone has an extremely high silica content). The existence of a dust disease problem for such workers had been

²¹A.G. Cumpston, 'Health and Disease in the Broken Hill Mining Industry', p. 544; on the dispute generally see Kennedy, *Silver, Sin and Sixpenny Ale*, pp. 133-6.

²²The long overdue 1916 legislation overhauled the 1910 Act which for some reason had been based on the 1897 British Act rather than the more generous 1906 Act; see *New South Wales Parliamentary Debates (NSWPD)*, vol. 4, 1916, pp. 537-63 for the 2nd reading debate in the Assembly.

²³*NSWPD*, 1916, vol. 66, p. 3159.

²⁴*Ibid.*, pp. 153-7 and *passim*.

²⁵The setting up of the Board is outlined in the 1918 'Report of the NSW Department of Labour and Industry', pp. 3-4, *New South Wales Parliamentary Papers (NSWPP)*, vol. 1, 1919.

acknowledged since the inquiry in 1902 of the Sewerage Ventilation Board.²⁶ In 1920 the number of deaths from respiratory disease among stonemasons was estimated at 18.4 per thousand as compared to 2.3 per thousand for the working population as a whole.²⁷ Although Wages Boards and Arbitration tribunals had made special provisions to reduce exposure to dust, a special inquiry in 1917 had highlighted the damage dust was doing and a dispute over a new award ensued.²⁸ The Government was also conscious of its failure to honour repeated promises to make miners' phthisis compensable.²⁹

The four questions referred to the Board by Beeby were:

1. To what extent does miners' phthisis exist among employees in metalliferous mines, in the rock-chopping and silver mining industry, and in ore treatment, refining and reduction works?
2. Should this disease be included in the schedule of the Workmen's Compensation Act, and if so, upon what terms?
3. To what extent does the disease, that is, pneumoconiosis, exist amongst quarrymen, stonemasons, and other employees working in stones?
4. What relief, additional or alternative to the inclusion in the Schedule of the Workmen's Compensation Act, 1916, should be provided in respect of the incidence of the disease upon any of the individual classes mentioned in this series of questions?³⁰

The Board issued an interim report in December 1918. Provisions, laws and research dealing with dust diseases of miners in the Australian States and other countries were exhaustively reviewed and a certain amount of oral evidence was taken. The Board confirmed that there was a dust disease problem among rockchoppers and similar workers and recommended that a compensation scheme be set up on the lines of the 1918 British Workmen's Compensation (Silicosis) Act. But regarding Broken Hill the Board argued that there was not sufficient evidence in the case of miners there. The Board recommended the setting up of a technical commission using 'clinical and radiological means' to establish eligibility among the rockchoppers for compensation and also to determine whether or not there was a dust disease problem at Broken Hill.

The Government prevaricated over the appointment of the Commission, but ultimately its hand was forced by a rapid deterioration in the industrial situation at Broken Hill. Early in 1919, the miners' three year Award expired and negotiations commenced between the unions and mine-managers over a new log of claims which included a 35 hour week and a wholesale revision of working conditions. These demands were based on growing concern and anger about the unhealthiness of the field, especially the degree to which it was responsible for dust disease. Late in 1918 the AMA had commissioned a series of medical examinations by a local doctor. The number found to be suffering from tuberculosis and lung complaints

²⁶On the struggle of the rockchoppers to control their working conditions see P. Sheldon, 'Job Control for Worker's Health: the 1908 Sydney Rockchoppers' Strike', *Labour History*, no. 55, November 1988, pp. 39-54.

²⁷*NSWPD*, vol. 79, 1920, p. 876.

²⁸NSW Board of Trade, *Interim Report on Miner's Phthisis*, vol. 1, pp. 74-84.

²⁹*NSWPD*, vol. 79, 1920, p. 873.

³⁰*Ibid.*, p. 17.

shocked the city, adding a keen edge to the union's anger about working conditions. The companies for their part denied that the dust at Broken Hill led to lung disease, and claimed that any disease that had arisen had been brought by miners from other fields such as those in Western Australia or Victoria. Negotiations over the new log quickly broke down, and in May a strike commenced which was to last for nineteen months, the longest in Broken Hill's history.³¹

Although the mine managers refused to countenance the new log and the unions refused to go to arbitration, there was a degree of unanimity on the need for a scientific investigation to establish the actual extent of the health problem. Pressure from both the companies and the unions finally elicited from the Holman government the appointment of the promised Technical Commission in December 1919. The Commission consisted of mining union officials, company officials and government medical officials. The Chair was Dr Henry Chapman, Professor of Physiology at Sydney University. The companies donated the X-ray equipment and paid half the cost, with the Government paying the other half. The Commission was only to look at the Broken Hill situation. Thus the plight of the rockchoppers and other sandstone miners was sidelined by the confrontation at Broken Hill.

The Technical Commission's interim report was brought out in July 1920. It was the result of the examination of just over 4,000 miners. The report stunned companies for it confirmed that the dust in Broken Hill mines did lead to lung disease. The work of Chapman's Commission, insofar as it established the causes and extent of the dust problem and who was to be eligible for compensation, played a critical role in the resolution of the dispute.

Initially the companies were in no hurry to reach a settlement. In Britain there were large stockpiles of Australian lead (built up for war use) and the Australian Government's war lead contract with the British (which had guaranteed a high price) had expired. With the rapid fall in the price of lead on the international market in January 1919, the Australian companies could see some benefit in reducing the stockpiles and the supply of lead generally as a means of improving prices.³² Requests from the miners to Prime Minister Hughes in August 1919 for the Commonwealth Government to intervene or convene a special industrial conference, as had occurred in the recent seamen's dispute and in the coal industry during the war, fell on deaf ears. On advice from the companies involved, Cabinet decided not to act.³³ Similarly, the New South Wales Nationalist Government evinced little interest in a settlement.³⁴

The situation changed dramatically in March 1920 when Percy Brookfield was returned for his seat of

³¹On the course of events see Kennedy, *Silver, Sin and Sixpenny Ale*, pp. 158-74.

³²These company deliberations are revealed in Julius Roe's study of the dispute, 'Companies, Prices and Pressures: The Broken Hill Strike, 1919-1920', BA Honours thesis, ANU, Canberra, 1974, pp. 11-8.

³³*Ibid.*, p. 106.

³⁴*Ibid.*

Sturt in the State election. He gained the balance of power in Parliament leaving the new Labor Government, led by John Storey, effectively dependent on his vote. The companies too were suddenly more interested in a settlement as stockpiles were now low. Consultations between Hughes, Storey, Brookfield, the companies and mining union officials finally led to the calling of a special arbitral conference.³⁵ Hughes, Storey and Brookfield agreed on the use of Justice William Edmunds, who was considered pliable and likely to make a judgement sympathetic to the unions.

Edmunds surprised all parties involved by initially handing down an award in August which accepted what the companies had offered (basically the 44 hour week) pending discussion of the health issues. This decision was not released and Edmunds was pressured to make a judgment more favourable to the unions.³⁶ On 29 September he handed down decision granting the 35 hour week for underground work, providing for the compensation and withdrawal of miners suffering from pneumoconiosis and/or tuberculosis, and requiring various other changes to work practices affecting health (e.g. no stoping on night shift and higher ventilation standards), pending the resumption and completion the Technical Commission's inquiry.³⁷ The unions called off the strike in November.

Legislation was quickly introduced to cover the compensation of Broken Hill miners suffering from dust diseases. In December 1920 The Workmen's Compensation (Broken Hill) Act, 1920 was passed. This Act, supplementary to the 1916 Workmen's Compensation Act, provided for the compensation and withdrawal of Broken Hill miners suffering from pneumoconiosis and/or tuberculosis.³⁸ The companies involved successfully pressured the State government to assist with future medical supervision of the field and the compensation payments (half the costs).³⁹

In September 1920 legislation had also been passed to provide a scheme for the compensation and withdrawal of rockchoppers and other sandstone workers suffering from lung disease.⁴⁰ However, the setting up of a scheme for the industry was dependent on a survey of the incidence of dust disease being carried out. Such a survey was not undertaken until 1924 and compensation did not begin until 1926. The problems at Broken Hill were paramount for the New South Wales Government.⁴¹

³⁵*Ibid.*, pp. 104-7.

³⁶See *ibid.*, pp. 111-4; Kennedy, *Silver, Sin and Sixpenny Ale*, pp. 172-3.

³⁷The terms of the Award are summarised in *Industrial Australian and Mining Standard*, 7 October 1920.

³⁸The Act was based on the South African Miner's Phthisis Act, 1919 and the British silicosis legislation of 1918; for the background see the second reading speech in *NSWPD*, vol. 82, 1920, p. 3975 *passim*.

³⁹*Ibid.*; Judge Edmunds in delivering his Award had recommended that the Government share equally the costs of compensation and Premier Storey had promised to consider the suggestion; *Industrial Australian and Mining Standard*, 7 October 1920.

⁴⁰See the second reading speech, *NSWPD*, vol. 79, 1920, pp. 873-88.

⁴¹Dr Arthur welcomed the measure but complained bitterly of the special treatment for the Broken Hill miners in view of the years of inaction regarding the far more dangerous rockchopping and sandstone mining industry; *ibid.*, pp. 878-9.

It is probable that situation at Broken Hill was a key factor behind the Commonwealth's decision to establish the Industrial Hygiene Division. Two points in particular are worth noting. The first point relates to the course of the dispute and the resolution of the health and safety issues.

Throughout most of the strike, Chapman's Technical Commission had been conducting its inquiry into dust disease. Chapman's interim report of July 1920, which confirmed the health problems in the industry, largely provided the framework for Edmund's judgment. Furthermore, Edmund's Award in September 1920 had been conditional on the Technical Commission resuming its work and all of its recommendations being implemented. When Victor Heiser met with Hughes in January 1921, the Technical Commission had resumed its inquiry (which was to continue until May 1922). However, although the AMA had called off the strike in November 1920, the mining companies, notwithstanding the Edmund's decision, had implemented a virtual lock-out or 'go slow'. The companies were unhappy with the decision on work practices and since the price of lead had fallen dramatically in December 1920, limitation of production was deliberately pursued.⁴² Against this background negotiations over the interpretation of Edmund's Award and implementation of the new work practices took place throughout 1921.

This situation enabled the companies to put pressure on the unions to agree to certain health provisions (most notably a compulsory medical examination before entry to the industry) and on the New South Wales Government to contribute to the cost of the new health and compensation measures. Given Hughes' involvement in the settlement of the dispute, he can hardly have failed to have appreciated just how critical the resolution of the health and safety issues was for the resumption of normal production at Broken Hill and indeed for stable industrial relations in future. Hughes clearly had Broken Hill in mind when he told Heiser that the Government desired to 'provide more healthful conditions in the mining industry'.

The second point concerns the role in the dispute of the Anglo-Australian or so-called Collins House group of companies. Julius Roe has argued that the motive force behind the course of the dispute derived from this Collins House group of companies. Their main aim was control of the international metal market in lead in the context of the more competitive post war environment and the ending of their British lead contracts. Since 1915 the Collins House group had been given virtual control of Australian metals policy by Hughes. William Robinson, the key manager and adviser of the Collins House group, and some other company managers were very enthusiastic about industrial health and welfare measures - they had taken up a new approach to industrial relations which had been gathering pace in the United States and Great Britain. This approach was in marked contrast with that of Broken Hill Proprietary (BHP) Ltd., renown for its militant anti-unionism and archaic working conditions. BHP managers tended to be older and imbued

⁴²*Ibid.*, pp. 114-7.

with a paternalism which did not countenance unions as intermediaries in the working relationship.⁴³

The Collins House group generally espoused a much more sophisticated policy. Long term stability and efficiency of the workforce were desirable. Active promotion of better working conditions was one means of ensuring this. As Roe observes, Robinson accepted that improved care of the labour force ultimately determined its price and condition. He hoped to remove 'struggle' from that process.⁴⁴ 'Managers and directors had to realize', he asserted, 'that all the ore on the field is not worth a pinch of salt unless the men can be got to work efficiently'.⁴⁵ Management policy at some other Collins House concerns such as the Electrolytic Zinc plant at Risdon, Tasmania and Broken Hill Associated Smelters (BHAS) at Port Pirie, reflected precisely this attitude. However, industrial relations theories aside, there were very different economic prospects at Broken Hill for the two major groups.

By 1914/15 BHP had virtually exhausted its lease at the centre of the lode whereas the Collins House companies were just beginning to realise the full potential of their leases. The companies could see that they had a long term future at Broken Hill whereas BHP had ceased to upgrade plant, eschewed mechanization and was generally concerned to invest very little in a city it would soon be quitting. BHP was investing all its energies in its new steelworks venture at Newcastle. In contrast, given the long and profitable future their leases promised, new health and safety practices and urban welfare measures were worthwhile investments for the Collins House group.

Roe is probably correct in speculating that the 1919-20 strike was really 'the mess of past inefficiency'.⁴⁶ With a future in the Broken Hill lode, the interests of the Collins House group lay clearly in improving conditions. The companies were not shy in seeking government assistance. As early as 1916 one Collins House manager raised the possibility of Commonwealth assistance to deal with occupational health problems on the field. W.E. Wainwright, manager of North Broken Hill, in response to continuing pressure from the unions for the inclusion of miners' phthisis under the New South Wales Workmen's Compensation Act, suggested that as the health problem was a national issue (on the basis that 'dusted' miners could have come from Bendigo, Kalgoorlie or even South Africa), one option would be for the Commonwealth to assume full responsibility.⁴⁷

This, of course, was not a new lament. The West Australian and Queensland Royal Commissions on

⁴³*Ibid.*, p. 92. Witness BHP's ruthlessness in the 1908 dispute where rather than accept an adverse Arbitration Award the company ceased production for two years - see G. Osborne, 'Town and Country', in J. Iremonger, J. Merritt and G. Osborne (eds), *Strikes: Studies in Twentieth Century Australian Social History*, Sydney, 1973, pp. 26-50.

⁴⁴Roe, 'Companies, Pressures and Prices', p. 95.

⁴⁵*Ibid.*, citing Robinson.

⁴⁶*Ibid.*, p. 91.

⁴⁷Kennedy, *Silver, Sin and Sixpenny Ale*, p. 153.

mining health problems had both asserted that relieving dusted miners was a Commonwealth responsibility because of the itinerant nature of the workforce. New South Wales Minister for Mines, John Cann, when explaining why the Government had agreed to pay half the compensation costs for Broken Hill, also put this view:

If the thing were properly carried out I am of the opinion that the Federal Government really should have shouldered the responsibility, because some of the men working there have come from other States. It seemed to us, however, that the Government could not allow any of these men to leave work and be victimized because they had been disabled through occupational diseases merely because the Federal Government had not seen its way to shoulder the responsibility.⁴⁸

Given Hughes' close relationship with Robinson it is possible that Robinson and his colleagues asked Hughes for Commonwealth assistance in the resolution of health problems on the Broken Hill field. At the very least these managers would have strongly supported the setting up of the IHD. The Division was to provide precisely the sorts of knowledge and medical skills available to some larger firms in Great Britain and the United States, and which Collins House managers themselves espoused.

Certainly, the linkages between the Collins House group and the IHD appear to have been quite intimate. Beginning in 1917 the Collins House concern at Port Pirie, BHAS, had been developing a fairly sophisticated occupational health scheme in association with the unions (chiefly the Australian Workers' Union (AWU)). Accident and sickness funds were organised and a considerable amount of money spent in improving the works, suppressing dust and cutting down fumes.⁴⁹ In 1920, management hired Dr Duncan Robertson - an experienced worker in the field of occupational health - to act as a permanent medical officer to the works. In the words of the company's Industrial Adviser: '[T]hree years ago [1920] the company asked one of the highest medical authorities in Australia to select a doctor to go to Port Pirie, reside there, and keep the employees in good health'. It was hoped he would institute a thorough system of medical supervision for all employees.⁵⁰ It is probable the medical authority was none other than the Commonwealth's Dr Cumpston.

In the event, the opposition of some unions to the proposed regular medical examinations eventually led to the withdrawal of Dr Robertson.⁵¹ However, by March 1921 Cumpston seems to have come to an agreement with Colin Fraser, the general manager of BHAS (and appointee of Robinson), about the use of Robertson to head a jointly-run industrial clinic at Port Pirie.⁵² In December of that year, Robertson was selected to head the IHD itself rather than to work in some dual capacity at Port Pirie. Interestingly

⁴⁸NSWPD, vol. 82, 1920, pp. 3978-9.

⁴⁹Lead-poisoning was the key problem at Port Pirie. BHAS smelted the bulk of the silver-lead concentrates from Broken Hill. Evidence of R.A. Burgoyne, BHAS management, *National Insurance*, Qu. 14926 and Qu. 14938.

⁵⁰Gerald Mussen, *National Insurance*, Qu. 16382.

⁵¹*Ibid.*

⁵²Cumpston to Fraser, 3 March 1921, A1928 1020/67, D.G. Robertson (personnel file). Evidently Cumpston and Fraser had been discussing health issues at Port Pirie for some time; presumably ever since Collins House had asked Cumpston to recommend an industrial doctor in 1920.

enough, in releasing the news of Robertson's appointment, Cumpston advised that that very week Robertson and Dr Anthony Lanza, the recently arrived IHB occupational health expert (see Chapter Four), 'would visit Port Pirie and the Iron Knob ... to inspect the industrial conditions of the smelters' and to look for site on which to establish a laboratory.⁵³

The case of Robertson is clear evidence of a nexus between the Commonwealth Government and Collins House companies in relation to the issue of occupational health. The Commonwealth Government was prepared to take on a broad responsibility for promoting occupational health in Australian industry, and in the process to deal with those problems faced by Collins House concerns. Hughes and Cumpston were perhaps taking a cue from more 'progressive' employers who were seeking to stabilize their workforces, and improve their efficiency and competitiveness. The promotion of better health and safety practices was an important way in which the state could contribute to this process.

The Western Australian Goldfields

While the problems faced by the Collins House concerns at Broken Hill were clearly important in eliciting Commonwealth action on occupational health, there were problems in other sectors of the mining industry of which the Government was also mindful. The Western Australian goldfields were afflicted with their own dust disease problem.

There are many similarities in the nature and development of occupational health problems at Broken Hill and Kalgoorlie. These similarities themselves reflect the similar characters and histories of each field. Both were relatively isolated metal mining fields located in harsh environments. Both fields had early on come to rely on deep lode mining which required a heavy initial capital outlay and so were developed by large mainly British companies.⁵⁴ In each case rapid development had occurred from the late 19th century and occupational health problems had been first noticed after a lag of some 10 years. Subsequently inquiries were frequent but no real remedial action was taken before the War. After the War mass surveys were conducted in both locations. The Western Australian Government, however, chose to rely mainly on Commonwealth expertise to resolve its mining industry health problems. This choice was probably a function of the paucity of necessary expertise in Western Australia's relatively underdeveloped economy and the lure of Commonwealth financial assistance.

The first major inquiry into miners' health in Western Australia was the Royal Commission on the Ventilation and Sanitation of Mines, appointed in April 1904 (reported February 1905). The mines

⁵³*Argus*, 16 December 1921.

⁵⁴On the development of mining at Kalgoorlie before the War see Blainey, *Rush That Never Ended*, p. 199.

inspected by the Commissioners were found to have inadequate ventilation, especially at deeper levels.⁵⁵ The Commission noted that the workers most at risk were the rock-drillers who were often breathing in dust and frequently did not use water. While only two definite cases of silicosis were found and a survey of the records of 25 local hospitals was inconclusive, census returns for the Kalgoorlie-Boulder area revealed a rate of death due to phthisis twice that for the rest of the State. The Commission recognized that this finding had to be qualified by the fact that many cases could have originated elsewhere (e.g. many miners were from the declining Victorian goldfields). The Commission was also frustrated by the fact that reliable statistics were impossible to obtain. The Commission acknowledged the influence of the recent overseas reports such as those on the health of Cornish and South African miners and of the Victorian Mine Ventilation Bonus Board in the preparation of its report.⁵⁶

While the Commission believed that Kalgoorlie mine dust did not cause lung trouble as quickly as the dust of some countries it nevertheless argued that there was 'no escape from the conclusion that sooner or later its effects must be shown, and to ignore it now is to live in a fool's paradise'.⁵⁷ The Commission recommended that power be created to make regulations dealing with ventilation, the laying of dust, use of explosives, and sanitary conditions of mines, and that a Mines Regulation Board be created to investigate health conditions. Most of the recommendations, with two important exceptions - the creation of the Mines Regulation Board and appointment of workmen's check inspectors - were included in the Mines Regulation Act of 1906, passed by the Moore Liberal Government. However the situation of the miners was still far from satisfactory.

Continued pressure from unions and goldfields MLAs led to Cumpston's inquiry of 1910 - the Royal Commission on Pulmonary Diseases Amongst Miners - which has already been briefly discussed (see Chapter Two). Cumpston made a complete physical examination (without X-ray facilities which were not available to him) of 1,805 men which represented about 22 per cent of some 6,000 miners or 37 per cent of the underground miners.⁵⁸ He also carried out a thorough analysis of local morbidity data covering such conditions as tuberculosis, asthma, emphysema, bronchitis, and pleurisy which could reveal the impact of fibrosis. He concluded that of the 1,805 working miners examined 19.6 per cent were suffering from early fibrosis, 2 per cent from intermediate fibrosis, 0.2 per cent from advanced fibrosis, and 1.5 per cent from

⁵⁵'Report of the Royal Commission on the Ventilation and Sanitation of Mines', p. 38, *Western Australian Parliamentary Papers* (WAPP), vol. 1, 1905, Paper no. 6. There are useful summaries of this and later WA reports in W.T. Nelson, *Report on an Investigation of the Pulmonary Conditions of Mine Employees, Western Australia, During the Years 1925-1926*, Canberra, 1927, pp. 2-3.

⁵⁶The purpose of the Victorian Mine Ventilation Bonus Board was to examine a range of suggested means for improving ventilation in mines. In the course of its work it found that ventilation was generally inadequate, particularly as regards dust; see 'Final Report of the Mine Ventilation Bonus Board', *Victorian Parliamentary Papers* (VPP), vol. 2, 1900.

⁵⁷'Report of the Royal Commission on the Sanitation and Ventilation of Mines', p. 38.

⁵⁸Analysis by Nelson, *Investigation of the Pulmonary Conditions of Mine Employees*, pp. 3-5; B. Gandevia, 'The Australian Contribution to the History of Pneumoconioses', *Medical History*, vol. 17, no. 4, p. 375.

tuberculosis.⁵⁹ He also found that early fibrosis was present in 33.16 per cent of machine miners, 7.23 cent of non-machine miners, 3.13 per cent of truckers, and 24.5 per cent of dry treatment hands.⁶⁰ There was a clear correlation between exposure to dust and the degree of lung damage. In his statistical review he found that all lung diseases accounted for a much higher proportion of deaths than was the case in the rest of the male population; tuberculosis was twice as prevalent; and pneumonia, bronchitis, asthma, and emphysema were also more prevalent. Cumpston observed:

it is clear that the mines in this State can, and do produce fibrosis to a considerable extent, both amongst machine miners and dry treatment men; and it is to be expected that as the years go by there will be an increasing number of deaths from this cause, and an increasing number of cases of fibrosis, if conditions obtaining in the past remain unaltered in the future.⁶¹

On the whole Cumpston's report was an exemplary piece of research which, despite the absence of X-ray facilities, demonstrated that there was a large amount of damage being done and revealed the precise causes of it.⁶²

In August 1911 the Commission to frame recommendations based on Cumpston's report was appointed. As Cumpston had already done most of the groundwork the Report was ready by December. It recommended that men suffering from tuberculosis and those suffering from intermediate fibrosis, as determined by Cumpston, be excluded and that the issue of compensation be considered. While a number of methods were suggested to deal with the dust problem no new legislation was canvassed, merely modification and better enforcement of existing provisions.⁶³

By the time the report had been presented, the Liberal Government which had appointed it had lost office to the Labor party led by John Scaddan. Better mining regulation had been a Labor catch-cry during the election.⁶⁴ The Scaddan Government made attempts in 1912 and 1913 to amend the Mines Regulation Act. The proposed amendments included provision for a Mines Regulation Board (to replace the cumbersome system of arbitration that operated) the appointment of check inspectors and greater employer liability for accidents. Both bills were thrown out by the Liberal dominated upper house.⁶⁵

Attempts to improve health and safety in mines continued but there were only two significant measures before the major reforms of the 1920s. First, the appointment of check inspectors was finally approved; secondly, a voluntary scheme was instituted at Kalgoorlie to relieve miners suffering from dust disease,

⁵⁹Nelson, *Pulmonary Conditions of Mine Employees*, p. 4.

⁶⁰*Ibid.*, p. 3.

⁶¹*Ibid.*, p. 4.

⁶²As noted by Gandevia in his evaluation of Cumpston's work from a medical point of view; Gandevia, 'Australian Contributions to the History of Pneumoconioses', pp. 374-5.

⁶³See 'Report of the Royal Commission on Miner's Lung Diseases', WAPP, vol. 2, 1911-12, Paper no. A6.

⁶⁴WAPD, vol. 4, 1912, pp. 4677.

⁶⁵See *ibid.*, pp. 4672-84 for the second reading speech of the 1912 bill.

which was contributed to equally by the miners, employers and the Government. Under this scheme over £20,000 was being expended annually by 1921.⁶⁶

Referring to this poor record of reform, John Scaddan, as Minister for Mines in 1922 observed:

It is about 18 years since I entered this House and almost every session since that date I have heard members representing mining districts refer in terms of disgust to the fact that nothing had been done to give relief to the men employed in the industry, or because ways and means had not been provided by which something could be done to relieve the sufferers. So far the most we have succeeded in doing is to establish a fund on a voluntary basis which is contributed to by the men employed on the mines, by the mine owners through the Chamber of Mines, and by a subsidy from the Government.⁶⁷

There is no evidence that the State Government or Kalgoorlie companies lobbied the Commonwealth for assistance in the lead-up to the establishment of the Health Department. Indeed, in contrast to the Collins House companies, the companies operating at Kalgoorlie were by all accounts as backward in their attitude to human resources as they were in their approach to productive techniques (see Chapter Six). They do not appear to have been interested in improving working conditions as a long term investment in human capital. It is likely that Cumpston, with his personal experience of the Western Australian problems, was responsible for including the Kalgoorlie laboratory in the proposal approved by Cabinet.

The proposal certainly suited the State Government. In 1922 it approached the Prime Minister for Commonwealth assistance in determining the extent of dust disease in Western Australia. With his approval negotiations commenced with the IHD over a complete survey of the extent of dust disease on the goldfields. In 1925 the Commonwealth Laboratory at Kalgoorlie was established to conduct an occupational health investigation even more extensive than Chapman's Broken Hill inquiry.

Miner's Phthisis at Bendigo

In 1920, just before taking up his position with BHAS, Duncan Robertson had conducted a joint Commonwealth-State inquiry into tuberculosis and mining at Bendigo. As previously mentioned, the war-time Committee on Causes of Death and Invalidity had recommended that a tuberculosis inquiry be conducted in a high risk area on a joint Commonwealth-State basis as a trial for future joint preventive campaigns. Bendigo was recommended because it afforded 'opportunities for attacking not only the general problem of TB in a municipal community, but also the special problem of TB in mines'.⁶⁸

Miners' dust disease and the associated prevalence of tuberculosis in the Bendigo region had been a contentious issue since the turn of the century. As Macumber has noted, with the advent of pneumatic

⁶⁶WAPD, vol. 66, 1922-23, p. 454.

⁶⁷*Ibid.*

⁶⁸D.G. Robertson, *Inquiry into the Prevalence of Tuberculosis at Bendigo, March-August 1920*, Quarantine Service Publication No. 19, Melbourne, 1920, p. 7. The early history of mining health problems at Bendigo is covered in P.G. Macumber, 'A History of the Miner's Phthisis Problem in Victoria, 1875-1908', *Mining, Geology and Energy Journal of Victoria*, vol. 7, no. 3, 1978, pp. 10-6, upon which the following paragraphs draw.

drilling in the 1870s 'there began a countdown of 20-25 years before the full effects became noticeable'.⁶⁹ Starting in 1900 a number of reports by official bodies and concerned doctors revealed high death rates due to lung complaints in the Bendigo district as compared to the rest of the State. A public campaign commenced in 1903 which called for the amending of the Mines Act to reduce dust. The campaign involved the press, the mining union, local medical men and friendly societies. A first bill was thrown out by the Upper House in 1903, but a second was passed the following year which stipulated better ventilation and the use of water jets for drilling.

In 1906 Dr Walter Summons conducted his thorough investigation into the Bendigo dust disease problem on the behalf of the Bendigo Hospital Committee and with the assistance of the Department of Mines. His work confirmed the serious damage dust disease and tuberculosis were causing in the Bendigo community. In relation to mining practices he recommended rigid enforcement of mining regulations, better ventilation, the appointment of a medical inspector of mines and the exclusion of tuberculosis sufferers.⁷⁰ He recommended a home for sufferers of miner's phthisis, a sanatorium for tubercular patients, financial provision for invalid miners by the Government and medical supervision in the homes of miners with lung complaints (but presumably not complicated by tuberculosis).⁷¹ In 1907 the Mines Act was amended to increase inspectors' powers and to impose higher ventilation and temperature standards.

Although significant progress had been made on the regulation front, the issue of dealing with the sufferers of mining disease proved less tractable. Prior to the Commonwealth's payment of invalid pensions, which commenced in 1910, the only State assistance had been via the special provision of the Victorian Old Age Pension Act which permitted incapacitated miners to receive the pension before age 65 (this assistance disappeared when the Commonwealth took over age pensions under different legislation in 1908). In 1913, mining MLAs pressed the ruling Liberal Government, then led by W.A. Watt, to introduce a scheme to give relief to sufferers of miner's phthisis. The Government promised it would act and a joint house parliamentary committee was set-up to work out a scheme. In the interim, 'sympathetic treatment' was promised for sufferers. Accordingly, an allowance of about £3 plus 5 s. per child per quarter was instituted.⁷² As preparation for the scheme the Mines Act was amended in 1914 to allow the making of regulations covering the medical examination of underground miners and the exclusion of sufferers of tuberculosis. In the event, the joint committee could not agree on a scheme and the proposal remained in abeyance.

⁶⁹Macumber, 'Miner's Phthisis Problem', p. 10.

⁷⁰*Miner's Phthisis. Report on the Ventilation of the Bendigo Mines*, Melbourne, 1906, pp. 42-3 [this was a preliminary report].

⁷¹*Report to the Committee of the Bendigo Hospital on an Investigation into the Nature, Causes and Means of Prevention of Miner's Phthisis*, Melbourne, 1907, p. 70.

⁷²VPD, vol. 140, 1915, p. 1596; VPD, vol. 186, 1931, p. 2186.

Cumpston, as may be recalled, had visited Bendigo in 1911 as part of his survey for the West Australian Government of preventive measures used in minings fields, so he would have been familiar with the situation there. His colleague on the Invalidity Committee, Dr Edward Robertson, Chief Health officer for Victoria, would have been aware of the situation too. Bendigo was also fortunate in having the personal interest of Prime Minister Hughes. Bendigo had been Hughes' electorate since the May 1917 general election and he certainly seems to have taken a keen interest in the miner's phthisis question.⁷³ There is little doubt that Hughes had a role in ensuring action on the issue.

In 1917 Cumpston and Robertson submitted a report recommending a tuberculosis clinic and sanatorium for Bendigo but only after an inquiry had examined the extent of the problem.⁷⁴ There was no further action until 1919 when, after pressure from the Bendigo mine owners and the miner's union, a special conference was held with Victorian Government representatives about the long promised miner's phthisis relief scheme. The conference adjourned by agreement until data on the health problem could be collected.

In order to collect that data, an inquiry similar to that proposed by Cumpston and Robertson was finally approved by both Governments. This was the joint investigation carried out by Duncan Robertson over the period February to August, 1920. The Victorian Government arranged the investigation so that it would include an examination of as many mining employees as possible. The prevalence of hookworm disease was also to be looked at. Funds were contributed by both governments to finance the team of a medical officer (Robertson), two nurses, and a microscopist (for the hookworm).⁷⁵ Support for the examinations was gained from the Co-operative Alliance of the Bendigo Amalgamated Company (which employed over 70 per cent of the workforce) and of the Mining Section of the AWU.⁷⁶ The Co-operative was a recently formed industrial co-operation vehicle for health, welfare and profit sharing schemes. The AWU gained further support at a meeting of the Bendigo Trades and Labour Council.⁷⁷ Visits for examinations were arranged with the managers. Examinations comprised 138 (39 per cent) of the 353 surface employees, and 570 (92 per cent) of the 618 underground workers. Robertson had great trouble in getting miners to be examined, but acknowledged that their reluctance was grounded in real fears: of being excluded from the mines if they were found to be suffering from lung disease, and of the disease itself.⁷⁸

Robertson's inquiry confirmed the greater incidence of tuberculosis in Bendigo as opposed to the rest of

⁷³A Victorian MLA observed of Hughes in relation to the issue: 'Three years ago he made it a burning question, and we heard no more about it until the next elections when it became a burning question again'. *VPD*, vol. 156, 1920, p. 663.

⁷⁴'Report upon the Activities of the Commonwealth Department of Health, 1909 to 1930', Canberra, 1930 [no pagination] [Department of Community Services and Health Library].

⁷⁵Robertson, *Inquiry into the Prevalence of Tuberculosis at Bendigo*, p. 7.

⁷⁶*Ibid.*, p. 32.

⁷⁷*Ibid.*

⁷⁸*Ibid.*, p. 33.

Victoria. Over the past 14 years the incidence of pulmonary tuberculosis for males 21 years of age and over had been roughly three and a half times higher in Bendigo than for Victoria as a whole.⁷⁹ Robertson asserted that this was chiefly due to the mining population; however, without X-ray equipment it was not possible to be precise about the incidence of tuberculosis as opposed to silicosis. He recognized that much of the incidence of tuberculosis was probably due to the lack of adequate sanitary conditions, the scarcity of suitable medical resources and the poor living conditions in the town generally.⁸⁰ His recommendations included the erection of a sanatorium to isolate and care properly for sufferers of tuberculosis, a sanitary clean-up and the provision of appropriate health staff and equipment. More specifically for the miners he drew attention to the need for better financial assistance to breadwinners incapacitated through tuberculosis and called for the immediate introduction of a Miners' Compensation Act. In reference to the need for compensation Robertson observed:

It is pitiful to note the great distress prevailing at the present time throughout the Bendigo District by reason of a large number of the wage earners being totally incapacitated solely through their occupation without any monetary compensation beyond the State grant of five shillings per week. The compensation afforded should extend to the widow in all cases. As emphasized previously, a large percentage of miners die from tuberculosis, and their children show evidence of infection, and therefore require careful attention, which is impossible under the present financial circumstances of most of the families.⁸¹

Overall Robertson's report provided further evidence of the need for preventive health measures in the mining industry. The immediate result was a Commonwealth offer in December 1920 to set up and fund a health laboratory at Bendigo. The Commonwealth was also prepared to discuss the sharing of costs for a sanatorium.⁸² When the Health Department was established in 1921 the proposed Bendigo Laboratory was brought under its wing. The Laboratory was personally opened by Hughes in July 1922 and its first piece of research work was an investigation using X-ray of the prevalence of silicosis and tuberculosis among the few miners left on the declining field.⁸³

⁷⁹*Ibid.*, p. 24.

⁸⁰*Ibid.*, pp. 62-3.

⁸¹*Ibid.*, p. 67.

⁸²'Report of the Commonwealth Department of Health, 1909 to 1930'.

⁸³Evidence of the Laboratory Medical Officer, K.R. Moore, *Health*, Qu. 10206, Qu. 10212.

Chapter 3

The Health of Working Women and the Idea of Industrial Welfare

Concern about the health of women workers derived less from pressing industrial problems than from the strength of new ideas about the proper conditions of work. In Britain the war had seen a tremendous expansion of attention to the health and working conditions of munitions workers, and particularly women. Conditions were improved significantly through the introduction of a range of health and welfare measures. Inspired by these developments, some Australian women's organizations campaigned for Commonwealth action on women's occupational health.

The experience in the British munitions industry also had lessons for governments and employers. The most impressive feature of the measures in the munitions industry was that they had led to higher productivity. Here on a grand scale the economic benefits of working conditions above and beyond the statutory minimum had been demonstrated. The new industrial welfare measures had been associated with a great deal of scientific research into health at work. After the war there was a strong interest in the application of the results of this work (i.e. new standards for health at work) as a means of attaining greater industrial efficiency. Additionally, the voluntary introduction of welfare methods offered the possibility of a more co-operative and tractable workforce, a goal which was particularly attractive to governments and employers in the turbulent post war period.

Although Australian industry did not experience the massive changes which occurred during the war in Britain and, to a lesser extent, the United States, the developments in the fields of industrial welfare and the scientific investigation of health were nevertheless influential here. Indeed, the new ideas about the roles of welfare and science in industry were important in legitimating Commonwealth action on occupational health.

The Nature of Concern about Women Working

It is not possible to identify a precise occupational health problem affecting women in the same way that can be done for the mining industry. Commonwealth concern about the health of working women was more generalized, an aspect of that questioning of women's fitness for modern life which was so common in this period.

Maternal health had been the subject of much debate and scrutiny since the latter part of the nineteenth century in many industrialising countries. The factors behind this attention include a greater interest in the quality of children and the growth of medical knowledge which increased the range and awareness of specific maternal health problems. A key concern was the demographic trend (from 1876 onwards) towards lower birth rates. In the context of the great imperial rivalries of the pre-War period, some commentators felt that national and racial efficiency were being jeopardised by a combination of moral slovenliness and the odious living and working conditions of large sections of the populace. National competitiveness was at stake.¹

Such concerns were clearly not shared by the populace at large which could only too readily see the benefits of limiting family size in terms of increased quality of life. The intransigence of the masses did not prevent campaigns against contraception and outcries about 'national deterioration' as occurred in Britain after the Boer War (as a result of the high rate of rejection of recruits).² The New South Wales Royal Commission on the Decline of the Birthrate of 1904 is the best known expression of similar sentiments in Australia at this time.³ On the positive side, such concern generated greater pressure for increased state support for families and assisted in the rise of the maternal and infant welfare movement.

The effects of occupation on women was a key component of concern about maternal health. The continued participation of mainly working class women in full- and part-time industrial work was at odds with the Victorian ideal of the woman as mother first and foremost. Much British factory and some mining protective legislation had been introduced specifically to regulate the working conditions of women and children. While this legislative trend was in large measure the result of a real concern, it also reflected the desire of Parliamentary reformers and male workers to confine women as much as possible to the domestic sphere and the socialisation of children. Interestingly, protective provisions were initially only applied in industries where women were in unusual conditions and particularly visible (e.g. in large textile factories in conjunction with complex machinery) or in an occupation that was deemed morally suitable only for men (underground mining). The bulk of working women were employed in domestic service which was not regulated at all during the nineteenth century. Laundry work, the dressmaking trades and agriculture accounted for the bulk of women's employment, but were not regulated until late in the century.⁴

On the whole the types of work to which women were restricted reflected customary notions of

¹See the discussion of the infant mortality issue in Smith, *The People's Health*, pp. 113-28.

²This alarm was misplaced as the general health of the population was actually improving due to better care and feeding of the fewer children that were born; see *ibid.*, pp. 119-22.

³These early views are covered in Thame, 'Health and the State', pp. 148-52 and K. Reiger, *The Disenchantment of the Home: Modernizing the Australian Family 1880-1940*, Melbourne, 1985, pp. 104-25 - Reiger alludes to the then common fear about the effects of civilization on women's reproductive ability.

⁴Data on structure of the female workforce is taken from J.W. Scott and L.A. Tilly, 'Women's Work and the Family in Nineteenth Century Europe', in A. Amsden (ed.), *The Economics of Women and Work*, Harmondsworth, 1980, p. 94.

appropriate female roles, perhaps harking back to a pre-industrial pattern.⁵ However, pressure increased throughout the century to remove or 'protect' women even in traditional areas of paid employment. Agriculture is a case in point. Katrina Alford points out that whereas an 1843 Select Committee on the employment of women and children in agriculture 'commented approvingly on the diversity of women's rural employment' the 1868 Select Committee found such employment totally unsuitable for women 'on physical, moral and social grounds'.⁶ Alford argues that both the Victorian ideology of fit work for women and increasing rural male unemployment were chiefly responsible for the change in attitude.

Notwithstanding the 'protective' trend, the proportion of women working in Britain, for example, remained steady at about 25 per cent throughout the century. (These women were overwhelmingly young, single and working class with most leaving the workforce to marry.) Faced with this fact (and perhaps a growing acceptance that a large proportion of women would always at some stage in their life wish or need to work) public authorities focused on means of refining protective provisions in line with perceived advances in medical and scientific knowledge. Women working for wages needed some state protection if only to ensure that they would be able later to perform their key purpose in life: reproduction and socialization of children.

This paternal attitude was prevalent in Australia. Women's employment patterns were similar to those of Britain although, due to the slower pace of industrial growth, there were fewer opportunities for industrial employment.⁷ Female employees appear to have accounted for some 20 per cent of the paid workforce from 1900 to the 1930s.⁸

Concern about the effects of occupation on women was also as common as it was overseas.⁹ The factory legislation and anti-sweating campaigns of the late nineteenth century aimed to prevent the abuse and protect the health of women in a number of occupations. Although there was some debate, as in Britain, about the effects of limiting opportunities for women, the refinement of protective provisions continued into the early decades of this century. All too often such provisions were really means of limiting the spread of women to occupations traditionally deemed male. This process has been graphically outlined in

⁵On the continuity of of women's traditional work patterns in the so-called industrial period see the excellent discussion in *ibid.*, pp. 108-21.

⁶Alford, *The Drover's Wife and Her Friends: Women in Rural Society and Primary Production in Australia, 1850-1900*, Working Papers in Economic History, no. 75, Canberra, 1986, pp. 37-8.

⁷On women's employment patterns see K. Alford, *Production or Reproduction? An Economic History of Women in Australia, 1788-1850*, Melbourne, 1984, chapter 8; E. Ryan and A. Conlon, *Genile Invaders: Australian Women at Work, 1788-1974*, Sydney, 1975, pp. 17-8 and chapter 2; B. Kingston, *My Wife, My Daughter and Poor Mary Ann: Women and Work in Australia*, Melbourne, 1975.

⁸Table in C. Baldock, 'Public Policies and the Paid Work of Women', in C. Baldock and B. Cass (eds), *Women, Welfare, and the State in Australia*, North Sydney, 1986, p. 27.

⁹On expressions of this concern in Australia during the 1890s and 1900s see Reiger, *Disenchantment of the Home*, pp. 109-10; A. O'Brien, *Poverty's Prison: The Poor in New South Wales, 1880-1918*, Melbourne, 1988, pp. 93-4.

Ryan's case studies of arbitral awards in a number of trades in New South Wales during the 1900s.¹⁰

Such 'protection' was provided by way of factory, minimum hours and wage legislation and the Awards of Wages Boards and Arbitral Tribunals. Some typical examples can be found in Victoria. In 1907 the Factory Act was amended to allow the Minister to require appropriate provisions for preventing or decreasing the danger or injury to health arising out of any process of manufactures, particularly as regards women or persons under 21 years of age. In 1909, along with a widening of factory inspectorate powers, the definition of a child under the Act was changed from a person under 13 to males under 14 and females under 15 years of age. The amending Act of 1915, which made the keeping of first aid ambulance chests obligatory in factories where machinery was used, also introduced a 25 pound weight restriction for women under the age of 18.¹¹

For New South Wales good examples are measures of 1909 and 1911. The 1909 Factory Act allowed the Minister to require owners to provide dressing rooms for women, limited night work for women, and gave the Government power to make regulations restricting women from working on any designated dangerous processes. In 1911 the Government used the latter provision and gazetted 38 processes on which no males under 16 or women could be employed.¹²

The pervasiveness in this period of the belief that women's industrial employment had to be restricted for their health is perhaps best conveyed by the tenor of A.B. Piddington's 1911-12 inquiry into the conditions of working women and children in a number of industries in New South Wales. The Commission, as has been noted by a number of writers, dwelt at length on the pernicious effects of factory work on the health and reproductive ability of young women.¹³ Most of the medical men and Piddington himself would have preferred that women be excluded from factory work altogether. In a less moralistic, more practical vein, Piddington made a number of recommendations for improving the environment in factories where women were employed.

The Commonwealth itself was not immune to the promptings of the maternal health lobby. The Commonwealth had gained a direct financial interest in maternal health through the 1912 Maternity Bonus which, it was hoped, would improve mother and child survival rates. Senator Pearce, Minister for Defence, acknowledged this when responding to criticism of the scale of expenditure on the maternity bonus in 1920. He agreed that money being outlayed on the bonus (£650,000 for the year 1919-20) was not getting the best results. He went on:

¹⁰E. Ryan, *Two-thirds of a Man: Women and Arbitration in New South Wales, 1902-08*, Sydney, 1984.

¹¹Robertson, 'Industrial Hygiene in Australia', p. 534.

¹²Report of Department of Labour and Industry, 1911', *NSWPP*, vol. 2, 1912; on restrictions imposed by the NSW Arbitration Court see Conlon and Ryan, *Gentle Invaders*, chapter 3 but particularly pp. 56-67 - provisions aimed at making female labour more costly included compulsory rest periods and extra payments for requiring them to lift certain weights. For a table of the range of restrictions on the employment of women in the various States in 1917 see *Commonwealth Yearbook*, no. 11, 1918, pp. 996-7.

¹³Kingston, *My Wife, My Daughter*, pp. 63-83; Conlon and Ryan, *Gentle Invaders*, pp. 72-7.

I am convinced it is the duty of the State to assist maternity, but the Commonwealth will never be able satisfactorily to deal with this and allied health questions until it has a Ministry of Health, and until it is endowed with proper powers to deal with health matters. The maternity question is only one phase of the bigger question of the health of the people.¹⁴

Hughes, as Attorney-General in the 1910-13 Fisher Government, had been responsible for steering through the Maternity Bonus legislation.¹⁵ The wartime Committee on Death and Invalidity had discussed at length the deleterious effects of occupation on women's health, especially when combined with duties at home.

However, while there was a tradition of concern about the health of working women, it was the vast changes in Great Britain during the war which did most to highlight the issue of women's working conditions and which can be seen to have set the terms of the debate at the end of the war. The large-scale introduction of female labour into British industry and the industrial welfare measures that this brought in its train gave valuable ammunition to women's organizations, politicians and medical professionals.

The First World War had brought the issue of 'national welfare' to the fore in Britain. It was quickly realized that national welfare ultimately depended on increased production which in turn relied on greater attention to working conditions. Initially the Factory Acts and trade union rules had been suspended to allow higher production targets (through more overtime, night work, and reduced restrictions on the employment of women and children). The immediate consequence was a disconcerting rise in sickness and absenteeism. As a result the cream of the Labour Department of the Board of Trade was transferred to the new Ministry of Munitions to deal with labour regulation problems. Then, in 1915, the Health of Munitions Workers Committee (HMWC) was created to 'consider and advise on questions of industrial fatigue, hours of labour, and other matters affecting the health and physical efficiency of workers in munitions factories and workshops'.¹⁶ One of the major problems the Committee faced was the need to supervise the huge numbers of women and children used to 'dilute' industry during the war. The HMWC appointed hundreds of special investigators and welfare supervisors to monitor the welfare of workers in government and private workplaces. The investigators attempted to deal with most issues ranging from cleanliness, first aid, safety training and provision of canteens to actual home living conditions. Their basic task was to enforce the special Welfare Orders of 1916 which made the provision of 'certain elementary matters of welfare' mandatory. These orders covered: arrangements for preparing, heating and taking meals; supply of drinking water; supply of protective clothing; ambulance and first aid arrangements; supply and use of seats in workrooms; facilities for washing; accommodation for clothing; arrangements

¹⁴Commonwealth Parliamentary Debates (CPD), 14 October 1920, p. 5608.

¹⁵Dickey, *No Charity There*, p. 126.

¹⁶N. Whiteside, 'Industrial Welfare and Labour Regulation in Britain at the time of the First World War', *International Journal of Social History*, vol. 25, 1980, p. 313.

for supervision of workers; and the provision of rest rooms.¹⁷ Such measures, combined with the extension of industrial medical services, led to a significant improvement in the conditions and health of industrial workers and particularly women.

The twenty Memoranda and two final reports issued by the HMWC during the War were important in setting the parameters of health and safety practices after the war. The Committee also generated the bodies which were to dominate British health and safety research during the subsequent decade. The Industrial Welfare Society was formed in 1917 by a member of the HMWC who had resigned in protest at its interventionist methods. Backed by employers, the Society advocated voluntary provision of improved amenities. It was very successful after the war, securing Royal patronage eventually becoming the Institute of Personnel Management.¹⁸ The other body was the Industrial Fatigue Research Board, set up by scientific, medical and bureaucratic interests to continue the work of the HMWC. Basically it promoted the introduction of scientific management.¹⁹

Some Australians had personal experience of the work of the HMWC. One was Dr Ethel Osborne. Over 1916-1919 she worked as a Special Investigator for the HMWC and later the Industrial Fatigue Research Board.²⁰ When she returned to Australia in 1919, Justice Higgins asked her to report on working conditions in the clothing trade as he was not satisfied with the evidence of employer or employee representatives.²¹ Her evidence on the effects of long hours on women's health was an important factor in determining Higgins' 44 hour week Award for women textile workers (see below). In reviewing her war work she told the 1925 Royal Commission on Health that she had to admit that she 'felt the whole of industry [in Britain] had been practically revolutionised' as compared to the situation before the war. She put this down to the fact that for the first time British employers had to cope with a serious labour shortage rather than a surplus. In comparison conditions in Australia were 'decidedly primitive' and a 'long way behind'.²²

The progress of women's war work in Great Britain was followed closely by the Australian press which, occasionally, was even effusive about women's 'new political status and ... firmer footing in the commercial and industrial world'.²³ In August 1919 a report on women's employment, by a special

¹⁷F. Tillyard, *The Worker and the State*, 3rd edition, London, 1948, pp. 231-3.

¹⁸Whiteside, 'Industrial Welfare', p. 324.

¹⁹*Ibid.*, p. 327.

²⁰She reflected on her experiences in a paper to the 1920 Australian Medical Congress, 'Industrial Hygiene as Applied to Munitions Workers', published in *MJA*, 26 November 1921, pp. 473-81.

²¹*Health*, Qu. 443.

²²*Ibid.*, Qu. 4411.

²³*Argus*, 15 February 1919.

committee of the British War Cabinet, was tabled in Federal Parliament.²⁴ The Report came out in favour of equal pay in certain cases, improved hours and conditions, sanitation, and a minimum wage for women over 18 which would cover everyday living expenses. It also recommended that the state take responsibility for the costs of maternity and widows' pensions.²⁵ A visible manifestation of the effects of the war on women was the arrival in September 1919 of a delegation sent by the British Government to inquire into the possibilities of settling British women war workers in Australia.²⁶

Women's organisations were quick to take advantage of the more widespread debate over women's work. At their annual conference, the Women's Central Committee of the Victorian Labor Party (formed in 1916), advocated a 30 hour week for women in factories; the non-employment of girls under 16; and the appointment, by women factory workers, of a factory inspector, her wages to be paid by the Government.²⁷ The Victorian and New South Wales Branches of the National Council of Women (NCW) also displayed a keen interest in women's industrial status. War work had first been discussed at an interstate conference held in 1916.²⁸ In April 1919 the Victorian Branch resumed its normal monthly peace-time meetings. At the first such meeting Ethel Osborne, fresh from her munitions welfare work investigations, spoke on the work of English women in munitions factories and their change of outlook during the war.²⁹ Over the next couple of years one monthly meeting each year was devoted to women's work. At one of these meetings a 'male speaker' presented a paper on the 'efficiencies' of better working conditions.³⁰

The New South Wales Branch evinced a similar degree of interest and activity but with, it appears, much greater effect. A paper entitled 'Women's Work in War Time' by a Ms Collison was heard in 1918³¹ and one on the subject of the 'Industrial Health of Women' in the following year. The Branch's report for that year advised that in relation to the subject of the latter paper they 'hoped to do more next year' as it was possible that the work of the Broken Hill Technical Commission could be applied to women.³²

The Branch's most important initiative was to lobby the Commonwealth Government to act on the issue of women's health at work. Early in 1920 the Council forwarded a resolution to the Hughes Government 'urging the pressing necessity for a scientific investigation into the health of women workers throughout the

²⁴*Argus*, 3 August 1919.

²⁵*Argus*, 19 May 1919.

²⁶*Argus*, 3 September 1919.

²⁷*Argus*, 7 April 1919.

²⁸A. M. Norris, *History of the National Council of Women*, Melbourne, 1978, p. 31.

²⁹*Argus*, 25 April 1919.

³⁰Norris, *National Council of Women*, p. 41.

³¹National Council of Women (NSW Branch), *Biennial Report*, 1918/19.

³²*Biennial Report* 1919/20.

Commonwealth'. As to the result of this approach, the New South Wales State Secretary was very pleased to 'announce that our resolution has borne fruit and the Commonwealth Government has appointed two doctors to make investigations in the matter of Industrial Hygiene'.³³ That Dr Cumpston had a role in these developments is clear from the Report of the Council's Standing Committee on Public Health:

We have noted with keen interest the establishment by the Federal Government of a bureau for the scientific investigation of the conditions and health of women workers. Dr. Cumpston, Federal Office of Health, has acknowledged the aid of the Council in this matter.³⁴

The success of the NCW's lobbying should be seen in the context of the emergence of the health and conditions of women workers as a distinct public issue during 1920-21. Cumpston, for one, seems to have taken advantage of this mood. At the August 1920 Australian Medical Congress there was a large number of papers on aspects of women's health including Ethel Osborne's on her munitions welfare work. The Congress had also discussed at length the subject of women's domestic working conditions in the tropical north.

In November Cumpston addressed the Annual Congress of the of the Victorian NCW. He used the opportunity to make some suggestions about ideas the Council could follow up which might lead to better maternal health.³⁵ Cumpston said that the 'mother's qualities' were important in the development of the human race:

While it was true that we humans are tolerating in our capital stock qualities that breeders of mammalian stock would not tolerate for a day - by permitting those on the border-line of imbecility to reproduce their unfortunate kind - there was another side to the human problem; the economic and intellectual qualities can be steadily improved from generation to generation, and the mother's qualities of courage, industry, initiative, intelligence, are thus most valuable.

Most of a woman's 'fitness for motherhood' was determined before marriage. Accordingly, he advised the Congress that:

Women like those before him should make a careful study of the conditions of employment of young women in modern industries, and discover, if possible, how they affect the young women's prospective motherhood, which is the most important of all women's duties. During the war there was a unique opportunity afforded the medical profession to watch the effect of modern industrial life upon women's bodies, and it was discovered that a very great proportion of such disorders as have a concentrated effect on the nervous system was prevalent among these girls and women. These, in their turn, must have a cumulative effect upon the girls' capacity for childbearing. This was in England where it was also discovered that the death-rate from consumption was increased by 7 per cent, through the employment of girls and women in such industries; but here we have the same problems, as yet untouched, save very superficially. Thus there is a wide field for investigation, calling loudly for investigators. The nerve strain in young women today in industrial life is considerable. They must rise early, and they rush off to catch trains or trams after a hastily-swallowed breakfast, and then they spend the day in nerve-wracking noise and bustle and jarring sensations of all descriptions. These in themselves are seriously detrimental to maternity.

He then went on to talk about the need for improved ante-natal work in Australia in view of the high infant and maternal death-rates. In this context he adverted to the role of 'domestic fatigue' in causing 'bad confinements':

What was becoming known as Kitchen Neurasthenia was very serious for the expectant mother, and tired mothers with house nerves did not come through their period of strain with anything like the ease of the woman who has been cared for during the months of waiting.

³³*Biennial Report, 1920/21.*

³⁴*Biennial Report, 1921/22.*

³⁵Account of speech in press clipping from *The Messenger*, 26 November 1920, Cumpston Papers, MS613.

He he did not know 'of any occupation that is attended with so much ill-health and so much disability as the occupation of the worker of a family'.

Cumpston's address was well received by the Congress. Dr Edith Barrett felt that the address was 'so important, and teemed with so much of vital interest to women, that she thought the Council should model its next year's programme on the subjects suggested by Dr Cumpston'. Her suggestion was agreed unanimously. Typically, the concept of 'kitchen neurasthenia' was the object of sardonic press comment, with the *Bulletin* for one delivering up an ode to the subject.³⁶

The NCW was a respectable organization whose members were women not in the paid workforce and mainly from middle class families.³⁷ Despite their lack of real knowledge of the problems poorer working women faced, theirs was an articulate voice that one would expect to be heard and lobbying by the NCW appears to have been a key factor in eliciting a Commonwealth commitment. But there was also pressure on the industrial front during 1921.

In February a number of unions in Victoria demanded some concrete action on women's health and welfare at work. The Victorian Trades Hall Council (VTHC) passed the following motion:

That this Council convene a conference of unions having women workers in their industry for the purpose of investigating wages, conditions and organisation of women workers as a whole.³⁸

The resolution had been proposed by the Clerks' Association.³⁹

The Conference was held on a number of Saturdays over the next two months at Trades Hall and was attended by delegates from 30 unions with women members.⁴⁰ E. J. Holloway (Secretary of the VTHC), Secretary of the Conference, told the press after the first meeting, that it was pointed out during the discussions 'that there were still thousands of women in this country whose working conditions were not covered in wages board determinations or Arbitration Court awards. The result was that there was still a great amount of "sweating"'.⁴¹ The major motion discussed was that a Government inquiry be held into the question of women's work. It was proposed that the inquiry should cover such things as housing, length of hours, nature of work, accidents, moral welfare, nature of surroundings, industrial fatigue, and the effects of industry on the pre-natal and post-natal conditions of women. The motion was discussed and refined over subsequent weeks and adopted by the VTHC on 2 June 1921.⁴²

³⁶Press clippings [unsourced and undated], Cumpston Papers, MS 613.

³⁷M. Sawyer and M. Simms, *A Woman's Place: Women and Politics in Australia*, North Sydney, 1984, p. 32.

³⁸*Argus*, 18 February 1921.

³⁹*Argus*, 11 March 1921.

⁴⁰*Argus*, 4 March 1921.

⁴¹*Ibid.*

⁴²*Argus*, 3 June 1921; the final meeting of the Conference had occurred on 7 May and was presided over by a Mrs (Councillor) Rogers of Richmond, *Argus*, 9 May 1921.

The VTHC asked for a small commission or committee of inquiry which would include union movement representation, for the purpose of 'investigating the extent and conditions surrounding child labour, and to ascertain all the facts and circumstances connected with women's place in industry, as well as the conditions covering domestic service'.⁴³ The issues concerning women's employment the commission was expected to address included effects on health, the possible effects on the 'future race', the increase of employment of women during and after the war, the number of occupations not covered by industrial awards, the extent and condition of outdoor workers, extent and condition of employment of married women, widows and deserted wives, the relations between the wages of men and women in the same or similar occupations or different classes of work, the extent to which women and girls are called upon to work heavy or dangerous machinery, the surroundings of women workers, and the general environment and conditions and the home environment of women and children. Investigations were also requested into the employment conditions and prospects of children. It was expected the inquiry would address overseas developments as well. That so many Australian unions were willing to discuss this range of issues indicates that the war years had seen the development of a degree of awareness of some of the problems Australian women faced at work.

The Conference also resolved that the VTHC should conduct a publicity campaign to educate women in the principles of unionism and to encourage them to join relevant unions.⁴⁴ The campaign would appeal to mothers to co-operate so that the Factory Inspectorate could be assisted in checking evasions of the anti-sweating provisions.⁴⁵ The use of suburban municipal halls and a series of public meetings were planned. It was agreed that each union be asked to contribute £1 1s to an organizing fund for the campaign.⁴⁶

The VTHC request was not taken up by the Victorian Government. A couple of days after the request, the Secretary of the Labour Department, H. M. Murphy, downplayed the need for such an inquiry. He said that many such inquiries had been conducted overseas and that:

a large number of reports have been published on the subject. Some of these reports are very elaborate and thorough, but it must be remembered that in Great Britain and America women workers have not enjoyed the protection that is given to them under the factory laws of Victoria. Here we limit the age at which a girl can enter a factory to 15 years, and a limitation is also placed on the number of hours a woman or boy is allowed to work in a factory. I am not mentioning these things with the idea of saying that Victoria has gone far enough, but to show that in Great Britain and America they have further to go in this matter than we have.⁴⁷

Such complacency in official quarters probably took some of the steam out of the VTHC's campaign.

The VTHC campaign would have added extra weight to the case being put by the NCW. As will be

⁴³*Argus*, 3 June 1921.

⁴⁴*Argus*, 4 March 1921.

⁴⁵*Argus*, 25 March 1921.

⁴⁶*Argus*, 3 June 1921.

⁴⁷*Argus*, 7 June 1921.

recalled, the IHD was not formally created until December 1921. In the interval between the announcement of the setting up of the Health Department (February 1921) and the creation of the Division the structure and functions of the new area were being finalized. Continued lobbying on the issue of women's health during the year must have strengthened the case for meaningful action on the issue. When the IHB expert, Anthony Lanza, arrived in August 1921, the Commonwealth Health Department advised that one of the first issues he would be examining was the effect of a number of industries on women employed in them.⁴⁸ Lanza was not only an expert on mining health, he had also been responsible for framing conditions of employment among munitions workers in the United States during the war. This may have involved some experience in supervising women's conditions (the US only seriously started producing munitions in 1917 which limited the extent of dilution). The same press report noted that the issue of women's health at work had recently been discussed by the Victorian Branch of the NCW, thus linking the NCW's efforts with the Commonwealth initiative.

The Victorian NCW was active on the issue for the remainder of the year. Some time in September the Branch formed a Trades and Professions Committee (the New South Wales Branch had had one for some years). The Committee intended to get a complete record of women workers and their work, and to watch all legislation which affected women workers.⁴⁹ The issue of women's industrial conditions was also prominent at the Branch Annual Congress in November 1921.⁵⁰ As well as an inspection of welfare work practices at Myers there were addresses by the Myers' medical officer, Dr Peggy Anderson, the chief welfare officer, Miss Cuthbertson, and Dr Ethel Osborne.

Anderson discussed the medical supervision of employees saying that compared with what was going on in England 'Victoria was only on the fringe of the work'⁵¹ - a striking contrast with Murphy's complacent views. Munitions work had depended on such services which were now widespread in British industry. Decreased absences and greater efficiency were evident. In the United States most industries had their own medical facilities which provided prompt attention. While in Australia many factories used the services of visiting medical men; injured persons usually had to go back to the surgery, and hope the physician was there. Often it was necessary to take half a day off to receive attention for a minor injury or illness, something which many were reluctant to do. She gave the example of a woman who had come to her with a 'slight illness' which was found to be tuberculosis of both lungs. She had been sent to a sanatorium and was recovering well. She also cited an example recently given by Gerald Mussen (BHAS) in which a young man who had been struck in the eyes by molten metal had been raced to Adelaide from Port Pirie (a

⁴⁸*Argus*, 5 August 1921.

⁴⁹*Argus*, 18 November 1921.

⁵⁰*Argus*, 18 November.

⁵¹*Ibid.*

drive of some hours). The doctor had said that a few more hours delay would have resulted in the permanent loss of sight in both eyes. Hence the ability to treat immediately was important.

Dr Osborne spoke on the effect of hours on women workers in the light of her industrial welfare work experience in Britain during the war and her report for Higgins on the clothing trade. She argued that conditions in the clothing trade, which was essentially a woman's trade, should be such that they should not impair the health of women under 21 - 'the future mothers'. The decline of Saturday morning work was to be lauded and a 44 hour week to be supported generally. Meal breaks had to be no less than one half hour and a spell no more than four. Higgins had incorporated most of these recommendations in his award. Miss Cuthbertson said that 'for a woman to be asked for a report by a Supreme Court judge as Mrs Osborne had been, was the highest possible compliment'. In reference to welfare work another delegate, Miss Anna Brennan, raised the evident problem of worker opposition to industrial welfare work. She reflected: 'The former felt - and the feeling might at times be wholly justified - that the welfare worker was not wholly disinterested.' Nevertheless she thought the work of Ethel Osborne was valuable as it went a long way to establishing the 44 hour week for women and contained a provision against 'speeding up' in lieu. This, she concluded, 'was an award largely due to the evidence of three women - Mrs Osborne, Miss Cuthbertson, and Miss Brenda Sutherland (clothing trade union representative)'.

The NCW continued to organize edifying papers and visits to model employers over the next decade. However, despite the Commonwealth Government's positive pronouncements as to what it intended to do about women's occupational health, ultimately little was to be achieved.

Industrial Welfare, Science and Occupational Health

While Commonwealth preparedness to address occupational health problems was, at one level, a pragmatic response to particular problems, at another it also reflected the greater government and employer interest in industrial welfare work and the role of science in industry.

Industrial welfare work was generally understood to consist of voluntary efforts on the part of employers to improve working conditions and promote greater harmony in industrial relationships. It could cover attention to the physical environment, health and safety measures, conditions of employment (e.g. sick leave, holidays, training etc) as well as more general developmental measures such as libraries and physical education depending on how broadly an employer interpreted the concept.⁵²

Welfare work was not of course a new phenomenon; from the late eighteenth century (and probably before) there had been progressive employers who took an interest in the attitude and health of their

⁵²See definitions in Advisory Council of Science and Industry (ACSI), *Welfare Work*, Bulletin No. 15 [by Herbert Heaton], Melbourne, 1919, pp. 3-4 and E. D. Proud, *Welfare Work*, London, 1916, p. 5.

employees. Welfare work was 'good business' in that it promoted fitter, happier and more productive employees. In Britain much early factory legislation merely enacted the practices of the most progressive employers who were also often themselves in the forefront of campaigns for better factory legislation.⁵³ To some extent these attitudes were of a piece with the paternalism which had traditionally operated in the smaller pre-industrial firm. Appreciation of the value of investment in human capital became more widespread as the scale and complexity of industry increased. In order to enhance productivity greater efforts were made to retain and protect skilled workers. Such things as accident and provident funds were supported, housing was subsidized and conditions of work improved beyond the minimum required by law. Sometimes someone was even employed specifically as a welfare/medical officer. Here were the beginnings of personnel management as it is known today. Needless to say, many employers also saw the potential of welfare work as a means of countering the growing influence of unions and preventing industrial unrest.

A powerful aid to reforming conditions was the growth of scientific knowledge about the effects of work on health. Greater medical knowledge underpinned such things as more precise factory legislation (e.g. better ventilation standards) and the compensation of specific occupational diseases (e.g. lead-poisoning). The increase of medical interest in occupational health appears to have been particularly strong from around the the last decade of the nineteenth century.⁵⁴ The first modern textbooks on occupational medicine appeared in the 1900s.⁵⁵

By the First World War quite a few larger firms in Great Britain and the United States were conducting industrial welfare work.⁵⁶ However, it was really only following the work in the British munitions industry that the subject gained a higher profile and generated more widespread interest. The work of the Health of Munitions Workers Committee was critical in giving legitimacy to scientifically-based industrial welfare methods. Welfare work appeared to offer greater productivity through a healthier and more co-operative workforce. In keeping with the mood of 'reconstruction' - encapsulated in the slogan, 'a land fit for heroes', which briefly held sway in political and civil service circles - welfare work was also seen as part of labour's reward for its war effort, a step on the road to 'a new social order'. Lloyd George expressed this sentiment in the following terms when introducing the first study of wartime welfare work:

⁵³ACSI, *Welfare Work*, pp. 4-10; Proud, *Welfare Work*, p. 3.

⁵⁴In Britain, for example, the first medical inquiries into occupational diseases were conducted by the Home Office Dangerous Trades Committee and in 1898 a Medical Inspector of Factories was appointed. The bringing of certain occupational diseases under the Workmen's Compensation Act in 1906 was done so on the basis of a lengthy medical inquiry. On growing interest in the United States see G. Rosen, *Preventive Medicine in the United States, 1900-1975*, New York, 1975, pp. 7-9.

⁵⁵T. Oliver, *Diseases of Occupation*, London, 1908; G. Kober, *Industrial and Personal Hygiene*, Washington, 1908.

⁵⁶On this awareness see R. Fitzgerald, *British Labour Management and Industrial Welfare, 1846-1939*, London, 1988, pp. 184-6; D. Nelson and G. Campbell, 'Taylorism Versus Welfare Work in American Industry: H. L. Gantt and the Bancrofts', *Business History Review*, vol. 46, no. 1, Spring 1972, pp. 1-16; S. Haber, *Efficiency and Uplift: Scientific Management in the Era of Progressivism, 1890-1920*, Chicago, 1964, chapter one; R. Asher, 'The Limits of Big Business Paternalism: Relief for the Injured in the Years Before Workmen's Compensation', in D. Rosner and G. Markowitz (eds), *Dying for Work: Workers' Safety and Health in Twentieth Century America*, Bloomington and Indianapolis, 1987, pp. 19-31.

It is a strange irony, but no small compensation, that the making of weapons of destruction should afford the occasion to humanize industry. Yet such is the case. Old prejudices have vanished, new ideas are abroad; employers and workers, the public and the State, are all favourable to the new methods. The opportunity must not be allowed to slip. It may well be that, when the tumult of war is a distant echo, and the making of munitions a nightmare of the past, the effort now being made to soften the asperities, to secure the welfare of the workers, and to build a bridge of sympathy and understanding between employer and employed, will have left behind results of permanent and enduring value.⁵⁷

One of the few enduring results of this mood was the setting up in 1919 of the International Labor Organisation (ILO). The Covenant of the League of Nations included a pledge that all members would 'endeavour to secure and maintain fair and humane conditions of labour for men, women and children and for that purpose will establish and maintain necessary international organizations'.⁵⁸ Hence, under Part XIII of the Treaty of Versailles the ILO was created to promote 'social justice' and 'humane conditions of labour'.⁵⁹ The organization consisted of the International Labor Office and an annual conference. All League members including Australia were automatic members.

The ILO developed an important role in the occupational health field. Its conferences set international standards on all aspects of occupational health and working conditions. It commissioned studies of major problems, disseminating the results widely. In 1930 it also released the first encyclopaedia of occupational health, *Occupation and Health*, which (in updated form) is still an essential reference work. The first ILO conference, held in Washington in 1919, dealt with hours of labour, night work, child labour and women's work. The 1920 conference, held in Genoa, addressed maritime working conditions. The Geneva conference of the following year examined agricultural work. Although member countries did not invariably implement ILO recommendations, its activities did a considerable amount to raise the profile of occupational health in the 1920s and Australia for one was an active participant in the organization's work.

Notwithstanding the ideals of Versailles, in most countries the postwar mood of reform soon dissipated - especially with the onset of a severe economic downturn in 1920. However, while the more ambitious elements of the reconstructionist agenda were set aside (e.g. industrial democracy, profit-sharing), welfare work, with particular attention to occupational health, was further developed during the 1920s. Australia was no exception to this pattern.

The influence of the work of the HMWC on the medical profession and certain women's groups has already been mentioned. At the 1920 Australian Medical Congress, Ethel Osborne's husband, W.A. Osborne, Professor of Physiology at Sydney University, commended welfare work in the following terms:

Australia has not yet realised the immense progress which the war has brought to welfare administration in

⁵⁷'Foreword' to Proud, *Welfare Work*, pp. xii-xiii.

⁵⁸H. Heaton, *An Economic History of Europe*, second edition, New York, 1948, pp. 731-3. On the ILO's predecessors (it incorporated two earlier international organizations concerned with labour legislation) see S. Bauer, 'Past Achievements and Future Prospects of International Labor Legislation', *The Economic Journal*, March 1921, pp. 28-37.

⁵⁹Heaton, *Economic History*, pp. 731-3.

Britain. Welfare should be an integral department of every business as much as packing and accounting.⁶⁰

The functions of the New South Wales Board of Trade included the promotion of the introduction of welfare work methods and co-partnership. In late 1918, George Beeby, New South Wales Minister for Labour and Industry, went on a study tour of the United States and Great Britain to examine progress in industrial methods. His subsequent report covered in detail the penetration of scientific management and industrial welfare methods as well as workers' compensation and industrial democracy schemes.⁶¹ Beeby returned convinced of the need for better working conditions, not just greater management control, if the threat of Bolshevism at home was to be staved off. He went on to promote industrial welfare and efficiency as an Arbitration Court judge during the 1920s. He also conducted the 1920 New South Wales Royal Commission into the 44 hour week which reduced the 48 hour week to 44 largely on the basis of the wartime research into industrial efficiency. Similarly, the Commonwealth Arbitration Court was influenced by this current of ideas, noting in some of its decisions that reduced hours and the introduction of rest breaks did not necessarily mean reduced production.⁶²

The Prime Minister, Hughes, had also been quick to take up the idea of industrial welfare work. In 1916 the Advisory Council on Science and Industry (the forebear of CSIRO) had been set up to promote the use of science in Australian industry. Included in the Council's functions, at the request of Hughes, was:
the collection and dissemination of information regarding industrial welfare and questions relating to the improvement of industrial conditions.⁶³

In 1919 the Council published a bulletin entitled *Welfare Work* which comprehensively surveyed the theory and practice of welfare work overseas.⁶⁴ In the subsequent year, a follow-up bulletin entitled *Industrial Co-operation* was released which presented examples of Australian industrial welfare work.⁶⁵ The specific purpose of these bulletins was to promote awareness of welfare work among Australian firms.

The range of firms included in the latter bulletin shows that many of the larger Australian companies were well aware of the new thinking about industrial conditions. This awareness is also evident in contributions to Pratt's *Australian Tariff Handbook* of 1919, with many firms advertising the modernization of their factories and introduction of amenities and shorter hours during the war (e.g. Pelaco

⁶⁰*Transactions of the Eleventh Session*, p. 98.

⁶¹'Industrial Conditions in Great Britain and the United States of America', *NSWPP*, vol. 1, 1919.

⁶²This is discussed in C. Nyland, 'Scientific Management and the 44 Hour Week', *Labour History*, no. 53, November 1987, pp. 20-37.

⁶³G. Currie and J. Graham, *The Origins of CSIRO: Science and the Commonwealth Government*, Melbourne, 1966, Appendix 13.

⁶⁴See footnote 52 above.

⁶⁵ACSI, *Industrial Co-operation*, Bulletin no. 17, Melbourne, 1920.

Ltd. and the Colonial Ammunition Co.).⁶⁶ The pages of the *Industrial Australian and Mining Standard* at this time are also replete with references to studies of industrial fatigue, company welfare initiatives and the nature of industrial relationships. A particularly interesting series of articles was contributed by Herbert Gepp, the Collins House Manager, and another writer under the heading 'Modern Principles of Industrial Organisation'. Over a number of weeks they outlined every possible aspect of modern industrial practice, including such things as attention to employee health, safety, and diet.⁶⁷

Awareness of the new practices is also reflected in the reports of the New South Wales factory inspectors during the War where one can see inspectors advertizing to the developments in Britain and noting the gradual adoption of welfare work in many factories.⁶⁸ These reports also highlight the fact that many employers were introducing these measures voluntarily, often well in advance of developments in Britain. It is evident that improvement of industrial conditions had been proceeding at a steady pace from, and indeed well before, the commencement of the War, no doubt reflecting employer experience of the efficiency and industrial relations advantages of such measures, and of course the activities of the Factory Inspectorate.

As in Britain, government and employer support for the more ambitious elements of industrial reform soon dwindled. For example, Hughes' schemes for industrial participation fell by the wayside⁶⁹ and in late 1920 CSIRO decided that it did not have sufficient funds to pursue its industrial welfare role. The founding of the Health Department in January 1921 was at the tail end of this waning of the reconstructionist spirit. As such the IHD survived as one of the few expressions of the post-war mood of concern about the need for better working conditions to boost productivity and employee welfare.

⁶⁶A. Pratt, *The Australian Tariff Handbook*, Melbourne, 1919. One has to bear in mind that these companies were seeking greater tariff protection in the more competitive postwar markets when advertising exemplary behaviour towards their employees. The development of welfare work practices in Department stores in this period has been examined by G. Reekie, "'Humanising Industry': Paternalism, Welfare and Labour Control in Sydney's Big Stores 1890-1930", *Labour History*, no. 53, November 1987, pp. 1-19.

⁶⁷E.g. *Industrial Australian and Mining Standard*, 28 October 1920, 4 November 1920.

⁶⁸For example, Inspector Armitage in the report for 1918 observed that welfare work was becoming more general 'as the need for it is becoming more widely appreciated in all large factories. The work undertaken follows largely the lines of welfare work in England as exemplified during the four years of war'; 'Report of the Department of Labour and Industry, 1918', p. 41, *NSWPP*, vol. 1, 1919; see generally the Department of Labour and Industry reports from 1913 to 1920.

⁶⁹See L.F. Fitzhardinge, *The Little Digger: William Morris Hughes: A Political Biography, Volume Two, 1914-1952*, London, 1963, pp. 442-5.

Chapter 4

The Commonwealth Division of Industrial Hygiene, 1921-1932, Part I

This chapter is the first of three which examine the work of the IHD in the 1920s, but first there is a section on the administrative aspects of the establishment of the IHD and another on the Division's initial policy framework. The third and final section deals with the Division's attempts to improve the quality of statistical data on occupational health in Australia.

Administrative Arrangements and Personnel

The establishment of the new Health Department proved to be a lengthy process. Not until December 1921 were the estimates for the Department passed thus enabling it to function. This delay was the cause of some embarrassment to the Government.

The proposal approved by Cabinet stated that the Department of Health would 'devote particular attention to certain phases of industrial hygiene, especially in respect of designing means for the control of industrial diseases associated with mining and with the employment of women'. For staff two male doctors, two female doctors, one woman investigator, and sundry technicians were proposed. The cost for one year was estimated at £6,150 out of the £49,100 proposed for the Ministry.¹ This staffing structure, which aimed to cover both the problems of male miners and female workers, was considerably truncated in the course of the year.

The outline of the new Department in the 3 February *Commonwealth Gazette* specified the occupational health function as 'the investigation of all factors affecting health in industries'. There were, however, a number of other functions under which Commonwealth occupational health initiatives were to be pursued:

The investigation of causes of disease and death, the establishment and control of laboratories for this purpose.

The education of the public in matters of public health.

The administration of any subsidy made by the Commonwealth with the object of assisting any effort made by any State Government or public authority directed towards the eradication, prevention or control of any disease.

The conducting of campaigns of prevention of disease in which more than one State is interested.

¹Cumpston to Treasurer, 10 March 1921, A571 21/13702 (see Chapter One).

Cumpston was keen to get the occupational health function underway. When he conveyed Cabinet's decision to create the Department to Heiser (8 February) he added that the 'early selection' of the Rockefeller industrial hygiene expert, perhaps by June, would be appreciated.² Correspondence then ensued between Cumpston and the IHB over the type of person required for the industrial hygiene adviser (see Chapter 2). Cumpston also wrote to Colin Fraser, BHAS, regarding the Port Pirie laboratory. He said he was intending, 'as agreed', to make an early start with the Port Pirie laboratory and added that relations between BHAS and the Department of Health would have to be sorted out. Cumpston was referring to the proposed joint laboratory which was to have been run by Duncan Robertson.³

Some members of the Government were not so convinced of the urgency of the new Department's work. In June Cumpston wrote to his Minister, Massey Greene, complaining about a delay in funding. The Treasurer, Sir Joseph Cook, was not prepared to grant any funds for the Health Department until Parliament had considered the matter. This was despite the imminent arrival of the IHB industrial hygiene expert, Anthony Lanza.⁴ Later in June, Senator George Fairbairn also raised the issue of the need for Parliament's consideration before the creation of new Commonwealth Departments and supported Cook.⁵ Perhaps Hughes' absence from Australia from the end of April until the end of September 1921, attending the Imperial Conference in London, weakened Cumpston's position. The *Melbourne Herald*, under the headline 'A Federal Dilemma: New Dept. "Stranded": Rockefeller Experts Await Directions', outlined the situation.⁶

After due Parliamentary scrutiny the estimates were passed in early December and Cumpston, breathing a sigh of relief, could write to Heiser informing him that the laboratories were to go ahead and that there was provision for appointment of a permanent Director of the IHD to work with Lanza.⁷ Lanza had arrived in August 1921. He appears to have been kept occupied familiarising himself with Australian occupational health problems until December when he was formally appointed Advisory Expert to the Division.⁸ The new Division was but a shadow of the proposals put forward by Cumpston earlier in the year. One male doctor had disappeared and gone completely were the female doctors and 'woman investigator'. Needless to say, the non-appointment of the female professional staff resulted in the Division giving only cursory attention to women's occupational health problems over the next decade.

²Cumpston to Heiser, 8 February 1921, A1928 443/11.

³Cumpston to Fraser, BHAS, 3 March 1921, A1928 1020/67.

⁴Cumpston to Massey Greene, 2 June 1921, A1928 443/11.

⁵CPD, 28 June 1921, pp. 9351-54.

⁶*Herald*, 24 August 1921; *Weekly Times* (Melbourne), 27 August 1921, clippings on A1928 443/11.

⁷Cumpston to Heiser, 8 December 1921, A1928 443/11.

⁸A1928 545/19.

The Director of the new Division, Duncan Robertson, was ably qualified for the position. He was born in Melbourne in 1883 and had attended Brighton Grammar School.⁹ At the age of 21 he had gone to Scotland and entered the Medical School at Edinburgh University. In 1909 he gained the Freeland Barbour Fellowship in Anatomy, Physiology and Pathology and graduated with honours in medicine and surgery. He went on to take out the Diploma in Public Health in 1911 and in 1912 secured the degree of Doctor of Medicine by thesis. He had conducted laboratory research work in Edinburgh and had held appointments at Rochdale Infirmary, Grimsby Hospital, Lincolnshire and the Western Infectious Diseases Hospital at Fulham. Late in 1913 he returned to Australia and joined the Federal Quarantine Service. He worked first in Sydney before being appointed Chief Quarantine Officer for Victoria. He was then lent to the Tasmanian Government for which he acted as Chief Health Officer for an interval. At this time he prepared his brief pamphlet, *Lung Diseases of Miners: Their Cause and Prevention*, which was published in 1916.¹⁰ In July 1915 he joined the Army Medical Corps Reserve and served for a period on an hospital ship (his Department, Trade and Customs, refused to allow him to go on active service). When he returned he was made Chief Quarantine Officer for Western Australia. In 1918 he resigned and served as a Captain in France in the Medical Corps. His key occupational health experience appears to have been as a medical officer to Lever Brothers' Port Sunlight establishment in England (when is unknown) and as the Medical Superintendent for BHAS at Port Pirie over 1920-21 (he seems to have been 'loaned' by the Commonwealth). In 1920, as previously mentioned, he had conducted the inquiry at Bendigo into miners' health for the Victorian and Commonwealth Governments, the results of which were published that year.

Robertson's Bendigo work seems to have stood him in good stead, notwithstanding his problems at Port Pirie. A few weeks after he had been appointed to the Division the Broken Hill AMA, obviously unaware of his appointment, telegraphed him asking him to be their medical officer on the Bureau of Medical Inspection the New South Wales Government was setting up to implement the new health practices at Broken Hill. Although he felt honoured to have been asked, he declined their offer because the Division offered him more scope.¹¹

Dr Lanza's 'expert' status was based on pertinent experience. For the previous 14 years he had been employed by the United States Government chiefly with the Bureau of Mines and the Public Health Service. In 1915, with others, he had conducted the first U.S Government study of silicosis and associated conditions in the lead and zinc mining district of south west Missouri.¹² The study was followed by others in hard rock metal mining regions of the United States. Lanza's work was referred to approvingly by the

⁹The following details are drawn from Cumpston to Minister for Trade and Customs, 3 December 1922, A1928 1020/67; and an obituary in *MJA*, 6 July 1929, pp. 32-3.

¹⁰The pamphlet stressed the link between dust and lung disease and listed a few basic preventive measures.

¹¹Robertson to AMA, 5 January 1922, A1928 1020/67.

¹²Sayers and Lanza, 'History of Silicosis and Asbestosis', p. 18.

New South Wales Board of Trade in its 1918 interim report on dust diseases. When advising that further surveys were needed to establish the precise nature of the dust problem in New South Wales, the Board recommended that such surveys should be done in accordance with the methods adopted by Lanza and his colleagues in the 1915 Missouri inquiry.¹³ The Board also appeared to be impressed with the educational work conducted by Lanza and his colleagues in the course of their inquiry. They used films, did free examinations and generally interested themselves in the living conditions of the miners.¹⁴ During the War Lanza had been personally responsible for framing employment conditions for United States munition workers with, it is said, 'marked success'.¹⁵ Evidently the Rockefeller Foundation had been able to lure him from Government Service to the lucrative pastures of international public health promotion. At any rate, Lanza's experience suited him for the problems of Australia's hard rock mining industry.

Robertson and Lanza worked together until December 1922 when Robertson went overseas to take up his Rockefeller Fellowship. He returned in November 1923. In his absence, Frank Kerr was appointed to assist Lanza in February 1923.¹⁶ Kerr obtained his Diploma of Public Health from Melbourne University in 1922 and in 1924 his Doctorate of Medicine for a thesis entitled, 'An Examination into the Economic Significance of Illness among Large Bodies of Employees'. This was surely the first Australian postgraduate thesis on occupational health. Kerr remained with Robertson when Lanza left in December 1923.

In 1925 the Division gained responsibility for the Commonwealth Medical Officers (CMOs) in Sydney (A.H. Moseley) and Melbourne. Kerr became the Melbourne CMO and was replaced as the Divisional Medical Officer by Dr Keith Moore who had been in charge of the Bendigo Health Laboratory since October 1922. Moore graduated from Melbourne Medical School in 1915.¹⁷ He then spent some time at the Alfred Hospital and in private practice. He enlisted in 1917 but, debarred from overseas service due to a rheumatic condition, he served instead at the Military Sanatorium at Macleod. It was there that he developed an interest in lung diseases and radiography. He spent three years at Macleod gaining considerable experience in the interpretation of chest X-rays, and acting as Medical Officer-in-Charge for the last 18 months. In April 1921 he joined the new Commonwealth Health Department serving initially as Quarantine Officer at Port Adelaide before being transferred to the Bendigo Laboratory.

¹³Report of the Department of Labour and Industry for 1918', p. 15, *NSWPP*, vol. 1, 1919.

¹⁴*Interim Report on the Prevalence of Miner's Phthisis*, pp. 44-5.

¹⁵*Argus*, 5 August 1921.

¹⁶Kerr attended Wesley College before entering the Melbourne University Medical School in 1908; *MJA*, 23 July 1977, p. 136. He obtained numerous honours before graduating in 1913. He shared the Fulton Scholarship in obstetrics and gynaecology in his final year. In the same year he was selected as a Rhodes Scholar and went to Britain. He enlisted in the Royal Army Medical Corps in 1914 and had a distinguished Army career; *MJA*, 23 July 1977, p. 136.

¹⁷*MJA*, 26 April 1941, p. 535.

The only major personnel change before the disbanding of the Division in 1932 came as a result of the untimely death of Robertson in June 1929. He was replaced by Moore. Additional CMOs were appointed to the Division in 1929 (Canberra) and 1930 (Brisbane). Two trained nurses were appointed in 1927 to assist the Sydney and Melbourne CMOs. As can be seen, overall the Division had few staff. It conducted most of its work by collaborating with officers from other Divisions (especially Laboratories) or the States. The Division moved with the Department from Melbourne to Canberra in 1928.

The Policy Framework

Hughes and Cumpston had secured the Rockefeller expert, Anthony Lanza, to advise on setting up of a Division which would promote the introduction of better health and safety practices into Australian industry. Initially the Division would focus on health in the mining industry but would also look at the occupational health of women. Beyond that it was intended to be a body capable of dealing with all occupational health issues, and in particular to be a source of systematic advice for employers and unions.

The formal objects of the new Division were:

- 1) The development of hygienic standards for industry and
- 2) The development and standardisation of systems of industrial medical and surgical service.

Its scope:

- a) The study of general hygienic conditions in industry to determine how existing conditions both within and without the working field comply with sanitary requirements;
- b) The study of specific occupational diseases and poisonings to ascertain cause, effect and prevention;
- c) The study of physiological requirements of various occupations so that a basis for the development of methods for proper placement of workers with regard to physical and mental ability may be arrived at;
- d) The study of measures for furthering industrial safety and the formulation of safety codes;
- e) The study of medical and lay supervision over the worker so as to safeguard his health and well-being.¹⁸

The Division's primary role was to conduct research and provide advice. Any hygienic standards it developed could not be binding on industry unless the State government in question legislated or made regulations to that effect. Exceptions, of course, were Commonwealth employees, and employees covered by Commonwealth legislation (e.g. through the Arbitration Court and maritime legislation).

Lanza and Robertson made a number of statements quite early on as to the nature of their work which help flesh out the early occupational health policy framework. Lanza's views were most clearly stated in an article which was published in the *MJA* in 1922.¹⁹ He thought the essential object of industrial hygiene was 'the prevention of illness and death arising from or in the course of occupation'. And the term did not just apply to industrial establishments: 'Wherever men and women are employed, be it factory, mill, store, office or bank, they are subject to the influences of the environment', and while specific hazards may vary, 'the main hygienic factors remain the same'. The task of prevention often provoked opposition from those whose interests were most directly affected, the employer and employee:

¹⁸December 1921, A1928 545/19, Industrial Hygiene, Report of the Division of Industrial Hygiene, December 1921 - December 1925.

¹⁹A.J. Lanza, 'Industrial Hygiene, with Particular Reference to Conditions in Australia', *MJA*, 24 June 1922, pp. 691-5.

The employer sees in it a sinister design to increase overhead charges, to coddle the worker and impose upon the industry more burdens in the way of expensive innovations, to subject him to an ever-increasing supervision at the hands of authorities. The workman has a deep suspicion that it is another scheme of the capitalist to exploit him, to restrict his liberties and to subject him to efficiency schemes which would tend to bar all but the physically perfect from earning a livelihood.

Such suspicion was useful as the 'fire of criticism and antagonism tends to burn away the dross in the form of the faddist, the ignorant enthusiast, and the man with a "sure remedy"'.

But while acknowledging their interests, Lanza argued that occupational health was not simply a matter between employer and employee; above all it concerned the state. The state's role in relation to occupational health was pre-eminent:

It is not the prerogative of the employer to define the conditions of labour, nor is it the prerogative of the worker to expose himself to adverse conditions of work if he so desires or is indifferent or is willing on account of an increased wage. It is the right and duty of the State to demand safe conditions and that the lives and health of its citizens be not imperilled.

He noted that the loss of time due to industrial illness averaged about ten days per employee which meant enormous suffering and economic loss to industry and society. The state, through factory and shops regulation, was making some progress. Amongst larger employers everywhere there was a 'tendency for industrial organizations to improve their working conditions and provide medical and surgical relief for their employees'. What was lacking was a systematic approach to occupational health problems: 'no two establishments attack the problem in the same way'. This 'waste of intention and effort' was one of the problems the Division hoped to reduce.

Lanza then outlined the major problems to be attacked. Accurate statistical information on the mortality and morbidity experience of industrial workers was needed so as to pinpoint the major problems. He emphasized that while much work had been done on specific industrial hazards, including regulations governing certain processes, there was little means of knowing how effective they were without knowledge of the sickness experience of the work in question. He made the point that 'the effects of the ordinary physical environment of industrial workers far outweigh in importance the effects of exposure to specific poisons' and that such effects could only be detected by gaining information on the prevailing illnesses of workers, regardless of the demonstrable connection with occupation. The best sources would be friendly societies, lodges, insurance associations, hospitals and record-keeping firms. He called for inclusion of occupation on most medical certificates and records.

Next, notification of industrial diseases needed to be extended and a qualified factory medical inspector appointed to follow the cases reported. The well known vagueness in factory regulations - e.g. 'properly lighted and ventilated', 'as harmless as practicable' - needed to be replaced by minimum standards across all States. Factory inspectors needed to be better trained. He drew attention to the high skills of British factory inspectors; they needed to be experts on factory architecture, fire prevention, lighting, ventilation, and sanitation, particularly dust prevention. Such experts were valuable to worker and employer.

Lastly, he dealt with women and children in industry. Lanza was surprisingly sceptical for his time, observing that if information on men's health at work was lacking, the situation with regard to women was much more obscure:

There would appear to be a well-defined opinion among medical men and social workers that industrial conditions are often unfavourable to women, an opinion not usually supported by definite proof. Whether it is warranted or not remains to be seen.

He hoped the study of the incidence of sickness among women would 'make a beginning towards substituting fact for opinion'.

The situation of the many children under the age of 16 employed in industry he viewed with more concern. The years from fourteen to eighteen were ones of great change for children 'necessitating careful supervision'. This was more so with those who worked as they probably suffered economic stresses at home and therefore lacked protection there too. The state should at least 'insist that their health and welfare be safeguarded so that they may become useful and healthy citizens'. Citing the report of the British Health of Munitions Workers Committee on Juvenile Employment, he called for state medical examinations of every child under 18; an examination that would take into account the proposed occupation of the child. He believed that up to the age of 18 six monthly examinations should occur.

Lanza concluded by stating that the issues he had selected were matters of 'basic importance that need to be clarified and adjusted by the various agencies having jurisdiction over them, so that industry and industrial workers can have a clear idea of the fundamentals involved'. These practices constituted a base level of state regulation from which private initiatives could extend.

Beyond this floor of state regulation a number of important practices could be instituted: foremost among them, industrial medical services. Factories and Shops Acts and Regulations had to be the foundation of any successful effort to conserve occupational health, but legislation alone would not suffice. Hence the need for the introduction of the trained nurses, industrial clinics, rest periods, and well-lit and spacious buildings with facilities for eating, washing and toilets.²⁰ Lanza argued that the provision of industrial medical services in workplaces marked 'one of the great forward steps in the alleviation of illness incident to occupation and the prevention of sickness and disability' as well as being the 'main hope of ever securing adequate information as to the influence of occupation on health'.²¹

The industrial physician was particularly important in this process. In an address to the 1923 Australian Medical Congress Lanza stated that industrial hygiene was ordinarily understood as comprising:

firstly, the adaption of the worker to his job. This is accomplished by the physical examination, conducted not for the purposes of excluding the unfit, but as a guarantee that no person be placed in a position where he may be a source of danger to himself or his associates and that each individual be employed to his best advantage. Secondly, ... the regulation of working conditions, supervision of ventilation, illumination and other physical factors and the safeguarding of processes dangerous either mechanically or chemically. In the

²⁰Lanza, 'Industrial Hygiene and the Physician', *Health*, January 1923, pp. 13-4.

²¹*Ibid.*

third place it makes provision for the early recognition and prompt treatment, either medical or surgical, of illness due to or arising in the course of occupation.²²

These were the functions of the physician in the workplace and were to be 'differentiated from the role of government supervising agencies'.

Robertson, in his initial outline of the role of the Division, defined industrial hygiene as the prevention of sickness and accident in industry.²³ It was important, first, because the 'health, comfort and contentment of the worker are vital factors in production, as, if favourable, they develop a stable, efficient, working force'; and secondly, because no industry *per se* ought to damage the health of the worker and so curtail the period of earning ability.²⁴ As occupational health was a public, or national, health problem, it constituted a responsibility of the government to the people. It had to be seen as an integral part of the workers' compensation system in helping obviate the causes of injury as well as lessen the burdens of workers' compensation premiums.²⁵ To be effective, activity required not merely regulation but the co-operation of the parties concerned and a sound basis of information. Employers had to recognize that the prevention of sickness and accidents was 'good business management'. It led to profits for them and a healthier life for people in general.²⁶ To help attain these ends the Commonwealth aimed to provide by the way of the Division an 'expert consulting service' without any cost to employers, which would investigate hazards and assist in their eradication. It was to be purely advisory and what is more, Robertson reasoned, as it was charged with promoting the interests of all persons, it should have the confidence of the workers.

As well as being a national information centre on occupational health and safety for all employers, it would, for industries under government control, install and supervise departments of health and sanitation, introduce and standardize records, conduct research on health risks and provide advice. For private industry the consulting service would consist of surveys, recommendations and monitoring of improvements.²⁷ Also, a number of industrial clinics were to be set up under the Laboratories Division; most notably those at Port Pirie, Kalgoorlie, and Bendigo. As well as providing up-to-date medical technology and expertise for the investigation of occupational diseases, the clinics would serve as a means of medically examining - perhaps annually - all employees.²⁸ The other key component was the promotion of industrial medical services in private firms. Such services would include first aid boxes, ambulance rooms, adequate first aid organization, proper accident records, medical supervision on a visiting basis, and even full time medical

²²'The Place of Industrial Hygiene in the General Scheme of Disease Prevention', *MJA*, 10 May 1924, pp. 304-6.

²³D.G. Robertson, *The Scope of Industrial Hygiene*, Melbourne, 1922, p. 7.

²⁴*Ibid.*

²⁵*Ibid.* p. 8.

²⁶*Ibid.*

²⁷*Ibid.*, p. 9.

²⁸*Ibid.*, p. 10.

service.²⁹

Before we go on to examine the work of the Division during the 1920s, mention should be made of Robertson's year overseas on a Rockefeller Fellowship in Industrial Hygiene. The Rockefeller Foundation saw training medical professionals as a particularly important part of its task in promoting the benefits of preventive medicine (indeed they went on to endow some Universities in Australia for this purpose).³⁰ The Fellowships were also of course an added inducement for the Australian Government to go ahead with the Health Department.

Robertson left Australia to take up his Fellowship in December 1922.³¹ Initially he spent two months at the Harvard School of Public Health. Two additional months were occupied in visiting the larger American industrial firms to study their health and safety measures including the operation of industrial medical services. The enforcement of labour laws and the work of the Office of Industrial Hygiene and Sanitation of the US Public Health Service were also investigated. He then went to England to examine the work of the Medical Inspectors of Factories and the Factory Certifying Surgeons and the enforcement of the Factory and Shops Acts. Again he inspected leading industrial establishments. Another two months were spent in Europe studying the administration of labour laws in France, Belgium, Holland, Germany, Czechoslovakia, Austria, Switzerland and Italy. In September 1923 he attended a meeting of the Advisory Committee on Industrial Hygiene of the ILO. Robertson arrived back in Australia in October 1923.

Although Robertson was already relatively experienced in the occupational health field, the trip would have enabled him to get a sound knowledge of the most recent trends and practices of more advanced industrial economies: knowledge which would have been a useful lever in struggles with often sceptical employers and state officials in Australia. In an address to the Australian Medical Congress shortly after his return from overseas, he pointed to a number of practices he would like to see adopted in Australia.³² The extensive powers under the British Factory Act to make regulations were an example Australian States could follow. In particular, compulsory periodical examination of workers in dangerous trades as well as compulsory notification of specified occupational diseases were desirable. Only three Australian States had any regulations governing dangerous trades. The appointment of government medical inspectors and certifying surgeons for factories, as in Great Britain and Belgium, was necessary. Australia had no doctors attached to labour departments. The power of the British Secretary of State to make 'welfare orders' for any occupier of a factory or shop to compel them to adopt such things as first aid boxes and ambulance rooms would also be useful. He suggested that the Australian coal industry could follow the Mining

²⁹*Ibid.*, pp. 10-24.

³⁰E. Willis, *Medical Dominance: The Division of Labour in Australian Health Care*, Sydney, 1983, pp. 88-9.

³¹AA 1928 545/19.

³²'Observations on Industrial Medicine in Australia and Other Countries', *MJA*, 10 May 1924, pp. 310-1.

Industry Act, 1920 (UK) which created a welfare fund through a levy of a penny per ton of output of every coal mine. Social insurance on the British model was also desirable as illness rather than accidents were the major cause of days lost. He believed that the Workers' Compensation Acts of all States should include comprehensive compensation for occupational diseases instead of the sporadic coverage of the existing compensation schemes. Furthermore, the Australian Acts had little if any emphasis on rehabilitation, unlike those of some American States and European countries where 'recuperative surgery and vocational rehabilitation of the industrially crippled' was receiving attention. Special orthopaedic clinics could even be considered. He found much to commend in American industrial medical services:

There is a growing appreciation among alert and forward looking employers of the economic worth in their enterprises of initiative or cordial cooperation in various forms of health and recreation activities. America's leading industrialists are setting a brilliant example in this respect. Their medical departments are the last word in efficiency.³³

In Australia, however, there was still a major difficulty to be overcome: as there was 'a suspicion on the part of organized labour as to the objects of industrial medical service'. Robertson also commended the work of the National Safety Council of America which was responsible for the 'Safety First' campaign; he called for the introduction of the study of industrial health into Australian medical courses as was the case in some American universities; and praised the work of the Health Section of the ILO.

In a survey of health provisions in Australian Factories Acts, published on his return, he noted a few other desirable overseas practices in addition to the above.³⁴ Accurate accident statistics, on which the British and American Safety First campaigns were based, had to be collected on uniform lines. Factory inspectors, as in Europe, Great Britain and some States in the United States, needed to be much more highly qualified. Finally, regarding such matters as ventilation, heat, humidity, and temperature, recent research overseas had emphasized 'how erroneous are many of the prevailing impressions on ventilation, and how necessary it has to become to completely revise ventilation requirements for factories and shops'.

In the remainder of this chapter, the Division's attempts to improve the quality of Australian occupational health data and its other statistical work are explored.

Morbidity and Mortality Statistics

The importance of meaningful morbidity and mortality statistics was recognized by both Lanza and Robertson. Lanza believed that it was impossible to know whether any particular preventive regulations were effective without knowledge of the sickness experience of the group in question:

Were we able to secure information as to the prevailing illnesses among industrial workers, we would have a much more valuable source of knowledge which, when correlated with mortality statistics, would enable us to estimate the effect of occupation upon health with far more certainty. We would be enabled to place our fingers on the sore spots and grapple with specific conditions and facts. Until we have facts in the form of sickness statistics which can be classified by occupation; we cannot escape from conjectures and wrongful

³³*Ibid.*, p. 310.

³⁴Robertson, *Hygienic Aspects of Factories and Shops Acts*, Melbourne, 1923.

opinions.³⁵

Or, as Robertson commented apropos industrial accidents:

From the national standpoint, the importance of comparative statistics is obvious. A comprehensive campaign for the prevention accidents can only be based on a standardized system which will afford an accurate measure of accident risk in specific industries, and of the comparative degree of immunity which may be attained by the application of safety principles.³⁶

Such a system, in Robertson's opinion, was 'urgently needed in this country'.³⁷ At the beginning of the 1920s, as is still the case today, there was no useful system of occupational morbidity and mortality statistics, at State or Commonwealth levels.

Although occupational injury and illness has been evident from the beginning of industry, the ability to discern trends initially only became possible with the extension of state regulation of industry. The factory inspection and Acts and workers' compensation systems offered new opportunities for revealing and measuring industrial casualties. There were also third parties such as friendly societies, insurance companies and even hospitals which could provide useful data on sickness and occupation for a proportion of the population.

In Great Britain a great deal of work had been done by the end of the First World War.³⁸ In Australia, as Robertson advised the Royal Commission on National Insurance:

Although the advent of workmen's [compensation] legislation has made the matter one of serious concern [i.e. costs to employers], it is surprising that in the past no particular effort had been made in Australia to collect and analyse the facts of accident frequency in the different trades'.

³⁹ Statistics generated by the Factory and Mining Inspectorates had been available for many years but these represented only a tenth of the actual number receiving compensation under the Workers' Compensation Acts. At the worst end of the scale, the Western Australian and Tasmanian Factory and Shop Reports furnished no particulars about accidents whatsoever. Under the Workers' Compensation Act in Victoria, the Government Statist was unable to publish information regarding the number of claims and payments for accidents and occupational disease by occupation included in insurance companies returns under the Act without the permission of the Accident Underwriters' Association and the State Insurance Commissioner. Nor, in the returns, were the number of employees in each occupational category stated, the number injured, premiums received, and payments made only being given (i.e. making it impossible to work out accident rates for occupations). Similarly, in Queensland employers were not required to state the number of employees, as premiums were assessed on the wages paid, therefore the State Insurance Commissioner had no data as to the number of persons covered in different occupations.

³⁵'Industrial Hygiene with Particular Reference to Conditions in Australia', p. 692.

³⁶*Industrial Accident Prevention*, Melbourne, 1924, p. 33.

³⁷*Ibid.* p. 32.

³⁸See the work of Farr and Greenhow in the 1860s, Manchester Unity, and the Health of Munitions Workers Committee during the War, much of which is summarised in H.M. Vernon, *Industrial Fatigue and Efficiency*, London, 1921, pp. 161-78.

³⁹*National Insurance*, Qu. 13195.

Charles Wickens, the Commonwealth Statistician, advised the National Insurance Royal Commission in 1924 that there was 'no data available of a satisfactory nature'; statistics had not been kept at all.⁴⁰ He makes much the same point when discussing vital statistics before the Royal Commission on Health in January 1925.⁴¹ When the New South Wales Government had asked its Statistician for information on the average period of sickness per wage-earner in New South Wales the reply was 'that no information is available concerning the average period of sickness per wage earner per annum ... and no details are available relating to sickness in localities in regard to different occupations'.⁴²

The Division tried a number of approaches to the problem of securing useful statistical information on occupational health. Work was done with the Commonwealth Statistician on implementing uniform practices for the collection of occupational morbidity and mortality data using friendly societies; industrial firms were encouraged to use a standard form to record sickness and accidents and make them available to the Division; and finally, the Division itself did studies of its own using the available data.

As early as 1922 the Division was discussing with the Commonwealth Statistician the possibility of requiring friendly societies, insurance companies and hospitals to provide details of occupation in their returns.⁴³ A few years later the situation had not progressed substantially. In a report prepared in 1925, Robertson commented on the difficulty of collecting useful statistics from friendly societies but added that the Commonwealth Statistician intended, when sufficient funding was available, 'to arrange for the collection of data regarding sickness incidence among members of friendly societies according to occupation'.⁴⁴ At this time, the New South Wales Statistician was investigating the industrial morbidity experience of friendly societies, by comparing returns from industrial suburbs with those from non-industrial suburbs. According to Wickens a similar investigation would have been in hand in the other States, except Queensland, but for the failure of the Commonwealth Treasury to provide the necessary £250 per annum.⁴⁵

In 1925 Robertson did acquire information from the Victorian Statistician on the sickness experience of dividing societies, which differed from friendly societies in that their membership was limited to those working at particular establishments.⁴⁶ Attempts to collect statistics on a large scale from friendly societies

⁴⁰*National Insurance*, Qu. 1333.

⁴¹*Health*, Qu. 33.

⁴²Evidence of Director General of Public Health, NSW, Dr George Armstrong, *National Insurance*, Qu. 8972.

⁴³Lanza, 'Industrial Hygiene with Particular Reference to Conditions in Australia', p. 692.

⁴⁴AA 1928 545/19; Wickens confirms this, *National Insurance*, Qu. 13334.

⁴⁵*Health*, Qu. 33.

⁴⁶*Ibid.*, Qu. 751.

do not seem to have been successful in the long run.⁴⁷

Records of Industrial Firms

The major function of appropriately detailed industrial medical records was to allow firms to gauge the health of their employees and the effectiveness of any preventive practices. Industrial record-keeping was also seen as another means of obtaining data on trends in occupational health on an industry-wide basis.

According to Lanza, the records of industrial establishments would form:

a most valuable guide and afford a valuable cross section of local industrial conditions. While the total number of industrial workers included in such statistics would be small, at least for some time to come, the data obtained would be more accurate and could be more carefully corrected than would be possible in the case of ordinary sickness certificates.⁴⁸

The Commonwealth Statistician was also enthusiastic about use of employer sickness records:

Another source of valuable morbidity statistics, and probably the most valuable in relation to industrial hygiene is the staff records of absence from work now kept by some of the larger employers of labour. By means of co-operation between the employers, the Health Departments and the Statisticians, most important results could be obtained with a minimum of cost. We could readily measure by such means the amount of working time lost in different industries by workers of different ages and sexes, and from different causes. Comparisons of different results for different industries in the same place or for the same industries in different places would indicate differences in procedure which could be adjusted for the benefit of the community.⁴⁹

The Department of Health drew up an approved Employee's Medical Record Form and an Employer's Monthly Report form. It was hoped the latter would be supplied by firms to the Department on a regular basis, thus giving the Department an idea about the level of occupational sickness and enabling it to analyse the information for the benefit of employers.⁵⁰ Details recorded would include the amount of sickness, accidents, absenteeism, personnel changes, output, use of ambulance and rest rooms, and nature of illness. These records would then be analysed by occupations, processes and departments within a firm so as to form a 'useful basis upon which a current index of the establishment's health conditions may be formed'.⁵¹

The Division published a pamphlet on industrial medical records in 1923.⁵² It stressed that the 'broader and far-reaching function of the ambulance room' was the collection of information in a standardized fashion rather than just 'the repair of health and well-being'.⁵³ For with such information 'prevention' could be undertaken. Only with prevention rather than 'repair' was the 'burden of suffering and waste ... to be appreciably and permanently lessened'. The suggested forms were drawn up in consultation with the Commonwealth Statistician. Use was made of the International Classification of Causes of Death in

⁴⁷No further developments occur on the relevant file up to the disbanding of the Division - see AA 1928 545/35, Industrial Hygiene, Statistics of Sickness, Collection and Tabulation by Commonwealth Statistician of Returns from Friendly Societies, 1921-32.

⁴⁸'Industrial Hygiene with Particular Reference to Australia', p. 692.

⁴⁹*Health*, Qu. 33.

⁵⁰Robertson, *The Scope of Industrial Hygiene*, p. 234.

⁵¹*Ibid.*, p. 23.

⁵²*Reliable Records in Industrial Ambulance Rooms*, Melbourne, 1923.

⁵³*Ibid.*, p. 6.

designing the forms so as to ensure compatibility with an international standard.⁵⁴

The Division was not very successful with the forms. In 1923 the forms were in use in 'several establishments'.⁵⁵ Arriving at useful forms proved to be a major difficulty. Evaluation of forms used as prescribed in *Reliable Records in Ambulance Rooms* resulted in the issue of new forms, again framed in consultation with the Commonwealth Statistician.⁵⁶ By mid-1924 'trustworthy' returns were being received from only four firms. Robertson was asked by the Commission whether there was any discernable improvement in the health of employees being medically examined regularly. He responded that the Division was having difficulty in obtaining useful statistics:

If there is anything more difficult than the compilation of statistics by nurses, I do not know of it. No matter how explicit you make your forms, it is very difficult to have them filled in correctly.⁵⁷

An even more dismal picture was painted before the Royal Commission on Health in January 1925: 'Unfortunately, we have found that it is a very difficult matter to get the owners of these places [private firms] to keep statistics accurately, and for the first year or so we found it almost impossible'.⁵⁸ Only two factories kept 'anything like reliable records' - a smelting and refinery company (394 employees) and a confectionery factory (Stedman-Henderson's Sweets, 281 employees). The only other comprehensive record-keeper known to the Division was the Sydney Municipal Council which had developed records to measure the impact of the introduction of the 44 hour week in New South Wales. Later, in 1925, the Division knew of 8 different establishments (whether government or private is not known) in which the nurse or physician was using the prescribed sickness forms.⁵⁹

It is doubtful that the situation improved in the long run. It may have been the case, however, that the Division's activities did help to focus firms' attention on the need for accurate recording of occupational health statistics. Once the cost benefits involved in closely monitoring, say, absences were spelled out by the Division, it is likely many employers would not have been content with less than accurate records. Perhaps the spread of industrial medical services could be taken as a measure of the introduction of better health records. Only a survey of the records of leading firms in the period in question could supply evidence of such a change in management practices.⁶⁰

⁵⁴*Ibid.*, p. 8.

⁵⁵*Ibid.*, p. 7.

⁵⁶Robertson, *National Insurance*, Qu. 13194.

⁵⁷*National Insurance*, Qu. 13211.

⁵⁸*Health*, Qu. 750.

⁵⁹A1928 545/19.

⁶⁰For an example of the sort of information submitted to the Division see A1928 545/4, Industrial Hygiene, Stedman-Henderson's Sweets Ltd, Returns, 1931-2.

The Division did the best it could with existing records. What statistics were available, particularly government records, were analysed for occupational health trends. The Division also embarked on a major program involving the organization of the accident and sickness records of a number of State railways.

The earliest major statistical study of occupational illness in Australia was probably Frank Kerr's work for the Division on the health of Victorian State School teachers. Sickness and employment records were used to generate statistics for the years 1914, 1920, 1921, and 1922.⁶¹ 1914 was chosen to ascertain the effects of the War, if any, on the service.⁶² In his introduction Kerr asserted that sickness experience gave a 'vastly more important clue to the effect of occupation on health'. While the effect of working conditions took many years to manifest itself in mortality statistics, sickness 'not only makes its effects felt much more quickly, but generally takes place while the victim is at his occupation'. A statistical study 'will furnish a clear idea of the risks to health of such an occupation, and will enable us to compare this calling with others of definite hazard'.⁶³ It was hoped the study would form the basis for future investigations.

On average 6,000 teachers were employed in each year (two thirds were women and one third men). Their records were analysed by age group, gender, type of illness (using the International List of Causes of Death), days of sickness and the actual number of working days lost. Medical data was available for all absences of two days and over. For absences under two days, duration only was available.⁶⁴

The study does provide useful information on the health of state school teachers. Kerr examined in detail the types and frequency of various illnesses and injuries by sex. His major conclusions were that the average number of working days a year lost through sickness by each teacher was 7.62, by each male teacher 5.00, by each female teacher 9.09. The percentage of male teachers suffering from illness lasting over two days varied from 18.68 per cent in 1914 to 23.33 per cent in 1921; of female teachers, from 32.11 per cent in 1924 to 36.75 per cent in 1921. Males were most likely to be ill when under 21 or over 56 years of age, and females were mostly ill between the ages of 41 and 55. The chief diseases were those of the upper respiratory tract (including influenza) and neurasthenia (nervous disorders). He found menstruation had little effect on women's efficiency.⁶⁵

The sickness experience of Victorian teachers was slightly above that found in the major British study of

⁶¹F.R. Kerr, *An Inquiry Into the Morbidity Statistics of the Victorian State School Teachers during the years 1914, 1920, 1921, 1922*, Melbourne, 1923.

⁶²*Ibid.*, p. 4.

⁶³*Ibid.*

⁶⁴See *ibid.* pp. 4-8 for the methodology.

⁶⁵*Ibid.*, pp. 29-30.

teachers' health. Kerr felt that this difference may have been the result of less adequate medical services in country areas.⁶⁶ It was also slightly above the average of some American studies of clerical workers, though within the expected range. This he found surprising as:

The teacher is not exposed to the diverse risks of many other industrial workers. He is not compelled to breathe the dusty air of a metal-grinder's shop, he does not work among poisonous fumes and gases, he is not liable to the effects of the extreme heat of the furnace, nor is his occupation conducive to severe injuries. His work is mainly mental, and on the whole his life is a safe one. The actual time of exposure to the effects of occupation is also less than in the case of the great majority of workers. The Victorian teacher works for 219 days in the year, has short hours, and enjoys long vacations in which to recuperate. Many other workers on the contrary, are subject to the specific risks of their trade for about 280 days a year, are employed for long hours, and are blessed with only a short period for rest. Everything is in favour of the teachers occupation being comparatively a healthy one.⁶⁷

Kerr concluded by calling for more study of the problems affecting the occupation of teaching, particularly those affecting women, and for better record collection.

Kerr conducted a similar study of the morbidity statistics of the Central and Victorian Taxation Branches of the Treasury and the Victorian Postal Department for 1921. The average figure here for the 4,821 officers was 10.6 working days lost per annum in a working year of 270 days; the female rate again was in excess of that for males. This rate was deemed high for clerical work.⁶⁸ The sickness experience of the Victorian Railways' 25,821 men in 1921 was also studied. The average number of sick days lost per worker was a surprisingly low 6.16. As would be expected in such an occupation, accidents caused 28 per cent of total time lost.⁶⁹

From these and other studies (e.g. 493,978 members of friendly societies averaged 6.6 days per member), Kerr estimated the average loss in Australia to be from six to eight days per worker per annum: much the same as estimates for the United States. Six days was calculated to be equivalent of 2 per cent of the total industrial population of Australia, or the labour of 30,000 people lost every year to the Commonwealth.⁷⁰ Kerr noted that even the saving of 1 day per worker would result in immense gains. Of course much depended on whether illness was attributable to occupation as opposed to other causes and in which areas labour was more valuable.⁷¹

The sickness and accident records of a number of railway authorities were highly thought of by the Division. The Chief Medical Officer of the New South Wales Railways kept accident and illness statistics

⁶⁶*Ibid.*, p. 31.

⁶⁷*Ibid.*

⁶⁸F.R. Kerr, 'Morbidity Figures of Various Public Service Occupations', *MJA*, 10 May 1924, p. 307.

⁶⁹*Ibid.*, p.307.

⁷⁰*Ibid.*, pp. 303-8.

⁷¹See also a later study of NSW schoolteachers, A1928 545/53, Industrial Hygiene, Investigation into Sickness of N.S.W. School Teachers, 1924-28.

which were 'of a very high order'.⁷² These statistics were submitted yearly to the Commissioners of Railways and analysed according to cause, nature, and location of injury and length of absence due to injury.⁷³ A comparative study of the New South Wales Government Railways and Tramways and the Victorian Railways sickness and accident experience in the early 1920s was published by the Division in 1925.⁷⁴

In 1924 the Division became responsible for organizing the New South Wales Railways accident and illness statistics. This involved the records of just over 38,000 employees.⁷⁵ The New South Wales system was to serve as the basis for the records of the Victorian and South Australian Railways. By 1928 the records of 100,000 employees in all three States were being kept on a uniform basis and analysed by the Division.⁷⁶ Regular updates were published in the Department's journal *Health*.⁷⁷

The Division's collation of these statistics stands as a useful contribution to occupational health inquiry in Australia. The analyses are very detailed, breaking down railway employees' work into its various components and injuries into their various types. Combined with a study of work processes in the railways they could serve as the basis for a valuable case study of the efficacy or otherwise of occupational health and safety practices over time.

Other studies, too numerous to examine here, were also made. These include those of Kerr on accidents in the Commonwealth dockyards;⁷⁸ Robertson on the Sydney Municipal Council's records;⁷⁹ and Moore on accidents reported in the press for one year.⁸⁰ Valuable studies were also made of the medical examinations under the Navigation Act by Robertson and Moore.⁸¹ These maritime studies are quite detailed and cover the examination of some 2-3,000 seamen. They highlight in particular the severe toll of accidents in the maritime industry.

⁷² 'Accidents to Employees of NSW Government Railways', *Health*, March 1925, pp. 55-6.

⁷³ *Ibid.*, p. 567.

⁷⁴ D.G. Robertson and G.H. Taylor, *The Morbidity and Mortality Statistics of the Employees of the New South Wales Government Railways and Tramways during the year 1924 and of the Victorian Government Railways during the years 1922, 1923, and 1924*, Melbourne, 1926.

⁷⁵ A1928 545/93, Industrial Hygiene, Industrial Hygiene in Australia, Survey, 1930.

⁷⁶ *Ibid.*

⁷⁷ See *Health*, March 1925, pp. 55-6; March 1926, p. 56; November 1926, pp. 179-80; September 1927, pp. 147-149; January 1928, pp. 24-5; September 1928, pp. 135-36; and November 1928, pp. 161-2. See also the files A1928 545/30, Industrial Hygiene, Collection of Industrial Morbidity and Accident Statistics of Australian Railways, 1924-1935 (4 parts); A1928 545/82, Industrial Hygiene, Sickness and Accident Statistics of Australian Railways, Annual Report, 1929-35. Evidently statistics were continued to be collected long after the dismantling of the Division.

⁷⁸ 'Accident Causation: With an Account of an Inquiry into the Accidents of an Australian Dockyard', *Health*, July 1924, pp. 97-109.

⁷⁹ 'The Sickness and Accident Record of the Municipal Council of Sydney', *Health*, January 1927, pp. 18-20.

⁸⁰ 'Analysis of Accidents Reported in the Melbourne Daily Press During 1926', *Health*, January 1928, pp. 6-17.

⁸¹ Robertson, 'An Analysis of Medical Examinations of Seamen under the Commonwealth Navigation Act, 1921-26', *Health*, July 1927, pp. 102-9; Moore, 'Medical Examinations of Seamen Under the Navigation Act during 1927-28', *Health*, April 1930, pp. 29-37.

Chapter 5

The Commonwealth Division of Industrial Hygiene, 1921-1932, Part II

This chapter continues the examination of the IHD's work during the 1920s. It looks first at the Division's promotion of employer-provided medical services and the response of employers and the medical profession. It then considers the Division's attempts to co-ordinate the national effort in occupational health and the Commonwealth's introduction of a system of supervision of the health of its own employees. The final section deals with the range of inquiries into specific health problems either conducted by the Division or in which it participated. The Division's important work in the mining industry will be dealt with separately in the next chapter.

Promoting Industrial Medical Services

The 'development and standardisation of industrial medical and surgical service[s]', was, formally, the second objective of the Division. If enough large firms could be persuaded to adopt systems of medical supervision, a significant proportion of workers would reap the benefits of improved occupational health. Appearing before the Royal Commission on National Insurance in 1924, Robertson reasoned that while only 3.5 per cent of factories employed more than 100 persons, in these factories no less than 40 per cent of the total number of factory employees were engaged; it therefore followed 'that at least 40 per cent of the workers could be covered by a system of industrial hygiene formulated by employers of 100 persons or more'.¹

Robertson's *The Scope of Industrial Hygiene* (1922), outlined the nature and benefits of industrial medical services. Employers were coming to recognize the 'business value' of providing medical services for employees, both as a result of experience under workers' compensation legislation and the promptings of humanitarian inclinations.² On the spot medical services ensured that injured workers could return to work as soon as possible and that in the long term preventive work, mainly through periodic medical examinations, could be carried out. Key practices included: first aid boxes, which would lessen the exacerbation of minor injuries (e.g. sepsis); ambulance rooms for more dangerous firms; adequate first aid

¹*National Insurance*, Qu. 13194.

²Robertson, *Scope of Industrial Hygiene*, p. 10.

organisation, preferably a committee with the support of the workers; proper accident records; medical supervision on a visiting basis and full time medical services.³ The last would involve vocational placement - requiring an understanding of the types of work in the factory and physical examination at all stages of working life; general health maintenance including such factors as food and recreation; surgical and medical treatment; general duties such as housing and social work; compilation of records and the provision of dental care.

As to the economic value of the industrial medical services, Robertson cited Selby's survey of the medical and surgical facilities in 117 United States firms at the end of the War. In Selby's study employers gave the following reasons for their medical services:

- 1) [provides] an acknowledgment of their obligations towards injured workers and an economic means of providing expert attention;
- 2) decreases causes of lost time;
- 3) reduces unstabilizing influences and labour turnover;
- 4) increases production;
- 5) prevents litigation and compensation expenses;
- 6) contributes to a sense of security among employers and promotes a feeling of goodwill towards management; and
- 7) necessary in isolated establishments.⁴

As Robertson summarized, a 'successful industrial health service should lessen sickness, absenteeism, and frequent changes of personnel, should foster a spirit of co-operation among employees and should make employment in the establishment sought after'.⁵

Given the lack of Commonwealth jurisdiction over industrial conditions generally, the Division had to confine itself mainly to advice and publicity for the benefit of private firms. One method was through publications outlining new practices. The already mentioned *Scope of Industrial Hygiene*, published in February 1922, was the first such publication. Due to demand a second edition was printed in 1923, so evidently it had found a ready audience.⁶ This was followed by the pioneering *An Index to Health Hazards in Industry* in August 1922, which provided the first guide to hazardous processes in Australian industry coupled with advice for employers and employees on appropriate preventive measures. *Reliable Records in Ambulance Rooms* was released in 1923 to provide a standard on which to base accident and sickness records. In 1924 a major study, *Industrial Accident Prevention*, was published by Robertson with 'the object of placing before industrial firms and others interested the fundamental principles of organized accident prevention, and of outlining some plans for putting into operation effective campaigns'.⁷ This was

³*Ibid.*, pp. 10-22.

⁴Cited in *ibid.*, p. 22.

⁵*Ibid.*, p. 18; on the value of industrial medical services see also Robertson's comments to the Royal Commission of National Insurance, *National Insurance*, Qu. 13194; his 'Observations on Industrial Medicine in Australia and Other Countries', pp. 310-1; and Lanza, 'The Place of Industrial Hygiene in the General Scheme of Disease Prevention', p. 305.

⁶Comment in the introduction to *Reliable Records in Ambulance Rooms*, p. 5.

⁷Robertson, *Industrial Accident Prevention*, p. 4.

the last of the pamphlets aimed specifically at employers. Divisional publications in the second half of the 1920s were usually studies of health problems in particular industries.

The Department of Health brought out its own journal, *Health*, in 1923. Articles on occupational health practices aimed at firms appeared frequently in the pages of the journal.⁸ Updates on the latest occupational health regulations and overseas developments were included in the 'Notes' section of the journal throughout the 1920s. The Australian Medical Congress of November 1923 devoted a section to occupational health at which Lanza, Robertson, Kerr and others gave papers on the subject.⁹ At this Congress the Division, through the courtesy of a couple of firms, presented a model ambulance room equipped for industrial medical service. There were photographs of medical services and ambulance rooms currently being installed by firms. Ergonomic chairs were also on display. Wax models and photographs dealt with various occupational diseases and X-rays from the Health Laboratory at Bendigo showed the chest conditions of Bendigo miners. Broken Hill South Ltd provided factory and mine health and safety apparatus and a large number of pamphlets was distributed.¹⁰

Health Weeks were another useful opportunity to promote new practices. The first Health Week in Australia, following the pre-war British example, was held in Sydney in 1921. Their object, in the words of the notice for that first Health Week, was 'to direct public attention to the various problems connected with public health, and force the people during the whole week to realize the waste resulting from preventable disease and the sentimental and economic value of the preservation of the health of the community'.¹¹ During the week special exhibitions and lectures were held, health was mentioned in the pulpit, and tours made of various establishments noted for their public health facilities or activities.

The first Health Week in Melbourne, held at the end of September in 1922, promoted occupational health extensively.¹² At Socialist Hall, Lanza spoke on 'The Preservation of Health After the Age of 40 Years'. He emphasized the lack of knowledge about the effect of employment on the young, the rise of cancer and degenerative diseases, and the need for information from the friendly societies and Trades Halls, to overcome the 'dead wall' confronting doctors. Cumpston spoke on 'National Health is Individual Health', again with lessons for employers. While public health sanitary reform was accepted, it was now time for

⁸E.g. Robertson, 'Industrial Health Service', *Health*, March 1924, pp. 46-50; Dr. Cresswell Howle, 'Industrial Hygiene in Confectionery', *Health*, November 1924, pp. 172-6; Janet Sorley, 'The Nurse in Industry', *Health*, June 1923, pp. 162-5; W.W. Woodland, 'The Place of the Corporate Body in Public Health', *Health*, July 1923, pp. 188-92; A.J. Lanza, 'Industrial Health and the Physician', *Health*, January 1923, pp. 13-5; F. R. Kerr, 'Some Aspects of Industrial Medicine', *Health*, May 1923, pp. 142-4.

⁹Lanza, 'The Place of Industrial Hygiene in the General Scheme of Disease Prevention', *MJA*, 10 May 1924, pp. 304-7; F.R. Kerr, 'Morbidity Figures of Various Public Service Occupations', *MJA*, 10 May 1924, pp. 306-8; C.A. Ellis, 'Glimpses into a Tram Man's Life with Special Regard to Occupational Diseases', *MJA*, 10 May 1924, pp. 308-10; Robertson, 'Observations on Industrial Medicine', pp. 310-1; G.H. Taylor, 'Colour Testing', *MJA*, 10 May 1924, pp. 311-2 (Taylor was Medical Officer for the NSW Railways and Tramways).

¹⁰*Health*, January 1924, p. 25.

¹¹*Health*, January 1933, p. 1.

¹²*Argus*, 2 October 1922.

the health of the individual to receive attention. There should perhaps be regular medical examinations of each individual every two years and, speaking as a public servant, he thought employers were 'not paying sufficient attention ... to what their servants were doing, and this did not make for efficiency'.

On the subsequent night, after a speech by the Treasurer, Stanley Bruce (filling in for Hughes), Lanza delivered another lecture. This time he raised the issues of employment of children and women and broached the possibility of a national physical stocktaking to prevent disease.¹³ Afterwards an illustrated lecture on 'The Town Planning of Yallourn from a Health Standpoint' was heard. Yallourn was being built by the State Electricity Commission for its electricity workers. Lanza also spoke at the monthly luncheon of the Melbourne University Association and to the Victorian Branch of the Student Christian Movement.¹⁴

Other activities during the week included: a demonstration of welfare work at Pelaco Ltd and a visit to Myers to observe the same.¹⁵ A highlight was a visit to the Newport Railway workshops.¹⁶ A large party was taken by the manager through the works. Lunch was served in the employees' dining room and then the visitors were shown what was being done for the 'hygienic welfare of the men'. The well-equipped casualty ward was examined, and machine guards and ventilation equipment inspected. A correspondent noted:

Many of the visitors were women, who had never seen machinery on anything like this scale before. They watched, among other things, great masses of metal being lightly picked up by electric travelling cranes, and transferred quickly from one shop to another. They watched steel plates 8ft in length, being cut in pieces by the new 'guillotine' as easily as they cut paper with a pair of sharp scissors. They were much impressed, too by the ponderous steam hammers and the boiler shop.

One gets an idea of the audience for Health Week from this extract, and assumes that the audience left reassured that the best measures were being taken to preserve the health of the nation's industrial workers. Similar activities took place in Sydney and other major cities in subsequent years.

Employer Medical Services

We turn now to the question of the extent to which employers responded to the promotion of industrial medical services. Some firms already had medical services for their employees before the creation of the IHD, but these were few in number and not necessarily very sophisticated in approach. The IHD desired to improve the availability and quality of medical services for employees.

While the figures on medical services for employees are imprecise, there is enough information to get some idea of the pattern for the 1920s and of the types of employers involved. As previously mentioned, Robertson had argued that as (in 1922-3) 3.4 per cent of factories employed over 100 workers accounting

¹³*Argus*, 3 October 1922.

¹⁴*Argus*, 3 October, 1922; 5 October 1922.

¹⁵*Argus*, 2 October 1922.

¹⁶*Argus*, 4 October 1922.

for two-fifths of the workforce, if each of these factories introduced a system of medical service, nearly 170,000 employees would be protected.

For the year 1921, so far as the Division could determine, nine firms had engaged the services of a qualified nurse and a total of 16 physicians practised occupational medicine.¹⁷ Virtually all of the physicians worked on a visiting basis. In November 1923 Lanza claimed that there were seventeen medical practitioners in Sydney or Melbourne who devoted all or part of their time to occupational medical practice.¹⁸ The figure suggests negligible change, though Lanza did claim other employers were developing their medical departments in conformity with his 'ideals'.

In view of the general lack of information, the Department of Health decided to conduct a comprehensive survey of the extent of medical services in industry. In October 1924, questionnaires were sent to the 500 largest employers of labour in Australia.¹⁹ The survey gives a valuable overview of the level of employer health services, government and private, at the beginning of 1925. In many cases the firms can be identified.²⁰

From the survey and personal visits, it was determined that eight physicians were engaged in occupational medicine on a full-time basis. These were divided among five employers: a department store employing one (Anthony Hordern's in Sydney), the Victorian Railways employing one, the New South Wales Railways employing three, a water supply and sewerage board employing one (presumably Sydney), and the Commonwealth Government employing two (the recently appointed CMOs in Sydney and Melbourne). Another 30 employers engaged physicians to attend employees at certain fixed times during the week. These included: two water supply and sewerage boards; four biscuit or confectionery factories; a clothing factory; three department stores; two gas companies; two lead works; a meat works; two mining companies; a motor body building works (Holden's, South Australia); a newspaper office; a photographic supplies factory; three government railways; two rubber works; three municipal tramways; a refining and smelting company; and a cordite factory (the Government's Maribyrnong factory). 33 establishments employed full-time nurses, 23 of the nurses being fully trained. Of these, 17 were employers who already engaged a doctor in some capacity; the 16 that had nurses only included a boot factory, a clothing factory, match factory, a motor body building factory, a piano factory, two printing works, two tobacco factories, a timber company, a gas company, a department store, a woollen mill, two banks and an insurance company. 42 additional establishments employed persons qualified in first aid. 18 of the above employers provided

¹⁷A1928 545/19.

¹⁸'The Place of Industrial Hygiene', p. 305.

¹⁹*Health*, Qu. 776; Roberston, 'Industrial Hygiene in Australia', p. 553.

²⁰Although the actual survey is not available, there are two accounts of its results, one in Robertson's evidence to the Royal Commission on Health, the other in his 'Industrial Hygiene in Australia', p. 553.

both an ambulance room and a dispensary. These included: three biscuit or confectionery factories, a boot factory, a bank, two clothing factories, four department stores, a match factory, two motor-body building factories, three railways and a spinning mill. Another provided an ambulance room only and five a dispensary only. Two department stores provided a rest room (with arm chairs and sofa) and a house ward (a bed at least); 53 other companies provide rest rooms only; and six companies made provision for convalescence from illness for employees (e.g. Hordern's sanatorium in the Blue Mountains).²¹

Overall, it was concluded that 52 employers made some provision for medical treatment.²² If one added rest rooms, about one-fifth of those surveyed made some provision for their employees' health. These figures would clearly represent a minimum level of services as other arrangements like the payment of employees' friendly society dues, retaining a bed in the local hospital and provision of paid sick leave are not covered. Regarding medical personnel for government and private sectors, it was estimated there were 27 qualified nurses working in industry and 42 medical men in 1925.²³

The Department embarked on another survey of occupational medical services in 1929. The survey was conducted by visits to employers in five States. Though there is less data available from this survey, it reveals a situation similar to that in 1924.²⁴ Approximately 40 private employers retained a 'regular form of skilled medical or nursing service'. There were also about eight government employers providing such services. A major expansion of the use of full-time medical officers had occurred in the government sector, with the number of officers increasing from eight to 16 (these figures do not include those Commonwealth medical officers engaged in Navigation Act work).

No figures are given on the extent of first aid personnel or training, but the survey found that in a 'far greater number of firms [i.e. than firms providing medical services], including many large manufacturing firms, males, females, or both, trained in first aid' were employed.²⁵ There is no information about other services such as rest rooms and contracted medical services.

Those firms using a full-time medical officer had an average of 2,000 employees. Those using part-time medical officers averaged 1,500 employees and those using a trained nurse only, 1,200 employees. Most firms in major cities without major hazards felt that a medical officer was not necessary and that a capable trained nurse could perform the duties. At a cost of just over £100 per annum as opposed to over £1,000 for a medical officer, a trained nurse would certainly have been a more affordable option for most firms.

²¹Robertson, 'Industrial Hygiene in Australia', p. 553.

²²Health, Qu. 782.

²³A1928 545/19.

²⁴See 'Industrial Medical Services in Australia', *Report of the Commonwealth and States of Australia, Fourth Conference on Industrial Hygiene, Canberra, 13 March 1930*, Canberra, 1930, Appendix II, pp. 19-24; see also A1928 545/76, Industrial Hygiene, Medical Services to Employees, 1929.

²⁵*Ibid.*, p. 21.

All but one of the managements interviewed commented favourably on the value of medical services. Comments included: 'Service indispensable with right personnel'; 'Increase goodwill and prevent sepsis'; 'Of greatest value, especially hygienic inspections'; 'Valuable as a humane measure and also in preventing sepsis and broken time'; 'a humane and profitable service'; 'a check on leaving for home and a prevention of disease and malingering'; and 'good business'.²⁶

On the basis of the sketchy information available, it is clear that the use of medical services by employers had expanded appreciably since 1921, especially among larger employers and the government sector (which also fitted into the former category). If an average of 1,500 employees per firm is assumed, some 60,000 workers in private firms theoretically had access to employer-provided medical services. In the government sector, it would appear that around 150,000 employees were subject to medical supervision (again arrangements for seamen are not included in these estimates). Whether these services were accessible and of suitable quality is of course another issue, and one which could only be resolved by detailed study of the experience of individual firms.

Industrial Medical Contracts

The co-operation of the medical profession was important to the Division's strategy of promoting occupational medical services among employers. In early literature aimed at physicians, the medical profession's expertise was lauded and its moral responsibility stressed. Legislation and regulation of industrial conditions and specific occupational hazards alone would not suffice; ultimately the questions of health at work led back to the subject of the human body and the physiological effects of various environmental factors upon it:

Physical fitness for work, a comprehension of the physical demands incident to various occupations and trade processes, the recognition of specific occupational disorders, the estimation of disability and its relationship, in any given case, to the occupation, the recognition of harmful conditions, as well as an appreciation of what constitutes desirable conditions of work, all imply the assistance of the medical sciences and of the man trained therein.²⁷

But the practice of industrial medicine also involved a moral issue. Action on occupational health was important not just because it made industry more efficient but because the 'health and well-being' of industrial workers was important in itself. These workers were, in Lanza's words, 'the most active part of the nation, who made industry possible' and their protection was imperative:

The conservation of human life is the index of civilization, and modern industry is not expressed in terms of the cost of human life, but of its enhancement.²⁸

Such protection demanded 'both the appreciation and co-operation' of the medical profession as its contribution to the public health.

²⁶*Ibid.*, p. 24.

²⁷Lanza, 'Industrial Hygiene and the Physician', *Health*, January 1923, pp. 13-5.

²⁸*Ibid.*, p. 14.

The medical profession seems to have been fairly cautious in taking up the challenge. The BMA's continuing wrangle with the friendly societies over the latter's preference for fixed contract practice (i.e. lodge practice) as opposed to fee for service made it fairly circumspect about the introduction of industrial medical services on a similar basis.

The scepticism of the medical profession about such services was not through want of effort on the part of the *MJA* which seems to have been at variance with the bulk of the profession over the issue. In 1922 a leading article in the *MJA* noted Robertson's call for occupational medical services in his *Scope of Industrial Hygiene*:

The principle is so sound that no one can possibly raise an objection ... But it will be necessary for the medical profession to consider the machinery that will have to be created for these purposes and ascertain what part the general practitioner will be called upon to play.²⁹

The writer, drawing an analogy between the co-operation of medical officer and army with that between general practitioner and employer, argued that:

[T]he medical officer in the Army recognizes the right of the soldier to have the advantage of modern science to assist him to recover rapidly and completely. In industry the practitioner must be prepared to collaborate with others in the interests of the individual.

The author concluded that with increasing awareness of occupational health problems by the profession a 'scheme of co-operation' would soon be elaborated and cautioned that '[i]t would be advisable if this scheme was considered at an early stage of the development of this movement, so that friction, such as that which appeared when national insurance was introduced in Great Britain, might be avoided'.

A guarded but faintly hopeful comment occurred in a review of current opportunities for doctors.³⁰ Under the heading, 'Industrial Firms', the reviewer noted the good work of the IHD and the general rise in interest in the subject of occupational health. The author noted that 'while some few openings' did exist for medical industrial hygienists 'their number is yet by no means large'. In these circumstances it was not possible to give standard rates of remuneration for this work. While some firms engaged medical officers part-time, such arrangements had to be regarded as 'temporary expedients' of doubtful utility, for the preventive aspect of industrial medicine required the 'greatest concentration of energy' - i.e. full time medical service.

By 1925 the Department of Health was working with the Federal Council of the British Medical Association on industrial medical services.³¹ The main issue was the model form of agreement between physician and company. At a meeting in September 1925 the Federal Council noted that under the BMA rules occupational medical work should be under contracts, each approved by the Branch.³² With this in

²⁹*MJA*, 10 June 1922, p. 641.

³⁰*MJA*, 25 October, 1924, pp. 450-1.

³¹A1928 545/19.

³²*MJA*, 19 September, 1925, p. 382.

mind the Committee asked the BMA State Councils to circularize their members who carried out industrial work to gather information regarding terms of contracts, if any, and the conditions of service if not, the object being 'to secure uniformity and protection of members doing this work'.

The Committee also considered whether special training was needed. This appears to have been in response to the view of Chapman (of the Broken Hill inquiry) that training equivalent to a Diploma of Public Health was a necessary prerequisite.³³ The general view was that as the subject was new, training was impractical 'at this stage'. It was agreed, however, that practitioners should make a special study of the conditions of the industry concerned. It was also agreed that a model agreement should be drafted at the next meeting.

At the February 1926 meeting of the Federal Committee, a model form of agreement was tabled which was subsequently sent to the Branches 'for consideration ... and suggestions concerning the rate of remuneration'.³⁴ Duncan Robertson drew up the model agreement at the request of the Victorian BMA Council with which he had discussed the matter.³⁵ Robertson spoke to the Victorian Branch Annual Conference in February 1926 on industrial medical service, stressing the indispensability of 'sound medical and surgical knowledge' to such practice and the 'wide scope for the practice of the principles of preventive medicine'.³⁶

When the Federal Council next considered the matter, the dearth of experience in Australia was evident.³⁷ There were no private practitioners specialising in occupational health in Western Australia, while Queensland and Tasmania felt they had insufficient experience to justify a recommendation as to a correct fee. Only New South Wales and Victoria made recommendations based on experience (New South Wales - £ 1 11s per hour and Victoria - £1 1s per hour or part thereof). In the discussion it was agreed that few industrial firms would be prepared to engage whole-time or half-time medical officers. In Victoria even large industrial firms were satisfied with a half an hour to one hour a day visit and the majority did not pay more than £1 per visit. Accordingly, Victoria argued that it would be wise not to be 'inelastic' about terms at this stage. While the work was currently being done by general practitioners, in time, with the development of more specialist expertise, higher fees could be commanded. For example, periodic medical examinations for occupational poisoning could be charged at a higher rate. Though the meeting agreed that the securing of uniform conditions across all States was doubtful in the immediate future, it resolved that 'the rate of remuneration for industrial medical officers be not less than one guinea (£1 1s) per hour or part of an hour'.

³³See editorial in *MJA*, 26 September 1925.

³⁴*MJA*, 20 February 1926, pp. 222-3.

³⁵*MJA*, 27 February 1926, p. 259.

³⁶*Ibid.*

³⁷*MJA*, 18 September 1926, p. 396.

The editor of the *MJA* evidently did not think the Committee had done enough. He felt it was lamentable that few industrial firms were prepared to engage a medical practitioner for more than an hour each day for industrial health work.³⁸ How could the extensive duties of the industrial medical officer 'be adequately performed in one hour a day in a establishment containing hundreds of employees?'. The Federal Committee was concerning itself solely with remuneration rather than the more significant issue of promoting occupational health:

But it [the Federal Committee] has not taken the first step in dealing with the question of the maintenance of the health of the workers. If the medical profession will recognise that the application of the principles of industrial hygiene depends to a large extent on its enthusiasm in commending them, the public will soon demand that every industrial undertaking must make provision for the adoption of adequate measures of preventive medicine. If the medical profession manifests indifference and a want of understanding, it may be long before Australia emerges from the stage of the hour a day programme. Experience teaches that a full measure of success will be attained only if the system is developed on a voluntary basis encouraged by enthusiastic practitioners who have mastered the subject. But there will be no general enthusiasm among medical practitioners unless the profession can be induced to accept the role of leader in reform.

One can only surmise from this criticism that the writer wanted specialist qualifications for industrial health practitioners and more efforts by the medical profession to raise occupational medicine's profile. An item in the same journal, the following year, on occupational health problems in Japan noted that the latter, 'like Australia ... is suffering from a lack of medical men specially trained for the work'.³⁹ Whether this meant there was a demand for occupational industrial medical officers is an open question.

The profession's enthusiasm evidently had not increased appreciably by the end of the decade, at least as far as the editors of the *MJA* were concerned. After discussing the progress of industrial hygiene in the British Empire and the consequences for preventive medicine in general, a leading article observed that: 'Employers have not yet realized the economic value of these [legislative health and safety] measures and the medical profession is still not enthusiastic in support of them', and concluded with the caustic comment: '[a]t the present time in Australia the main interest of the medical profession is centred on the scale of fees payable for the treatment of industrial injuries'.⁴⁰

Promoting Government Regulation and Co-ordination

Commonwealth occupational health officials viewed a certain level of state regulation of working conditions as an essential component of any strategy to improve health practices in industry. The state had an economic and moral right to intervene on behalf of the endangered individual. The relationship between employer and employee was mediated by the state. In Robertson's words:

As to more effective governmental control, the industrial worker, unlike the man of means, is unable to choose his hours of work or to control his environment while at work. He must look to his employers to provide sufficient wages, fresh air, good lighting, and other conditions that make for health and longevity. As the employee must largely accept conditions as he finds them it is evident that it is the function of the state to champion his rights and insure, as far as is practicable, that he is not subjected to environments liable

³⁸*MJA*, 2 October 1926, p. 455.

³⁹*MJA*, 26 February 1927.

⁴⁰*MJA*, 1 February 1930, p. 158.

to cause injury to health.⁴¹

The situation in Australia was complicated by the number of states involved, and the Commonwealth's limited power to involve itself in industrial and health issues. Generally the Commonwealth could only become directly involved by way of express invitations from the States. In terms of setting national occupational health standards there was little the Commonwealth could do other than persuade and advise or 'inspire and co-ordinate' (the use of Arbitration Court awards to set industry by industry conditions is the major exception here).

Despite its lack of legislative muscle, the IHD had some success in promoting more uniform up-to-date national standards and in persuading and assisting the States to deal more effectively with occupational health problems.

In the 1920s (as is still unfortunately the case today) factory legislation was quite variable in its application from State to State. Furthermore, in many cases it failed to incorporate recent advances in standards made overseas.⁴² There was no uniform system of collecting accident statistics under Factory Acts, making it impossible to compare the level of hazard of similar industries in different States or even in the same State.⁴³ Unlike some industrial countries, there were no medical inspectors of factories attached to Labour and Industry Departments (though in Western Australia factory inspection came under the Department of Health).⁴⁴ Britain had appointed its first Medical Inspector of Factories in 1898. In Europe and Great Britain factory inspection was recognized as a profession calling for high mental and educational attainments whereas in Australia no educational requirements other than a school education were necessary.

The restrictions on employment of children and young persons varied from State to State. The minimum age limit was generally 14 except in Queensland where it was 13 and in Victoria and Western Australia where it was 15 for females.⁴⁵ Restricted occupations for children also varied. For example, only two States restricted children under certain ages from cleaning moving machinery.⁴⁶

Restrictions on women were, if anything, more variable than those for children. In Victoria only wet spinning and cleaning moving machinery were restricted processes whereas Queensland restricted white

⁴¹*Health*, Qu. 13194.

⁴²Cumpston makes this latter point in his preface to *Hygienic Aspects of Factories and Shops Acts*, p. 1.

⁴³Robertson, *Hygienic Aspects of Factories and Shops Acts*, p. 3.

⁴⁴*Ibid.*, p. 4.

⁴⁵*Ibid.*, p. 5.

⁴⁶*Ibid.*, p. 12.

lead, lead-headed nails, dry grinding, glass annealing, mirrors and bronzing.⁴⁷ Two States made some provision for restriction of women working before or after childbirth.

Only three States made any regulations for dangerous trades and generally legislation was vague about measures to deal with dusty processes.⁴⁸ Only New South Wales had a prescribed lighting standard. While all States made some provision for adequate sanitary facilities, regarding seating and rest rooms, all States failed to specify proper designs and dimensions.⁴⁹ There was also no requirement for compulsory notification of occupational diseases in any State.

As a first step in tackling the problem of securing uniform and up-to-date legislation, the Prime Minister invited the States to a joint conference on occupational health in September 1922.⁵⁰ The first Industrial Hygiene Conference was held in Sydney and attended by delegates of State Health and Labour Departments, the Commonwealth Health Department and the New South Wales Railways Medical Branch. On the agenda were: child labour, female labour, occupational diseases, morbidity statistics, hygienic standards, factory hygiene inspection and medical supervision of employees in industry. The conference resolved that: all persons should be medically examined before employment and in each year of employment until the age of 18; the medical records of the Education Departments should be made available to authorised medical inspectors in respect of children seeking employment; all States should legislate for a minimum employment age of 14 for boys and 15 for girls; each state should have legislation governing dangerous trades; all occupational diseases should be notifiable by medical practitioners to the Health Department of each State; factory medical inspectors should be appointed; the Commonwealth Statistician should draw up a uniform scheme for the collection of morbidity and mortality statistics; and that the provisions of the Factories Acts should be extended to government factories.

A number of issues were referred to the IHD to report on at the next conference. These were restrictions and provisions governing women's employment including the advisability of appointing female medical inspectors, and the formulation of occupational health standards to be applied in factories and shops. A committee was also formed to report on qualifications necessary for factory inspectors.

The next conference was held in Melbourne in August 1924.⁵¹ There were no new agenda items apart from the need to consider the draft conventions and recommendations adopted by conferences of the ILO.

⁴⁷*Ibid.*, p. 12.

⁴⁸*Ibid.*, pp. 6-7.

⁴⁹*Ibid.*, pp. 7-8.

⁵⁰*Report of the Commonwealth and States of Australia Conference on Industrial Hygiene, Sydney, 12th September, 1922, Sydney, 1922, p. 3.*

⁵¹*Report of the Commonwealth and States of Australia, Second Conference on Industrial Hygiene, Melbourne, 19th August, 1924, Melbourne, 1924, p. 3.*

The conference adopted detailed recommendations on the employment of women. A schedule of processes from which children of both sexes and women should be excluded was drawn up. Uniform weight-lifting restrictions and the exclusion of women and girls from employment for at least six weeks after confinement were also agreed. Various recommendations were made for the types of facilities employers should have to provide when employing women. The appointment of female medical inspectors was recommended.

Regarding hygienic standards, the delegates agreed that ventilation standards supplied by the IHD should form the basis of an inquiry over the next two years in each State, with the results to be considered at the next conference. Other recommendations were adopted covering lighting, lunch rooms, and ambulance and first aid arrangements, generally following recent British standards. All States were to legislate for uniform factory inspector qualifications and a biennial conference was to be instituted to update them. All accidents were to be reported to the Chief Inspector of Factories and, in the annual report of the the Chief Inspector of Factories, the statistics were to be drawn up as recommended by the 1923 International Conference of Labour Statisticians. All States were to require the notification of an agreed schedule of occupational diseases. Another schedule of occupational diseases for which compensation should be paid was also set out.

The next conference, in May 1927, was also held in Melbourne. The meeting had the imprimatur of the the Royal Commission on Health which had recommended that the conferences continue so as to ensure uniformity in statistics and action on occupational health. All the State Health Departments except those of Queensland and Western Australia were represented and every Labour Department except that of Tasmania. The New South Wales and Victorian Railways' medical services also sent representatives.⁵² At the conference the IHD reported on its activities; progress on previous recommendations was reviewed; the practicability of exchange of officers between different States discussed; and progress with occupational medical services considered. Other topics included occupational hazards of the painting industry, practical methods of reducing accidents, the exclusion from mines and quarries, etc., of persons suffering from tuberculosis, the regulation of office workers, and health provisions contained in Awards of the Commonwealth Arbitration Court.

The last conference was held in Canberra in March 1930.⁵³ Health officials attended from all States except Western Australia and Labour Department delegates from all States except Tasmania and Queensland. The New South Wales Railways' medical service was again represented. The conference was opened by the Minister for Health, Frank Anstey and commenced with a joint session with the Federal Health Council. The three agenda items discussed at the joint session were pulmonary disease in

⁵²Details of the conference are taken from *Report of the Commonwealth and States of Australia, Third Conference on Industrial Hygiene, Melbourne, 26th May, 1927*, Melbourne, 1927.

⁵³See *Report of the Commonwealth and States of Australia, Fourth Conference on Industrial Hygiene, Canberra, 13 March, 1930*, Canberra, 1930.

employees in metal mines in Western Australia, regular medical inspection of persons handling food, and accident prevention and Safety First measures. It was decided to postpone acting on the issue of pulmonary disease in mining until the Australian delegation to an international conference on silicosis had returned (see Chapter Six). Regarding food handling, it was agreed that existing State legislative powers were adequate for regulation. In relation to accident prevention, the conference resolved that 'official action directed towards the organisation of measures for the prevention of accidents is urgently necessary'. Each State Government was to organize a State Council including representatives of the State Departments, concerned employers, employees and other interested organizations. The conference also asked the Commonwealth Government to approach the States with a view to organizing accident prevention on national lines.

The rest of the conference followed much the same pattern as previous ones. The IHD reported on its activities and action by the States on previous recommendations was reviewed. A number of other issues were also dealt with. The conference agreed to appoint a committee to report on the 'psychological aspect of accidents to minors in industry', and the subject of 'standards of physical fitness in children to be employed in industry'. Previous resolutions on the compensation and exclusion from industries of persons suffering from active tuberculosis, the need for better qualifications for factory inspectors and for applying the 'principles of industrial hygiene' to clerical and office workers were reaffirmed. Regulations to cover hazards in battery and refrigeration industries were called for. It was also recommended that a standard lighting code be established by the Standards Association of Australia in consultation with State and Commonwealth experts. Discussion of the administration of Factories Departments was put on the agenda for the next meeting.

This was the last Commonwealth-State Industrial Hygiene conference, as the disbanding of the IHD in 1932 left no Commonwealth body to co-ordinate or organize them.

The efforts of the IHD to improve the quality and uniformity of State action on occupational health do seem to have borne some fruit. While not many of the conferences' recommendations were fully implemented, there were a number of changes to legislation and practices in some States. Of course, this is not to say that the efforts of IHD were the sole cause of State action. For example, in the case of New South Wales, factory inspectors were actively promoting the introduction of better practices long before the IHD was created. What the IHD provided was an additional impetus for continued attention to improving conditions and a source of additional expertise.

Some reforms in Victoria illustrate this interdependence of effort. In 1919, amendments to the Factories Act gave the Minister power to require any occupier to provide a dining room and bathroom for employees of both sexes and rest rooms for women.⁵⁴ In the same year the Victorian Health Act gave the Health

⁵⁴Robertson, 'Industrial Hygiene in Australia', 1925, p. 534.

Commission the power to make regulations governing dangerous occupations and, in 1922, the Factories Act was amended to allow the Minister to call for 'suitable seating' if necessary. Also in 1922, the part-time services of a medical officer from the Health Department were placed at the disposal of the Labour Department.⁵⁵ Such initiatives largely reflected a momentum within the Victorian administration itself. But when necessary the expertise of the IHD was called upon. The Chief Health Officer of Victoria discussed the issue of regulation of dangerous trades at length with Anthony Lanza.⁵⁶ As a first step, Lanza suggested that occupational diseases be made notifiable. Regulations to this effect were made under the Health Act in 1923. This is a typical example of the way in which legislative change in the regulation of working conditions proceeded in the 1920s. The function of IHD was expressed in such incremental changes. The following overview of State governments' regulatory and administrative measures in the 1920s is not exhaustive but does deal with the major changes.

One of the most important State initiatives in the long term was the New South Wales Public Health Department's decision, after a number of conferences with the Labour and Industry Department, to appoint a Medical Officer of Industrial Hygiene in 1923. The 'urgent reason' for the appointment was the number of disputes before the Arbitration Court which involved conflicting medical evidence.⁵⁷ The officer, Dr Charles Badham, and his colleagues went on to conduct an impressive amount of occupational health work during the 1920s and 1930s. Badham himself also gained an international reputation as an expert on dust diseases.⁵⁸ Badham and his colleagues generated a body of occupational health research which, with the efforts of IHD, constituted an important achievement in the two decades after the War.⁵⁹

His first task was to investigate the health and factory conditions of textile workers in New South Wales.⁶⁰ In 1924 he conducted investigations into the hazards of sandstone dust in sewer mining in Sydney and among other miners, quarrymen and stonemasons in the State; the working conditions and health of quarrymen in State quarries; the health and working conditions of employees in wine cellars; and the incidence of lead-poisoning in motor car painters. There were many investigations in subsequent years: indeed the work increased so rapidly that it was seen necessary to appoint a technical assistant for Badham in 1924.

Turning to Victoria, the availability of the part-time services of a medical officer for the Labour

⁵⁵A1928 545/19.

⁵⁶*Health*, Qu. 12793.

⁵⁷'Report of the Director-General of Public Health, 1924', p. 8, *NSWPP*, vol. 1, 1925-6.

⁵⁸See Gandevia, 'Disease and Occupation', 1971, p. 220 on Badham's international reputation. His work is summarized in his obituary, *MJA*, October 2, 1943, pp. 227-8.

⁵⁹Most of their work was published in the series *Studies in Industrial Hygiene*, Sydney, 1923-.

⁶⁰'Report of the Director-General of Public Health, 1924', p. 8.

Department in 1922 has already been mentioned. In October 1924 the Victorian Government took the innovative step (in Australian terms) of appointing a female medical factory inspector. Dr Kate Mackay was appointed to the Department of Labour to safeguard the health of women and children. Apparently, the Young Women's Christian Association and the Victorian Branch of the National Council of Women were instrumental in obtaining Mackay's appointment.⁶¹ The NCW, perhaps disappointed with the Commonwealth's failure to devote resources to occupational health for women, had evidently turned its attention to the Victorian Government. Mackay, like Badham in New South Wales, went on to conduct inquiries into a large range of occupational health problems until her position was abolished during the Depression as an 'economy measure'.⁶²

In 1925 the Victorian Government also appointed a medical officer with 'special qualifications in industrial hygiene' to the State Railways.⁶³ Aside from Victoria and New South Wales, no other State seems to have appointed special occupational health personnel.

Progress in updating factory regulations was relatively slow but steady. As has already been mentioned, in 1922 Victoria inserted a provision in its Factory Act requiring suitable seating where necessary, and in the following year, provided for the compulsory notification of certain occupational illnesses under the Health Act. The Western Australian Factory Act was amended in 1923 to allow protective regulations to be made for factories where lead, mercurial or arsenical preparations were hazards. Under these regulations, periodical medical examination of employees was prescribed for the first time in Australia.⁶⁴ Provision was also made for compulsory notification of injuries associated with use of these preparations. The first regulations under the Factory Act amendments - for lead or any poisonous compounds of lead - were introduced in January 1925.⁶⁵

In the following year the Western Australian Government amended the Workers' Compensation Act to provide for compulsory notification and compensation of certain occupational diseases.⁶⁶ There was also, for the first time in Australia, provision for the payment in addition to compensation of reasonable medical or surgical expenses. New South Wales amended its Workers' Compensation Act in 1926 to cover more occupational diseases by making the term 'injury' include a disease contracted by a worker in the course of

⁶¹'Report of the Chief Inspector of Factories, 1925', p. 6, *VPP*, vol. 2, 1926. The Chief Inspector also mentioned that the appointment of female factory medical inspectors had been called for by the 1924 Commonwealth-State Industrial Hygiene conference.

⁶²'Report of the Chief Inspector of Factories, 1932', p. 7, *VPP*, vol. 3, 1933.

⁶³A1928 545/93.

⁶⁴A1928 545/19.

⁶⁵*Health*, May 1925, pp. 87-8.

⁶⁶A1928 545/19.

employment and to which the employment was a contributing factor.⁶⁷ This important legislation also introduced compulsory insurance of employees, registration of insurance companies and higher rates of compensation.⁶⁸ Tasmania in 1924 appointed a Select Committee to report on a scheme for compensating occupational diseases in the mining and metallurgical industries.⁶⁹ The Committee's recommendations were embodied in the Occupational Diseases Relief Fund Act of 1929. Based on Badham's extensive investigations in textile and other industries from 1923 onwards, the New South Wales Factory Act was substantially amended in 1927.⁷⁰ It provided that cubic and floor space per person, ventilation, air change and air movement be as prescribed, set a uniform scale of weights for women and children in accordance with the recommendations of the 1924 Industrial Hygiene conference, and made provision for the making of regulations for dangerous trades.

As to factory inspectors' qualifications, only New South Wales seems to have taken up the recommendation of the second Industrial Hygiene conference for certain prescribed standards. Regulations were gazetted under the Public Service Act, 1902, requiring certain educational qualifications for cadets and two grades of factory inspectors.⁷¹ However, examinations for cadets and the higher grade of inspector were abolished sometime between 1927 and 1930.⁷²

By 1930 some States had adopted the uniform method of reporting industrial accidents, endorsed by the third Industrial Hygiene conference, but others were still only considering the idea (basically States were asked to report all accidents which resulted in loss of life or which incapacitated for 24 hours or more).⁷³ No progress was made with the interchange of officers from the various States, the variable nature of their duties being cited as one of the major problems.

If we turn to investigations in particular industries, we find a wide variety of State activity, particularly after the third conference which affirmed the desirability of a general investigation into hygienic standards in factories and the practical application of such standards.⁷⁴ In Victoria investigations were made into women working in the metal trades and into working conditions in bag-making, pottery, laundry, rubber-dipping, leather-cloth, millinery, paint and jam industries amongst others (Kate Mackay conducted or was

⁶⁷*Health*, July 1926, pp. 121-2.

⁶⁸H. Nelson, 'Legislative Record, 1925-27', in H. Radi and P. Spearitt (eds), *Jack Lang*, Neutral Bay, 1977, p. 82.

⁶⁹Robertson, 'Industrial Hygiene in Australia', 1925, p. 538.

⁷⁰A1928 545/19; *MJA*, 27 August, 1927, p. 135.

⁷¹*Report of the Fourth Conference on Industrial Hygiene*, pp. 8-9; see also W.I. Taylor (NSW Chief Inspector of Factories), 'Educational and Technical Status of Factory Inspectors', *Health*, November 1924, pp. 177-181.

⁷²*Report of the Fourth Conference on Industrial Hygiene*, p. 9.

⁷³*Ibid.*, p. 9.

⁷⁴*Ibid.*, p. 8.

involved in most of these investigations).⁷⁵ In South Australia a twelve month study of atmospheric conditions in selected factories was conducted and, following inquiries by Professor J. Cleland for the South Australian Government, and Robertson for the Commonwealth Arbitration Court, regulations for wood-working establishments introduced. In New South Wales Badham continued his studies in a range of industries (see above). Western Australia introduced comprehensive regulations covering the printing industry in 1928 based on the safety code produced by the Standards Association in collaboration with a Special Committee to the Australian Commonwealth Engineering Standards Association (Duncan Robertson was on this Committee).⁷⁶ New South Wales introduced regulations in 1928 to combat lead poisoning in the rapidly expanding battery industry.⁷⁷ Finally, in 1930 both New South Wales and Victoria said they were looking at means of improving regulation of office employees' conditions in line with the recommendation of the third Industrial Hygiene conference.

The range and skilfulness of State inquiry had definitely improved over the decade. When combined with the effort in the mining industry in various States (see Chapter Six) and those of the IHD itself, we have a picture of a significant and productive rise in government action on occupational health. There is no doubt that the IHD in its role as national advocate and as a source of expertise did make a significant contribution to the improved performance of the States.

Regulation of Commonwealth Employees

While the Health Department could generally only advise the States and private employers on better occupational health practices, Commonwealth employees provided the opportunity for direct supervision. An example could be set for private employers of the utility of preventive health measures in the workplace. The 1920s witnessed a significant extension of occupational health measures for Commonwealth employees, culminating in 1925 in the appointment of the first Commonwealth Medical Officers, who were controlled by the IHD.

When announcing the creation of the IHD, Cumpston mentioned that 'attention was being given to the adoption of industrial hygiene in the Commonwealth Public Service'.⁷⁸ As has already been mentioned, early on the Division had examined the sickness records of a number of Government Departments. The study revealed an average of 10.6 days sick leave per annum per officer, with female rates being considerably higher than those of men. This appeared high by international standards for clerical work.

⁷⁵*Ibid.*

⁷⁶*Ibid.*, p. 10.

⁷⁷*Ibid.*, p. 11.

⁷⁸*Argus*, 16 December 1921.

These results, combined with evidence gathered on personal visits to Departments, led to two conclusions: that medical supervision was lax and that conditions were unhealthy.⁷⁹ Accordingly, the Public Service Board urged the appointment of permanent medical officers.⁸⁰ It was recommended that full-time medical officers be appointed in Sydney and Melbourne and nurses in establishments employing over 100 females.⁸¹

Originally medical examinations for entry to the Commonwealth Public Service had been conducted by private physicians on a part-time contract basis (these commenced in 1909). In 1920 the General Post Office (GPO) at Sydney had appointed a Medical Officer to supervise the health and sick leave of postal employees.⁸² This was probably done in view of the large numbers of women employed as telegraphists. Permanent CMOs were appointed in Sydney and Melbourne in 1925. The GPO Medical Officer in Sydney, Dr Arthur Moseley, was transferred to the IHD as the CMO for Sydney, and Frank Kerr, who had done most of the work on the Public Service sickness records, was appointed CMO in Melbourne.⁸³

Their duties included examination of all applicants for admission to the Service, examination of applicants for sick leave and of officers injured on duty, treatment of officers ill or injured on duty, periodic examination of motor drivers' eyesight and examinations for workers' compensation purposes.⁸⁴ To these rather standard duties a number of more unusual ones were added. The CMO was to examine all temporary telephonists before they would be permitted to commence a course of instruction. Special attention was to be given to physique, hearing, voice and general nervous control.⁸⁵ He was also to make special visits to the homes of telegraphists and mail workers, and, in Melbourne, workers of the Commonwealth Serum Laboratories who reported absent from duty. Investigation of accidents, review of sickness records and general supervision of working conditions were also expected. In Melbourne the CMO had the added duty of periodically examining the employees engaged in the manufacture of tri-nitro-toluol and nitro-glycerine at the Commonwealth Munitions Factory, Maribyrnong.⁸⁶ This was to prevent poisoning from these processes.

The work of the CMOs increased rapidly. In Melbourne 3,648 examinations were conducted in the year 1926-27 (this figure includes surgical dressings and minor ailments attended to by the nurse). For the year

⁷⁹F.R. Kerr, 'Activities of Commonwealth Medical Officers', *Health*, June 1930, p. 56.

⁸⁰Comment in A1928 545/93.

⁸¹Kerr, 'Activities of Commonwealth Medical Officers', p. 56.

⁸²*Ibid.*

⁸³A1928 545/19.

⁸⁴Kerr, 'Activities of Commonwealth Medical Officers', pp. 56-8.

⁸⁵*Ibid.*, p. 57.

⁸⁶*Ibid.*

1928-29 the figure was 8,495 examinations.⁸⁷ To cope with the increase, trained nurses were appointed in Sydney and Melbourne to assist the CMOs.⁸⁸ The staff worked out of suites in the GPO in each city, consisting of an examination room and office for the Medical Officer, a room for dressings and treatment by the nurse, a rest-room with two beds, a retiring room for the nurse and a waiting room.

Perhaps one of the most effective means of controlling sick leave was the CMO's power to examine all applications for sick leave of more than seven days and to review the number of days recommended by medical practitioners. For 1925-26, it was claimed 1,771 days were saved in Melbourne equalling a 7 per cent reduction. For the subsequent consecutive years reductions of 2 per cent, 2.9 per cent and 3.2 per cent were apparently achieved.⁸⁹

The CMOs duties were not confined to medical regulation; addresses and health talks were given in lecture halls and lunch rooms, and health literature was distributed. In other words, they were expected to take a preventive approach to occupational health problems.

The CMOs were a success from the Commonwealth Departments' point of view, as a significant decline in absences occurred.⁹⁰ The fact that CMOs were progressively appointed in other centres is indicative of management's view of their value. A CMO was appointed in Canberra in 1929 and in Brisbane in 1931. In other States and various regional areas CMO duties were given to certain other Health Department staff (e.g. in Perth and Adelaide the Chief Quarantine Officer performed the CMO function).⁹¹

The development of a comprehensive medical and health promotion system for Commonwealth employees was one of the major achievements of the IHD. This system remained in place after the break-up of the Division and forms the basis for today's Commonwealth Medical Service. Whether public service employees, particularly those who received home visits when they reported sick, were appreciative of the system is hard to gauge. Kerr claimed that the more educational activities of the CMO had helped to 'bring about a better understanding between the rank and file of the Service and the Medical Officer placed over them'.⁹² He observed that 'it may be claimed that harmony had been well established in Sydney and Melbourne between the Commonwealth Medical Officers and the officers of the Service, the heads of Departments, the practising Medical men, and the metropolitan hospitals' - a comment which is perhaps indicative of initial tensions. Nevertheless, the increasing numbers of people attending each year for

⁸⁷*Ibid.*, p. 58.

⁸⁸*Ibid.*

⁸⁹*Ibid.*, p. 59.

⁹⁰See files A1928 545/19, 545/93 for comments to this effect.

⁹¹Kerr, 'Activities of Commonwealth Medical Officers, p. 60.

⁹²*Ibid.*, p. 59.

consultation and advice probably indicates acceptance of the role of the CMO.⁹³

The medical work at the Maribyrnong explosives factory involved the examination of employees working with TNT. The TNT workers were examined fortnightly and up to 1930, at least, no serious cases of poisoning had occurred.⁹⁴ Several employees had been found suffering from early symptoms. They were temporarily withdrawn from the work and placed on other duties. Medical supervision at the other Commonwealth concerns such as the dockyards and woollen factory was not an issue as they had been disposed of by 1925.

Commonwealth Inquiries During the Decade

Initially the Division's main function seems to have been to promote greater interest in occupational health on the part of employers and State governments. However, from the mid-1920s onwards the Division was increasingly called upon by unions, State Governments and the Commonwealth Arbitration Court to conduct inquiries and to provide expert advice.

Perhaps the most significant inquiry the Division was involved in (excepting those in mining), was the South Australian Royal Commission on Plumbism of 1925. This was an investigation into the causes of lead poisoning at the BHAS works at Port Pirie. In 1924, despite the 'thousands of pounds' which had been spent on 'improving working conditions' at the smelters by BHAS' relatively progressive management, a large increase in the number of reported cases of lead poisoning had occurred. 56 cases were reported in 1922, 89 in 1923, a massive 234 in 1924 and, for the first six months of 1925, 126 cases. Management admitted that it found this situation 'inexplicable'.⁹⁵

The unions at the smelters, led by the AWU, approached the South Australian Government about an inquiry. Lacking the resources to conduct such an inquiry itself, in September 1924 the Government asked the Prime Minister, S. M. Bruce, to provide appropriate experts to conduct a Royal Commission into the matter. Bruce referred the South Australians to the IHD which offered Keith Moore and technical assistance from the Port Pirie Laboratory. Moore was made Chair of the Commission. The other members were J. L. Pearson, State Inspector of Mines and Quarries, Walter Robinette, secretary of the Port Pirie Combined Unions Council (and of the local branch of the AWU), and for BHAS, Herbert Gepp, general manager of the Collins House concern, Electrolytic Zinc, Risdon.

⁹³*Ibid.*, p. 59. If the attitudes and activities of Moseley, who continued as CMO well into the late 1930s, are any guide, the early CMOs were skilled and sympathetic medical men who contributed significantly to the welfare of their clients. Moseley took an active interest in the welfare of the telephonists at the Sydney GPO and had a keen awareness of the dual burden of home duties and work which these women faced. See his evidence to the Royal Commission on Health in *Health*, Qu. 9463-533.

⁹⁴A1928 545/93 and see A1928 545/27, Industrial Hygiene, Trinitrotoluene (T.N.T.), Use of at Defence Explosive Factory, Advice Re Effect on Health of Employees, Sections 1-2, 1926- 1937.

⁹⁵Most details here are drawn from the 'Report of the Royal Commission on Plumbism', *South Australian Parliamentary Papers (SAPP)*, vol. 3, 1925, Paper no. 57. Important background material is provided in C. Johnstone, 'The Origins of BHAS', pp. 414-37; a good summary is contained in K.R. Moore, 'Royal Commission on Plumbism in Port Pirie, South Australia, 1925', *Health*, November 1925, pp. 177-81.

That Robertson did not offer himself is not surprising. Although given his experience as medical officer to the company in 1920-21 and his intimate knowledge of conditions at the smelter, he would have been ideal, his role there in 1920-21 would have tarred him with management's brush in the eyes of the unions. Moore was an adequately neutral choice for a Commission with union and management representatives. Despite Robertson's inability to conduct the inquiry, presumably he would have been an important source of advice for Moore.

The Commission commenced hearings in April 1925 in Adelaide and Port Pirie. It then proceeded to Broken Hill where the work of the New South Wales Bureau of Medical Inspection and Medical Board in relation to lead-poisoning was examined. As well, some mines' health and safety measures such as change houses and methods of dust suppression were inspected. The Commission then went to Sydney where Henry Chapman and Sydney Smith of Broken Hill fame were questioned. In view of the pair's knowledge and 'international reputation', they were invited to Port Pirie to assist the Commission in its investigations. While in Sydney the Commission also visited the Berger white lead factory at Rhodes and the works of the British Australian Lead Manufacturing Company at Cabarita. Both factories used medical advisers and employed effective preventive measures against lead poisoning. Finally, before returning to Port Pirie, a leading lead rolling works in Melbourne was inspected.

The Commission had been asked to examine the causes of lead poisoning, the reasons for its increase in recent years, and the best means of preventing it. It found that most lead was taken in by the body in the form of lead-bearing dust or fume, where it accumulated eventually damaging blood vessels and the nerves. In addition, the Commission believed that carbon monoxide poisoning was a complicating factor in many cases. The recent rise in reported cases was attributed to an increase in the lead-bearing tonnage treated, a change in the physical character of the concentrates, and the high number of southern European migrants employed who, for a number of reasons, appeared to be more susceptible to lead poisoning (they tended to work in the most hazardous areas, their English was often inadequate [meaning they were unable to read notices or understand safety instructions], and they generally had a lower standard of living than the British-born workers).

The Commission also found that the rise in cases was not nearly so dramatic as at first thought. Although lead poisoning had been a compensable disease under the South Australian Workmen's Compensation Act since 1912 no cases had been reported up to 1917. It turned out that most of the men were ignorant of this provision until 1917 after which time a trickle of cases began. Figures from the local hospital showed that over the period 1911-17, 219 cases of lead poisoning were treated, in none of which was compensation paid. It appears that the attitude of BHP, which controlled the smelters up to 1915, was particularly to blame for this state of affairs. In 1910 a Dr Ramsay Smith had investigated lead poisoning at Port Pirie on behalf of the Central Board of Health. He found that over 1907-09 an estimated 150 to 250 cases of lead

poisoning had occurred. However, he only recommended that employees receive more instruction as to how to use existing facilities, despite their obvious inadequacy.⁹⁶ BHP made little effort to heed the example of the regulations covering the prevention of lead poisoning under the New South Wales Mines Inspection Act, 1901, the German regulations of 1905, British regulations of 1911-12, and regulations under the Tasmanian Mines and Works Regulation Act, 1915. In fact, B.H.P. actively opposed claims for compensation, claiming the disease was contracted before employment at the smelters. On two occasions BHP sent a 'gratuitous payment' of £1 to leaded workers ostensibly in recognition of service.⁹⁷ The circumstances of leaded workers only improved after the Collins House managers gained control of the smelters and set about modernizing conditions and methods. But even then the lead problem was still not dealt with adequately. As Johnstone points out, the new management would have been aware of the New South Wales legislation and the system at Berger, but it was not until after the Broken Hill strike commenced in 1919 that serious thought was given to preventive measures (though as she notes, the demands of war production may have been a factor in limiting change).⁹⁸

The engagement of Robertson in the following year did represent a serious attempt to tackle the problem but not surprisingly, the company was unable to convince the unions of its sincerity. As if to facilitate the improvement of practices, in 1920 the South Australian Government passed the Mines and Works Inspection Act, which gave the Government power to make regulations covering lead poisoning. However, regulations were not introduced until after the 1925 Royal Commission. Although unable to introduce compulsory medical supervision, BHAS did set up an Industrial and Hygiene Department in 1923 to investigate health and working conditions and collate statistics. Free milk was introduced (to line the stomach against lead absorption) and in 1924 notices on preventive measures were posted in Maltese, Greek, and Italian in addition to English.⁹⁹ Given these initiatives management's perplexity at the rise in cases of leaded workers is, to some extent, understandable (it might also be worth noting that the General Superintendent of the works, who had inspected overseas facilities in 1919 and 1924, believed that conditions at BHAS were the equal of the best in other countries).¹⁰⁰

The Commission recommended a number of measures: that regulations covering the suppression of fumes and dust and the prevention of disease be made under the Mines and Works Inspection Act; that the Mines Department be charged with ensuring that the regulations were carried out; that a workmen's check inspector be appointed to work in conjunction with management and the Government's inspector; that a

⁹⁶Early BHP indifference is covered by Johnstone, 'Origins of B.H.A.S.', pp. 420-28.

⁹⁷'Origins of B.H.A.S.', p. 428.

⁹⁸*Ibid.*, p. 429.

⁹⁹*Ibid.*, p. 434.

¹⁰⁰'Report of Royal Commission on Plumbism', p. vii.

special workers' compensation act be passed and a Medical Board similar to that covering Broken Hill be instituted; and that carbon monoxide poisoning be made compensable. In addition, the Commission recommended time off every week in lieu of the average of seven shifts per week which had been the usual practice, and finally that the Commonwealth Health Department be asked to conduct research into criteria for diagnosis of lead and carbon monoxide poisoning. In a dissenting report, the union member of the Commission said he disagreed with the emphasis on medical examination, arguing that it would lead to compulsory examinations. He also opposed the creation of a special Medical Board on the same grounds. Lastly, he criticized the conduct of Chapman and Smith, who apparently had arranged the issue of summonses in order to examine workers - certainly a fairly draconian approach compared to that of the Technical Commission at Broken Hill.

The South Australian Government acted reasonably quickly. In November 1925 regulations for the prevention of lead and gas poisoning under the Mines and Works Inspection Act were gazetted.¹⁰¹ In January 1928 the Workmen's Compensation Act was amended to provide for a special Board which could require workers to appear for examination.¹⁰² From 1925 the company gradually phased out the use of Southern European workers; by 1930 98 per cent were British in origin. The company also continued efforts in other directions to stabilize and improve the quality of the workforce. A dental clinic was opened in 1926 (following the successful example of Electrolytic Zinc) and preference was granted to unionists. In 1931, after pressure from the unions, a lead bonus was introduced giving the smelter workers conditions similar to those operating at Broken Hill.¹⁰³ By 1930 reported cases of lead poisoning had been reduced to just under 50 and after the Depression there was an average of 9 cases per year.¹⁰⁴

Other major Inquiries

In 1926 the Federal Council of the Australian Timber Workers' Union (TWU) asked the Commonwealth Government for an inquiry into the effects of dust on timber workers in wood-working factories.¹⁰⁵ Although there had been an inquiry into the same subject in South Australia in 1925, the TWU felt that knowledge of the situation Australia-wide would be a better basis on which to take action so the IHD was asked to undertake an inquiry. The Division sent questionnaires to timber unions and medical practitioners in all States. Then, in conjunction with the TWU, the Furniture Trades Society, and the Boot Trades Employees Federation, 13 representative establishments were investigated in Melbourne.

¹⁰¹*Health*, May 1926, pp. 85-6 gives them in full.

¹⁰²Johnstone, 'Origins of B.H.A.S.', p. 439.

¹⁰³*Ibid.*, pp. 441-5.

¹⁰⁴AA 1928 545/93; Johnstone, 'Origins of B.H.A.S.', p. 445.

¹⁰⁵The following details are from D.G. Robertson, *An Investigation of Certain Aspects in Persons Engaged in the Wood Working Industries*, Melbourne, 1926.

Together with union representatives and two Melbourne doctors, Eric Gutteridge and S. W. Shields, Robertson examined the workers in these joineries and wood working factories for respiratory problems due to dust and cases of dermatitis. They found that there was a definite correlation between wood dust and nasal troubles, particularly in the case of wood machinists. Dermatitis, though not common, was linked to working with particular woods. Robertson recommended the fitting of exhausts on each wood working-machine. Regarding dermatitis, the only solution he could see was removal from exposure of those affected. In this regard he recommended 'serious consideration' of some means of providing for the small number of people affected.¹⁰⁶

In March 1927 the Federated Rubber Workers Union (FRWU) asked the Commonwealth Minister for Health to investigate a sudden outbreak of dermatitis in the rubber trade. Keith Moore conducted an inquiry into this problem on behalf of the IHD. He investigated two factories in Sydney (accompanied by Charles Badham) and five factories in Melbourne. The seven factories employed over 5,000 workers in total.¹⁰⁷ An expert dermatologist, Dr R. R. Wettenhall of Melbourne, was engaged to assist. It was found that in five of the factories there was little or no occupational dermatitis but in the two other factories (one in Sydney and one in Melbourne) 200 cases had received compensation in less than 18 months. The cause was found to be the recent introduction of hexamine and para-phenylene-diamine as accelerators to vulcanization (treating of rubber with chemicals to improve its flexibility, hardness and strength). The use of benzine as a solvent was found to be the cause of around 10 other cases. Moore reported that the withdrawal of the first two substances had led to the virtual disappearance of occupational dermatitis in the two factories concerned.¹⁰⁸

The Division was asked to conduct its first investigation for the Commonwealth Arbitration Court later that year. Reflecting the growing awareness of occupational health issues during the 1920s, an increasing number of Federal Arbitration Awards were including occupational health provisions. The report of the 1927 Industrial Hygiene Conference included a table of health provisions inserted in Federal Awards in recent years.¹⁰⁹ These health and safety provisions included: rest pauses, limitation of work in wet places, provision of protective clothing, lockers, change and meal rooms, provision of hot water and firewood, provision of shelter, ventilation, lighting, protection of eyes, first aid, sickness and accident provisions, provisions covering special processes, weight lifting, sanitary accommodation, seating and special restrictions on women and juveniles.

¹⁰⁶*Ibid.*, p. 30.

¹⁰⁷Details from Moore, *Dermatitis in the Australian Rubber Industry*, Melbourne, 1927.

¹⁰⁸Moore was also assisted in his work by Dr. Wade Wright, Assistant Medical Director, Metropolitan Life Insurance Co., New York who provided him with a fairly comprehensive set of references on dermatitis in the rubber industry elsewhere in the world. *Ibid.*, p. 5.

¹⁰⁹*Report of Third Commonwealth-State Industrial Hygiene Conference*, Appendix 2.

The bulk of these provisions had been introduced over the period 1924-1926 and were spread between some 21 unions. However, most of them were concentrated in a few unions such as the Printing Industry Employees, the Rubber Workers, the AWU (State Electricity Commission, Victoria), North Australia Industrial Union (Commonwealth Railways), Liquor Trades Employees, and the Amalgamated Clothing and Allied Trades Union. It is clear that the Commonwealth Arbitration Court was increasingly inclined to consider that medical and other scientific evidence was necessary before establishing the basis for claims dealing with conditions.¹¹⁰ The Court would also have had before it the New South Wales precedent, of an Industrial Hygiene Section created expressly to help resolve claims before that State's industrial tribunal.

In September 1927 the Arbitration Court asked the IHD for information on carbon monoxide poisoning in gas-making plants. As the Division had no such information it offered to conduct an investigation, an offer which was readily taken up by the Court. The inquiry, which was conducted in Melbourne, was welcomed by the Federated Gas Employees Industrial Union. Frank Kerr conducted it with the assistance of various experts.¹¹¹ 370 workers were examined. After a careful investigation Kerr concluded that the work was certainly unpleasant, but that it had no long term ill-effects on health. The workers' sickness rates were a little above normal but their death rate was low and retirement age high. Although serious gassing was always a possibility, no chronic poisoning existed at any works. Still, he saw ample room for improvement of the working environment and made a number of suggestions for improving the buildings and ventilation, some of which he noted had been carried out while he was conducting his inquiry.¹¹² He also recommended that oxygen and carbon dioxide be on hand, as these were the best treatments for carbon monoxide poisoning.

The Division was also responsible for the only large survey of women's occupational health during the 1920s. The 1927 Industrial Hygiene conference had resolved that 'a survey of female labour in industry' should be undertaken by the IHD in conjunction with State authorities.¹¹³ This resolution appears to have been inspired by the work of Kate Mackay in Victoria. She had attended the conference and presented some evidence on the ill-health of young working women. Shortly afterwards she was selected to join Prime Minister Bruce's Industrial Mission to the United States which studied industrial organization and methods there. Mackay made a special study of the employment of women and girls in the United States.¹¹⁴ When she returned her experiences were well publicized, and probably ensured that the proposed survey of women's conditions went ahead.

¹¹⁰The penetration of health and safety provisions into Federal Awards would be an interesting study in itself.

¹¹¹See Kerr, *An Investigation into the Health of Employees in Gas-Making Plants*, Melbourne, 1927.

¹¹²*Ibid.*, p. 78.

¹¹³*Report of the Third State-Commonwealth Industrial Hygiene Conference*, p. 18.

¹¹⁴Norris, *History of the National Council of Women*, p. 60.

Victoria was selected as the State in which to conduct the joint survey; more women worked in industry in Victoria than in any other State (there were approximately 50,000 women in factories in Victoria in 1928). Dr Marion Ireland was temporarily appointed to the IHD in October 1927 to head the survey. Kate Mackay was to assist. Female employees in all Commonwealth offices and factories and eleven other industries were surveyed.¹¹⁵ The nine industries were rubber, manufacturing grocers, jute bags, fruit canning, confectionery, boot, clothing, printing and cardbox, textiles, metal, and tobacco and cigar. In most industries five or six factories were visited. The establishments visited were: three Commonwealth offices, two Commonwealth factories, five rubber products, eight manufacturing grocers, eight jute bag, six confectionery, five boots and shoes, ten printing and cardboard, six clothing, four textile, twenty metal, two tobacco and cigar, and five canning establishments. A special investigation into fruit poisoning (a disease of the skin caused by fruit acid, usually from lemons) was conducted in the canning industry. Interviews with all or a certain proportion of the employees were conducted.¹¹⁶ Overall, 84 establishments were visited and 4,341 women interviewed.

At each establishment the investigators examined all the various aspects of the working environment including the layout of the workroom itself, ventilation, temperature and means of heating, cleanliness, lighting, noise and type of flooring. Particular note was made of 'the presence or absence of dust and fumes, and the exposure of employees to special sources of heat'. Inquiry was made into the weight lifting required of females and any special problems specific to particular industries. Sanitary, lavatory, and cloakroom accommodation, the type of seating available, provisions for meals, drinking water, rest rooms, surgery or first aid rooms and equipment, the supply of working clothes and any welfare schemes were looked at. Sickness, absenteeism and labour turnover records were also examined. As for the interviews, in most factories, all the female employees were personally interviewed; in the larger ones one person in every three or four was selected on a random basis.¹¹⁷

The investigators concluded that while there were few examples of poor working conditions and breaches of the Factories Act, 'overall working environments were not of a 'satisfactory standard'.¹¹⁸ Hours were generally 44 to 48 hours per week; overtime was rare except in the fruit industry. In several factories little attention was paid to rotation of work, spacing of workers, provision of rest periods and adequate lunch hours. Sanitary and other facilities were usually not up to acceptable standards and in no factories were physiologically correct seats and footrests provided for all employees. Lighting was generally acceptable but ventilation needed improvement. Heating was provided in very few establishments. Welfare work was

¹¹⁵The inquiry is dealt with in M.I. Ireland, *A Survey of Women in Industry, Victoria, 1928*, Canberra, 1929; a succinct summary appears in *Health*, June 1929, pp. 53-59.

¹¹⁶*Ibid.*, p. 6.

¹¹⁷*Survey of Women in Industry*, pp. 6-7.

¹¹⁸*Ibid.*, p. 32-38.

well conducted in a couple of factories (some firms employing a nurse and providing surgeries). Sickness and turnover records, as the IHD well knew, were generally inadequate. Very few women worked on dangerous processes or in processes requiring heavy physical labour.

From their interviews the investigators found that a large number of the women workers were juveniles (46.2 per cent were under 21), but that aside from period pain their health was generally better than that of adults. Headache, fatigue and period pain were most common in the trades with the greatest pace of work, though in the textile and boot trades headache was probably related to eye strain. Dust was a problem in the jute and tobacco trades leading to a higher than average rate of respiratory infection in these trades. Bad posture through inadequate seating arrangements or work organisation (e.g. continuous sitting or standing) appeared to contribute to such things as varicose veins, dysmenorrhoea, constipation and anaemia. Finally, they established that fruit poisoning in fruit canning factories was industrial in origin.

In conclusion they recommended that a scientific survey of heating, lighting and ventilation in factories be carried out; that there be an investigation using X-ray into dusty trades employing women; that fruit poisoning be made a compensable disease and that fruit canning factories take adequate steps to provide medical advice and first aid and where possible introduce machinery for squeezing lemons; that the condition of female office workers be investigated since they had been neglected to date; that sight testing for juveniles entering industry be legislated for; and finally that more attention be paid to special facilities and practices for women such as lavatories, dining and rest rooms, well-equipped medical rooms and adequate rest pauses and meal breaks.

There seems to have been no concrete action as a result of the inquiry. At the fourth Industrial Hygiene conference in 1930 the report of the survey was noted but there was no mention of action by the States. Overall, the survey can be seen as a pioneering attempt to relate women's working conditions and experiences to their health as well as being an excellent study of factory practices in a number of industries at this time.

Other inquiries that bear mention include ones into measures adopted in public hospitals and by private practitioners for the protection of workers from X-rays and radium,¹¹⁹ aspects of lead absorption among employees at the Broken Hill mines and BHAS smelters for the Australian Commonwealth Engineering Standards Association¹²⁰, and accidents to minors.¹²¹ At the time of its demise the Division was conducting a study of ventilation and lighting in printing establishments in Melbourne and Sydney at the

¹¹⁹For the report see *Report of the Third Session of the Federal Health Council*, Canberra, 1930, pp. 73-6.

¹²⁰Report in *MJA*, 16 February 1929.

¹²¹See *Report of the Fourth Industrial Hygiene Conference*, pp. 15-18.

request of the Printing Industry Employees' Union.¹²²

Overall, even leaving aside work in the mining industry, it does seem that the Division had succeeded in establishing itself as an important source of advice and expertise for unions, employers, the Arbitration Court and the States. While it had less success in encouraging uniformity of State standards, it did contribute to the greater level of State activity during the decade. Similarly, though it had only moderate success in encouraging employers to provide medical services for employees, it did help legitimate such services even if only in the eyes of the larger firms who were more able to afford them. The Division also made a particularly important contribution to the welfare of Commonwealth employees through the establishment of the Commonwealth Medical Service. Finally, its research and investigations, along with those of the New South Wales Industrial Hygiene Section, constituted the first systematic body of knowledge on occupational health in Australia.

¹²²The Melbourne part of the study had been completed and the Division was about to undertake the Sydney component with Charles Badham, when the Division was abolished; see A1928 545/79, Industrial Hygiene, Investigation into Working Conditions in Printing Industry, 1930-32.

Chapter 6

Occupational Health in the Mining Industry during the 1920s

The persistent dust disease problem in the mining industry was the key factor behind Commonwealth intervention in 1921. Appropriately enough, it was in mining that the IHD made its most enduring contribution. Commonwealth assistance proved invaluable in the clean-up of the mess of years of neglect and inaction.

The fact that the Commonwealth had to be invited by a State to participate in health and safety projects limited its scope for initiatives in the mining field. Cumpston had advised the IHB early on that the 'experts' should be warned about the Commonwealth-State difficulties which could be 'in the way of getting such rapid and effective actions as they may consider desirable'.¹

Nevertheless, during the 1920s, a number of States turned to the Commonwealth for its expertise and funding to help resolve mining health problems, perhaps signifying State acceptance of a legitimate Commonwealth role in occupational health.

The Role of Lanza

The Rockefeller expert required by the Commonwealth Government in 1921 had to be a specialist in mining health and safety. Lanza, with his record of research on dust disease in the United States, fitted the bill. And he does appear to have been reasonably active during his stay in Australia.

Accompanied by Duncan Robertson, he visited the Bendigo mines in September 1921, shortly after his arrival. The purpose of the visit was to report to the Prime Minister, Hughes, on issues relating to the establishment of a 'phthisis clinic' at Bendigo, and to compare mining conditions at Bendigo with those of the area he was familiar with in the United States.² In the course of his visit, Lanza gave an address to the Bendigo Amalgamated Co-operative Alliance on his United States mining experience and the necessity of

¹Cumpston to IHB, New York, 22 April 1921, A1928 443/11.

²*Argus*, 15 September 1921.

a clinic to deal effectively with dust disease cases.³

He and Robertson inspected BHP's Iron Knob mine in December 1921,⁴ and in the following year he was also assisting Robertson in negotiations with the Western Australian Government on the setting up of a medical bureau at Kalgoorlie.⁵ Lanza may have also acted in an advisory capacity in relation to initiatives at Broken Hill. One Broken Hill manager mentioned that Lanza was 'very familiar' with conditions at the latter so he evidently spent some time there.⁶

Whether Lanza played an important role in the Division's early mining work is difficult to determine. Certainly it is possible that the growing number of Australians with expertise in the field of mining health may have rendered Lanza's mining experience less than critical for the progress of mining health and safety initiatives. However, in the absence of information on the actual nature of Lanza's contribution, no definitive assessment is possible.

Bendigo

The situation at Bendigo was the first to be taken in hand. Robertson's investigation of 1920 had confirmed that tuberculosis was more prevalent in Bendigo than Victoria as a whole and that mining was partly responsible. To help address the problem, the second of the Health Department's new laboratories was opened in Bendigo in July 1922.

Like all of the laboratories, the basic function of the Bendigo Laboratory was to act as a regional centre of modern preventive medicine; providing skilled personnel and up-to-date technical services (e.g. a pathology service to private practitioners) to deal with local health problems in collaboration with State medical officers.⁷ But like the laboratories at Port Pirie and Kalgoorlie, the Bendigo one was also expected to deal with a particular occupational health problem, miners' phthisis.

For this purpose, a 'high class' X-ray plant was installed.⁸ The plant was purchased at a cost of £1,500.⁹ The building itself was lent to the Commonwealth and State Governments by the Bendigo Benevolent Asylum and remodelled and equipped for about £6,000.¹⁰ The new medical officer in charge of the

³*Argus*, 21 September 1921.

⁴*Argus*, 16 December 1921.

⁵*WAPD*, vol. 66, 1922, p. 454.

⁶W.E. Wainwright, Manager, Broken Hill North, to Cumpston, 23 August 1923, A1928 456/1, Health Laboratory, Broken Hill, Establishment of, 1923-27.

⁷W.C. Sawers, 'The Commonwealth Health Laboratories', *Health*, September 1924, p. 129-32.

⁸*Ibid.*, p. 134.

⁹*Argus*, 12 July 1922.

¹⁰*Argus*, 13 June 1922.

laboratory, Dr James Brown, had special qualifications in the treatment of lung complaints, bacteriology and X-ray work.¹¹ Brown, however, retired in October 1922 and was replaced by Keith Moore who remained until March 1925 when he was transferred to the IHD. Moore was succeeded by R. D. McIntosh.¹²

Hughes opened the new laboratory, accompanied by Walter Massey-Greene, Minister for Health.¹³ As Hughes changed electorates again at the December election of that year, and had been removed from the Prime Ministership by the following February,¹⁴ the opening was one of the few opportunities he had of making any political capital out of his support for occupational health.

In his speech he noted the origin of the laboratory in the wartime Committee on Death and Invalidity and expressed the hope that the laboratory would act as a 'centre which would radiate health throughout the Commonwealth'. Turning to the issue of tuberculosis and mining he said that:

Tuberculosis had been too long regarded as incidental to mining. It was a reflection on civilisation that men should be condemned to death in order to win wealth for themselves and the world. He could not believe that this was one of the inevitable concomitants of the industry. It was possible to stamp out tuberculosis.¹⁵

The town Council then presented Hughes with £2,000 and 80 acres for the extension of the laboratory's work; preferably in the form of a tuberculosis sanatorium.¹⁶

The laboratory did serve a useful public health function. There had been no functioning X-ray plant in the area for two years.¹⁷ All pathology and X-ray work was free to Victorian Government Medical Officers. The laboratory was, in effect, a subsidy from the Commonwealth to the Victorian Government.¹⁸

Occupational health work got under way with an inquiry into miners' lung diseases in 1922. The aim was to determine the amount of silicosis complicated by tuberculosis.¹⁹ The co-operation of the mine managers and the Mining Section of the AWU were secured to encourage miners to attend and individual mines were circularised.²⁰ In the event, only about 30 per cent of miners attended. This was mostly due to the rapid decline of the mines since the end of the War. In 1919 there had been about 1,100 men underground and

¹¹*Argus*, 12 July 1922.

¹²*Health*, K.R. Moore, Qu. 1996-8.

¹³*Argus*, 24 July 1922.

¹⁴Sawer, *Australian Federal Politics*, pp. 221-5.

¹⁵Account of speech in *Argus*, 24 July 1922.

¹⁶*Ibid.*

¹⁷*Health*, Qu. 10201.

¹⁸*Ibid.*, Qu. 10212; Keith Moore notes: 'Everything the State authorities have asked for has been done by the laboratory'; Qu. 10223.

¹⁹*Health*, Qu. 10213.

²⁰*Ibid.*, Qu. 10212; A1928 545/19.

even then the mines were closing down rapidly.²¹ In 1922 there were 400 men underground but by 1925, when Moore was giving his evidence, there were only about 100.²² Understandably, as Moore observes, there was 'a great deal of reluctance' to be examined - 'they did not want to be told they were sick, because they would be paid off'.²³

Moore and his assistants examined about 150 working miners and 160 ex-miners. Of the working miners nearly 60 per cent were suffering from silicosis and/or tuberculosis but as the sample was so inadequate no report was published.²⁴ It had been hoped that the Bendigo mining investigation would be carried out on the lines of the comprehensive work on miners' lung diseases in South Africa,²⁵ but the world-wide slump in gold prices and the drying up of investment after the War effectively brought the Bendigo goldfield to its knees, dispersing its workforce.²⁶ It seems the new occupational health measures came too late to be of significant benefit to the bulk of the miners who had passed through the Bendigo field.

Examinations were continued for miners who turned up in later years; they were still dribbling in in 1925, mostly men 'who were just about knocked out'.²⁷ The examinations were important for the miners as they determined eligibility for the Victorian Miner's Phthisis allowance. Presumably there was less to lose if your working days were nearly over and there was a possibility of compensation.

The Bendigo field was examined again in 1928 by Moore for the Commonwealth Arbitration Court which was deliberating over an award for miners covered by the AWU award in Tasmania and Victoria (see below). This time 150 men were working on the field of whom only 58 volunteered to be examined.²⁸ Of those examined 16.4 per cent had silicosis simple and/or complicated by tuberculosis, which was much higher than for the Tasmanian miners (6.2 per cent).²⁹ Moore expected a difference because of the higher silica content of the Bendigo ores (80 per cent) compared to the Tasmanian ones (60 per cent). He felt, however, that the incidence of silicosis at Bendigo, insofar as one could judge from such figures, had decreased in recent years. This conclusion, however, had to be qualified by the fact that the more seriously affected miners usually dropped out of the industry first. As an indication of the scale of the problem in the

²¹*Health*, Qu. 10212.

²²*Ibid.*

²³*Ibid.*

²⁴*Ibid.*, Qu. 10216; K.R. Moore, *Report on an Investigation into the Health and Working Conditions of Employees in the Mining Industry of Victoria and Tasmania*, 1928, Canberra, 1928, p. 6; A1928 545/19.

²⁵Frank Hone, as a member of the Royal Commission on Health, mentioned this fact when discussing the Bendigo work with Moore. *Health*, Qu. 10215.

²⁶See Blainey, *The Rush That Never Ended*, p. 289 on the causes of the decline of goldmining and pp. 283-93 on the effects of the collapse generally.

²⁷*Health*, Qu. 10213.

²⁸Moore, *Health and Working Conditions of Employees in the Mining Industry of Victoria and Tasmania*, p. 10.

²⁹*Ibid.*, p. 18.

past, he noted that of the 61 miners examined, in 32 cases the father of the miner had died of miner's phthisis. He concluded that while the companies had made improvements in recent years the next generation of miners was still not secure from the threat of dust disease: the 'effective minimum of dust content in mine air has not yet been reached, and increasing efforts must still be made to combat this particular enemy'.³⁰

The Bendigo Laboratory continued its work in monitoring miner's phthisis up to and beyond the Second World War.³¹

Broken Hill

Commonwealth involvement in the resolution of the dust disease problem at Broken Hill appears to have been minimal (Hughes' securing of Edmunds to arbitrate is the major exception here). Both Robertson and Lanza were familiar with the situation at Broken Hill and acquainted with some of the companies involved, but whether or not they assisted the Technical Commission in the course of its inquiries in 1921 and 1922 is not known. There was pressure in the mid-1920s for greater Commonwealth involvement, but ultimately the New South Wales Government took full responsibility.

Importantly, however, the arrangements developed at Broken Hill to tackle dust disease provided a model of how to deal with the problem in other areas of the mining industry. The Commonwealth's approach at Kalgoorlie, for example, owed much to the work at Broken Hill.

The Broken Hill Technical Commission's interim report of July 1920 was the result of examinations of 4,337 mine employees. Of these, 193 were diagnosed as having pneumoconiosis at varying stages, 59 as suffering from pneumoconiosis complicated with tuberculosis, and 39 suffering from pulmonary tuberculosis.³² The Commission's most important conclusion was that the dust of the Broken Hill mines did lead to pneumoconiosis in miners who had not worked elsewhere in mines.³³ This finding once and for all refuted the claims of the mine managers that the Broken Hill dust did not cause lung disease. The Commission also found that men affected with pneumoconiosis showed a predisposition to pulmonary tuberculosis, that the dust hazard was capable of control, and that no hookworm occurred in the Broken Hill mines.³⁴

³⁰*Ibid.*, p. 25.

³¹The subsequent work of the Laboratory can be traced in A1928 458/1, Health Laboratory, Bendigo; A1928 458/10, Health Laboratory Bendigo. Tuberculosis Investigation 1929/4; A1928 458/13, Health Laboratory Bendigo. X-ray examination 1934-45.

³²Cumpston, 'Health and Disease in the Broken Hill Mining Industry', p. 554.

³³Kennedy, *Silver, Sin and Sixpenny Ale*, p. 169.

³⁴M.R. Finlayson, 'Industrial Diseases and Medical Examination of Broken Hill Employees', *Health*, July 1925, p. 103.

The report recommended the exclusion and compensation of sufferers from tuberculosis and pneumoconiosis, the provision of alternative employment for excluded non-tubercular sufferers, regular medical examinations before and during employment, and further research on the health problems.³⁵ Edmunds' Award of September 1920 assumed that the Commission's recommendations would be implemented and that further investigation would be conducted by the Commission. When work resumed in November 1920 the following conditions were enforced: the continuance of the contract system; a 35 hour week for underground miners; a 44 hour week for surface shift men; a 43 hour week for surface day men; a basic wage of 15 shillings per shift (i.e. 75 shillings per week for an underground miner); no stoping of ore on night shift; where it was necessary for the effective prevention of dust, water sprays to be worked by a man other than the machine operator; withdrawal of all workers suffering from pneumoconiosis and/or tuberculosis; compensation of such workers and periodical analysis of air in the mines. The Technical Commission also concluded that dust could be minimized by adequate ventilation and use of water, firing of explosives at the end of a shift only, and preventing work in firing areas until dust has subsided.³⁶ These important recommendations were included in amendments to the Mines Inspection Act 1901.³⁷

The 1920 Workmen's Compensation (Broken Hill) Act was originally only applied to those miners employed at the time of the 1919 strike. The Act was to lapse in 1928, presumably because conditions would have improved. But in 1927 the Lang Labor Government amended the Act so that it would apply indefinitely to all who at any time had been employed by the mines.³⁸

The Act was administered by a joint committee nominated by employers and employees. For a worker to receive compensation he had to be certified by a medical authority appointed by the Committee.³⁹ This was the position offered to Robertson by the AMA early in 1922. To control compensation costs, the companies inaugurated compulsory medical examinations for all new applicants for employment and when miners changed mines. Needless to say the unions were unhappy about company control of this process, so the New South Wales Department of Labour and Industry agreed to establish a Bureau of Medical Inspection to carry out the work independently. A standard for examination was based on the schedules of the New South Wales Railways, Australian Mutual Provident Society, and the Medical Bureau of the Rand mines of South Africa. The examinations sought to eliminate those who had or would be liable to contract silicosis or tuberculosis and those who were less healthy than the standard set. Each applicant had to be free of symptoms of 21 diseases or conditions, the '21 diseases' examination, as it became known.⁴⁰ In

³⁵Kennedy, *Silver, Sin and Sixpenny Ale*, p. 170; the report was published in the *MJA*, 24 July 1920, pp. 87-9.

³⁶Finlayson, 'Industrial Disease and Medical Examination at Broken Hill', p. 103.

³⁷Burford, 'Mining Legislation', p. 511.

³⁸Cumpston, 'Health and Disease', p. 545.

³⁹Finlayson, 'Industrial Diseases and Mine Employees' p. 103.

⁴⁰*Ibid.*, pp. 105-6.

practice this intimidating list could be reduced to 9 or 10 firm reasons for rejection.⁴¹

The Technical Commission continued its inquiries from January 1921. Further reports were published in December 1921 and in 1922.⁴² Overall 6,538 employees were examined. Of these 266 of the 2,618 underground workers had pneumoconiosis, 102 of these were complicated by tuberculosis, and 107 other workers were suffering from uncomplicated tuberculosis. Another 61 persons were suffering from lead poisoning; all but one of these had a history of lead colic and 31 had a degree of lead palsy.⁴³

To deal with lead poisoning cases, the Workmen's Compensation (Lead Poisoning-Broken Hill) Act, 1922 and the Workmen's Compensation (Lead Poisoning-Broken Hill) Amendment Act, 1924 were passed. These Acts were necessary because the 1916 Workmen's Compensation Act failed to bring within it certain workers suffering from lead poisoning and yet obviously entitled to compensation. The Acts provided for the appointment of a Medical Board, to undertake the responsibilities previously held by the medical referee under the old Workmen's Compensation Act, and comprised an employer nominee and an employee nominee, with the Chair being the Medical Officer in charge of the Bureau of Medical Inspection. The Acts provided for the complete control of treatment of workers receiving compensation for lead poisoning, compulsory notification of cases of lead poisoning in the district, and removal of susceptible persons. Any workers who had been certified as suffering from lead poisoning could not return to work unless certified as fit.⁴⁴ As with pneumoconiosis, the New South Wales Government and the companies shared the cost of medical supervision and compensation.

During the first two years of operation of the Bureau up to June 1924, 5,444 men were examined for employment; 964 or 17.7 per cent were rejected, the chief causes being abnormalities of the respiratory, renal, and cardiovascular systems comprising 83 per cent of rejections.⁴⁵ From its inception in May 1923 until 1925, the Medical Board had certified 62 cases of lead poisoning, 44 of whom had previously been certified and were in receipt of compensation. Thus 18 fresh cases had been found (most of these had been exposed from 15 to 30 years).⁴⁶ It should be remembered that these regulatory measures did not include any provision for compulsory periodic re-examination of employees: an aspect which irked medical officers but which was important to the unions.

⁴¹Cumpston, 'Health and Disease', p. 546.

⁴²'Report of the Technical Commission of Inquiry appointed upon the recommendation of the NSW Board of Trade to investigate the prevalence of miners' phthisis and pneumoconiosis in the metalliferous mines at Broken Hill', *NSWPP*, vol. 2, 1921, pp. 1289-362; *Further Reports of the Technical Commission of Inquiry appointed to investigate the occurrence of industrial diseases in or about the metalliferous mines at Broken Hill*, Sydney, 1922.

⁴³Cumpston, 'Health and Disease', p. 546.

⁴⁴Finlayson, 'Industrial Diseases', pp. 104-5.

⁴⁵Finlayson, 'Industrial Disease', p. 106.

⁴⁶*Ibid.*, p. 105.

The success of the new measures is undoubted. Over the years 1933-44, 289 men were re-examined and of these, 41 (17.6 per cent) were found to be suffering from pneumoconiosis and/or tuberculosis; all had been employed at Broken Hill before the 1919 strike. By 1944 no employees could be found who were suffering from pneumoconiosis caused solely by work in Broken Hill. From 1926 to 1968 only four cases of pneumoconiosis had been diagnosed in men with a history of exposure to dust since the early dust control measures had been put in place (and these were minor cases). In the ten years to 1968, no applications were received for medical examinations for lead poisoning.⁴⁷ These figures have to be qualified by the fact that many workers were never again examined after the 1920s as examination after then was purely a matter of choice for employed miners. While it was in the miner's interest to be protected and compensated as early as possible, some miners preferred not to be withdrawn if they only had a slight case of silicosis.

The resolution of the occupational health issue at Broken Hill was a significant achievement. For the diseased miners compensation was secured, even for tuberculosis which was probably more a consequence of poor living conditions than of the occupation of mining itself. It is hard now to conceive the effect on hundreds of families of the revelation that their breadwinner was incapacitated. Chapman himself was conscious of this and refused to reveal names of 'dusted' miners until the compensation rates and terms were backed with the force of law.⁴⁸ The settlement also provided protection for new workers; it was in the companies' interest to keep their compensation costs lower by keeping conditions at an optimum, and independent medical examination was available to the worker on request. The agreement preserved choice for the worker, and because it improved health, also provided security against future losses due to unpaid leave for illness. From the employers' point of view, a major source of industrial disputation had been removed and the New South Wales Government was paying half the cost of compensation and medical supervision. More than this, there were the efficiencies resulting from improved conditions. As Chapman told the Royal Commission on Health in 1925:

when we went there [Broken Hill] each miner obtained per shift something like 4.7 tons; but as a result of improving the hygiene and temperature, and removing people with tuberculosis and so forth, the economic efficiency rose to 6.6 tons per man per shift.⁴⁹

This improvement occurred despite the introduction of the 35 hour week. Chapman also said he had been told by the Broken Hill companies that they would have no objection to the extension of the workers' compensation system to cover all sickness arising during employment - 'I have been told that definitively; it is the very best method by which the State can deal with the question.'⁵⁰

There were lessons for the occupational health bureaucrats in the Broken Hill saga too. The success of

⁴⁷Cumpston, 'Health and Disease', p. 547.

⁴⁸Kennedy, *Silver, Sin, and Sixpenny Ale*, p. 173.

⁴⁹*Health*, Qu. 4913.

⁵⁰*ibid.*

the Technical Commission demonstrated that workers could be persuaded to be medically examined if a sensitive approach was taken. It may be recalled that mass examination at Port Pirie was vehemently opposed in 1920-21. When asked by the Royal Commission on Health how he had managed to get all the men to be voluntarily examined, Chapman replied that persuasion was the only means. When he first arrived the men were very doubtful about examinations; however, he made a point of very carefully explaining the object of the examinations:

We showed then that it is entirely to their advantage. We pointed out that if their health is examined by a medical man, and they carry out the directions which he gives them to cut out those risks which are readily avoidable, the morbidity can be reduced considerably [that is] the number of days of absence from work on account of ill-health, fall to at least half of what it had been previously.⁵¹

In sum, Chapman stressed that ill-health was the greatest hardship that could befall them, and he seems to have been sincere when he told the Royal Commission: 'From my own experience at Broken Hill I think there is nothing so harmful to the general worker as the failure of his health; he is usually the support of his family'.⁵²

Although the Commonwealth role at Broken Hill was limited, there was, for a time, the serious possibility of greater involvement. In 1923 Cumpston was approached by W. E. Wainwright, Manager, Broken Hill North, regarding the setting up of a microbiological laboratory which could conduct research on dust diseases. Wainwright had apparently talked the proposal through with Lanza.⁵³ Cumpston's bid for funding for the laboratory in the 1923-24 Budget deliberations was knocked back. The Treasurer told him to try again next year. The proposal was then put on hold pending the report of the Royal Commission on Health.

In November 1926, a Broken Hill union delegation approached Earle Page, the Commonwealth Health Minister, about the establishment of the laboratory. Subsequently, in March 1927, the Prime Minister wrote to the New South Wales Government asking it what it proposed to do regarding a Broken Hill laboratory. Later that year the Lang Labor Government announced that it was going to provide full funding for a laboratory to meet the needs of the region, thus obviating the need for Commonwealth involvement.

Sewer Miners and Rockchoppers

After the regulatory and compensation arrangements for the Broken Hill miners had been put in place, the New South Wales Government at last turned its attention to the problems of the sewer miners and rockchoppers. In 1924 a decision was made to use X-ray techniques to determine the extent to which Sydney quarrymen, stonemasons, sewer miners and rockchoppers suffered from silicosis. The Board of Trade, which was responsible for the inquiry, approached the Commonwealth Government for assistance.

⁵¹*Ibid.*, Qu. 4896.

⁵²*Ibid.*, Qu. 4898.

⁵³Correspondence is on the file A1928 456/1.

The Minister for Health offered the services of the IHD and the use of an X-ray plant for three months. The offer was accepted and the inquiry was conducted from 18 August until 12 November 1924.⁵⁴

The Technical Committee consisted of Justice George Beeby (Chair), Duncan Robertson (representing Commonwealth health interests), and Drs Sydney Smith and W. A. Edwards, Chapman's assistants in the Broken Hill inquiry, who acted as consultants.⁵⁵ Technical staff included Frank Kerr (IHD), Dr E. Laycock (IHD, radiologist) and Charles Badham, the New South Wales Medical Officer of Industrial Hygiene. Badham had already done a considerable amount of relevant research prior to the establishment of the Technical Committee.⁵⁶ He had worked for four or five months in the sewers and railway tunnels being constructed in North Sydney. His chief observations were the lack of ventilation and the exposure of the workers to clouds of quartz dust, especially after firing. He took a large number of dust readings using the latest techniques. This research was not published before the Technical Committee began its work.

The Committee conducted clinical and radiological examinations of 716 workmen in the Sydney Metropolitan District; 123 exhibited symptoms of silicosis of varying degrees, 38 of these being complicated by tuberculosis.⁵⁷ Another 16 were found to be suffering from simple pulmonary tuberculosis. As Gandevia has noted, while it is clear injury was occurring it is difficult to gauge its extent, as the Committee did not indicate the total population in question or how the 716 were selected.⁵⁸ The Committee did say that on the basis of the information it had, it was 'convinced that a reasonably close approximation to the incidence of the disease can be made'.⁵⁹ This, Gandevia observes, is an 'unacceptable proposition' in the absence of evidence. Nevertheless, the problem was significant enough to prompt action.

In 1925 a judgment was handed down in the State Arbitration Court prescribing facilities for ventilation and maximum levels of dust.⁶⁰ Arrangements were made to examine medically and with X-ray every new employee of the Public Works Department engaged in sewer mining. In 1927 a special compensation scheme for Sydney workers suffering from silicosis was set up with a Medical Board. The field was re-checked and surveys also made among sandstone masons and quarriers in the neighbourhood. The same hazards were revealed and appropriate preventive measures (open sheds and wet methods) were

⁵⁴'Report of the Activities of the Commonwealth Department of Health, 1909 to 1930'; *Health*, Qu. 8665-70.

⁵⁵A1928 545/19.

⁵⁶*Health*, Qu. 8638.

⁵⁷Robertson, 'Industrial Hygiene in Australia', p. 524.

⁵⁸B. Gandevia, 'The Australian Contribution to the History of Pneumoconiosis', *MJA*, vol. 17, no. 4, 1973, p. 377.

⁵⁹*Ibid.*

⁶⁰*Health*, Qu. 8638.

recommended.⁶¹

Commonwealth assistance in the rockchopper inquiry was appreciated by New South Wales. Badham told the Royal Commission on Health that Commonwealth involvement had saved the State a lot of money and familiarized State health officers with some good Commonwealth officers.⁶²

Kalgoorlie

In 1922 the Western Australian Government approached Hughes for assistance in ridding the goldfields of dust disease. Hughes agreed to assist and referred it to the IHD.⁶³ Subsequently, the Western Australian authorities negotiated with Robertson and Lanza about use of the proposed Kalgoorlie laboratory and its officers. Scaddan, Minister for Mines, told State Parliament that:

He [Robertson] was able to tell me that they would be delighted to have such an opportunity, that it would help them if we could come to an arrangement to provide for the compulsory medical examination, and at the same time appoint their officers to carry on investigations and examinations.⁶⁴

The proposal was clearly attractive to the State Government as it involved minimal expenditure. The Commonwealth would carry out the bulk of the work and report the results to the relevant State agencies. Accordingly, the Miner's Phthisis Act was passed in 1923. The Act provided for the compulsory medical examination of mining employees. The bringing into operation of the Act was delayed until 1925 when the Commonwealth laboratory at Kalgoorlie was ready.

In the interim a Royal Commission into the decline of the Western Australian goldfields had been appointed. The Commissioner was Charles Kingsley Thomas, an expert from the Rand mines in South Africa. One of his terms of reference was: 'To advise as to the improvement of existing practices in respect of betterment of health and welfare conditions of mine workers'.⁶⁵ As in previous inquiries, severe health problems were revealed. In a particularly damning piece of evidence, the secretary of the Mine Workers Relief Fund stated that since the inception of the fund in 1915, 721 applications for relief had been granted, 92 per cent of which had been for lung diseases. Of these, 521 were dead, the average time elapsing between incapacity and death being 21 months.⁶⁶

In January 1925 the Workers' Compensation Act was amended to cover certain diseases to which miners were subject, including miner's phthisis, hookworm, nystagmus, and pneumoconiosis.⁶⁷ To determine

⁶¹Sayers and Lanza, 'History of Silicosis and Asbestosis', p. 15.

⁶²*Health*, Qu. 8669.

⁶³WAPD, vol. 66, 1922-3, p. 454; W.T. Nelson, 'Activities of the Commonwealth Health Laboratory, Kalgoorlie, W.A.', *Health*, September 1927, p. 130.

⁶⁴*Ibid.*

⁶⁵'Report of the Royal Commission on the Mining Industry', WAPP, 1924, vol. 1, Paper no. 3.

⁶⁶As noted by Nelson, *Investigation of the Pulmonary Condition of Mine Employees*, p. 6.

⁶⁷*Ibid.*; however, this portion of the Act was not proclaimed pending a medical inquiry; see *Health*, November, 1925, p. 186.

liability under the new provisions the State Government asked the Commonwealth to conduct a survey of all metal mine employees in the State.

The Miner's Phthisis Act was finally proclaimed in September 1925. Under the Act it was compulsory for every mine employee to submit himself from time to time to a medical officer appointed under the Act for an examination for symptoms of miner's phthisis or tuberculosis. Later a three person medical board, as in New South Wales, was set up. There was a fine of £50 for failure to attend.⁶⁸ The Act prohibited the employment of miners suffering from tuberculosis who were then entitled to compensation equal to the ruling rate of pay in the district for their class of work at the time of exclusion, unless other suitable employment could be found by the Department of Mines. No miner could continue working or commence working in a mine unless he possessed a certificate stating that he was not suffering from tuberculosis. Those found to be suffering symptoms of miner's phthisis were to be advised by the Minister of Mines that further mine employment could be detrimental to their future health. There were provisions for fines for employers who knowingly allowed excluded miners to work.

The laboratory was opened on 12 March 1925 by the Prime Minister, Bruce. In his speech he said that he regarded the opening of the laboratory as 'the most important function' he would perform while in Western Australia.⁶⁹ He believed that the laboratory should have been opened 20 years ago given the immense rise in sickness and death in the mining industry. He highlighted the preventive role of the laboratory:

it would do a great work for Australia. It might eliminate miner's phthisis and thus confer inestimable benefit upon the men engaged in the industry. It had not been established merely to take steps to assist men who had already been attacked, it could be described as a means for attaining the prevention of disease and saving men from the effects of their working conditions.

The laboratory was situated in a corner of the Kalgoorlie Hospital. Normally it was intended to have a staff of one medical officer, a radiographer, and a technical assistant. For the purposes of the inquiry, two medical assistants, an assistant radiographer, a registrar, messenger boy and later a statistician were temporarily added.

The Medical Officer in Charge was William Nelson, who had assisted Chapman in the Broken Hill Technical Commission.⁷⁰ His assistants in the investigation were Drs O. B. Goyer and B. O. Bladen. The survey was conducted in two parts, the first of employees on the Kalgoorlie field and the second of employees scattered throughout the State. All employees in each mine were examined. Men from four or

⁶⁸Details from Robertson, 'Examination of Mine Employees', p. 166 and Nelson, 'Activities of Commonwealth Health Laboratory', pp. 131-2.

⁶⁹He was accompanied by the Western Australian Senator, George Pearce, then Minister for Home and Territories; *West Australian*, 14 March 1925, clipping on A1928 460/1, Health Laboratory, Kalgoorlie, Preliminary Arrangements for Opening of.

⁷⁰Nelson graduated in medicine from Sydney University in 1918. Apparently quite early in his career he had a keen interest in occupational health and was determined to become an expert in the field. After a period as a house surgeon at Sydney Hospital he assisted Chapman in the Broken Hill Technical Commission. He was then in general practice in Sydney before going to England and obtaining his M.R.C.P. (London) in 1923. Upon returning he joined the Commonwealth Health Department and gained his Doctorate of Medicine (Sydney) in 1926. Details from his obituary *MJA*, 8 January 1955, pp. 55.

five mines were examined together at the rate of five men per day from each mine or 100 overall each week. Care was taken to conduct examinations with a minimum loss of time to employer and employee. Employers were bound under the Act to make good any loss of wages for those attending examinations.

After an X-ray, a thorough clinical examination including sputum, blood, and urine was conducted. Complete industrial and clinical histories were meticulously recorded on cards. The whole examination took about three-quarters of an hour. No results were furnished to the examinees and the possibility that mining managements might acquire the information was carefully prevented. The clinical card and X-ray film bore a number only, and only the Medical Officer in Charge could ascertain relevant names. As the examination of each mine was completed, certificates were issued to miners not affected, stating they were not suffering from tuberculosis.

The Kalgoorlie inquiry examined 2,980 persons. Of these 2,316 (78 per cent) were found to be healthy; 321 (11 per cent) to be suffering from silicosis in an early stage; 219 (7 per cent) from silicosis in an advanced stage; 114 (4 per cent) from silicosis complicated by tuberculosis; and 11 (0.4 per cent) from tuberculosis uncomplicated by silicosis.⁷¹ The average length of service of silicotic and tubercular cases was over twenty years for both underground and surface workers.

The second part of the investigation was quite novel in that it involved Nelson's staff taking a portable X-ray unit to the remote mining districts. The difficulties of operating sophisticated medical equipment in poorly serviced outback towns were many. Voltage varied, accommodation was poor and working conditions challenging. One medical officer reported that, 'at yet another centre the mine battery, operating with all its twenty heads just 50 yards from the bell of the stethoscope, was not conducive to easy auscultation'.⁷² Dark rooms were also difficult to set up, the radiographer often being reduced to sending his assistant 100 feet down an adjacent mine to change film into other cassettes. The plant itself was transported by motor car or rail. The incidence of lung complaints of the 1,088 employees examined by the portable X-ray plant was basically in the same proportions as for the Kalgoorlie examinations.

The examinations were concluded in July 1926. Altogether, 4,067 employees had been examined. Of these 655 (16.1 per cent) presented definite evidence of pulmonary silicosis, and 155 (3.8 per cent) of tuberculosis (12 of these having tuberculosis only). In terms of type of work, silicosis was much more prevalent in the 2,308 underground workers.⁷³

⁷¹Robertson, 'Examination of Mine Employees', p. 168.

⁷²As cited in *ibid.*, p. 169.

⁷³*Health*, May 1930, pp. 45-6; the results of the study are discussed at length in Nelson, *Investigation of the Pulmonary Conditions of Mine Employees*; see also B.H.H. Hooker (the investigation's statistician), 'Weights and Heights of the Mine Employees of the Western Australian Goldfields', *Health*, November 1927, pp. 172-182; and W. Phoenix (WA Mining Inspector), 'Mining Hygiene', *Health*, July 1926, pp. 114-121.

By January 1927 the Western Australian and Commonwealth Governments had come to an arrangement whereby the Medical Officer in Charge of the laboratory would act as the authority for medical examinations under the Miners' Phthisis Act for a period of three years.⁷⁴ Employees were to be examined every year and all applicants for employment had to have a prior examination. To strengthen the authority of the laboratory, in 1926 a clause was added to the Mines Regulation Act requiring that wherever practicable certificates of freedom from tuberculosis should be issued by the Commonwealth laboratory, and giving its certificates precedence over others.⁷⁵ In October 1927 further clauses were added to the Mines Regulation Act which required certification of freedom from a schedule of diseases including pneumoconiosis, miner's phthisis, hookworm, nystagmus, beat hand, beat knee, beat elbow, inflammation of the synovial lining of the wrist joint and tendon sheath, and dermatitis, and for miners to be physically fit for underground work, very similar to the '21 diseases' procedure at Broken Hill. The new clauses also required that all persons who had not been employed in Western Australian mines for two years, or who were not resident in Western Australia, to produce a certificate.

In December 1930 these conditions were repealed and slightly less stringent ones substituted, probably due to the onset of the Depression. Certification of freedom from tuberculosis was to be provided within 12 months of taking up employment. For persons who had not worked in the industry for two years, certificates of freedom from tuberculosis and the other listed diseases, could now be provided by any doctor, though laboratory certificates were preferable. Foreigners were also to be subjected to a language test. In January 1933, the regulations were relaxed further, permitting some individuals found to be unfit for underground employment to qualify for surface work. Unfit persons who were suffering from disabilities which may have been of a temporary nature were permitted to reapply for an examination after a set interval. In January 1931 fees for the examination for a certificate had been introduced; a nominal fee of 10s was charged to cover expenses, presumably as a Depression cost-cutting measure. A provisional certificate was available for the indigent.

Commonwealth action at Kalgoorlie no doubt saved the Western Australian Government much money; the necessary medical skills and equipment were simply not available locally. The investigation itself was the most comprehensive in Australia up till then. In the opinion of Gandevia, Nelson 'proceeded to conduct the most thorough survey for more than another quarter of a century and probably the most thorough survey in the world prior to the 1930s'; his 'clinical and radiological acumen enabled him to draw specific attention to the condition now known as progressive massive fibrosis, noting that it was not attributable to tuberculosis and noting that physical signs might be absent'.⁷⁶

⁷⁴Nelson, 'Activities of the Commonwealth Health Laboratory, Kalgoorlie', p. 137.

⁷⁵K.R. Moore, 'Medical Supervision of Mine Employees in W.A.', *Health*, December 1934, pp. 96-7.

⁷⁶'Australian Contribution to the History of Pneumoconioses', p. 376.

More importantly, medical supervision of the gold miners did reduce the incidence of lung disease. Bearing in mind that the numbers examined fluctuated from year to year, at the time of the initial survey in 1925-26 the percentage of normal examinations was 80.1 per cent; in 1933 this had risen to 86.5 per cent. Over the same period the number of miners with silicosis had dropped from 16.1 per cent to 13 per cent, the number with silicosis in conjunction with tuberculosis from 3.5 per cent to 0.4 per cent, and the number with tuberculosis only, from 0.3 per cent to 0.1 per cent.⁷⁷

Although effective action had finally been taken on the goldfields' dust disease problem, a number of Western Australian politicians and mining companies could nevertheless be condemned for their tardiness. Regarding the Broken Hill inquiry and the case of New South Wales' sandstone tunnellers, Charles Badham drily observed:

It is interesting to note that the lessons taught by the work of the South African Committee [the 1912-14 Miner's Phthisis Commission], about the effective means of allaying phthisis-producing dust, by means of efficient ventilation and water blasts, remained unappreciated in Australia until the Broken Hill Technical Commission took advantage of them five years later; and only this year [1925] - nine or ten years after the lessons were appreciated in South Africa - have these lessons been applied, at my instigation, in certain sandstone tunnels under construction in Sydney.⁷⁸

The same criticism surely applies to the years of inaction in Western Australia.

Just how many Australian miners died of dust diseases and how many families were rendered indigent by the incapacity of their breadwinners will never be known. Blainey, for one, estimates 10,000 mining lung disease casualties for the whole of Australia before effective dust control measures were introduced.⁷⁹ Like that at Bendigo, the Kalgoorlie laboratory continued its valuable work up to and after the Second World War.

Other Mining Work

The IHD was involved in two other mining inquiries. As has already been mentioned, in 1928 the Division was asked by the Commonwealth Arbitration Court to investigate the health and working conditions of employees covered by the AWU award in the metal mines of Victoria and Tasmania. The Bendigo component of this inquiry (conducted by Keith Moore) has already been discussed (see above). In Tasmania, 650 workers in metal mines and treatment plants representing 65 per cent of workers under the AWU award were examined using a portable X-ray plant. Although the incidence of silicosis (6.2 per cent) was much lower than was the case on the high risk Bendigo field (16.4 per cent), this was the first time the existence of dust disease had been scientifically demonstrated in Tasmanian mines (it was also the first time X-ray examinations had been made underground in Australia).⁸⁰

⁷⁷See table in Moore, 'Medical Supervision of Mine Employees', p. 99.

⁷⁸*Health*, Qu. 8638.

⁷⁹*Rush That Never Ended*, p. 301.

⁸⁰A1928 545/93; Moore, *Investigation into the Health and Working Conditions of Employees in the Mining Industry of Victoria and Tasmania*. For a short summary of the latter see *Health*, January 1929, pp. 2-5.

The inquiry also found that there was a definite risk of lead poisoning in the Tasmanian industry. At the Electrolytic Zinc works in Risdon, 43 per cent of the employees showed signs of lead absorption and 20 per cent of the mine workers in the same district showed similar signs. Moore stressed that any relaxation of hygienic conditions would lead to poisoning. Moore concluded that while conditions had improved in recent years, there was still room for greater effort. A number of recommendations were made covering such things as ventilation, firing, drilling, draining and provision of amenities.⁸¹

The last mining inquiry involving the Division was that into pulmonary disease in the New South Wales coal industry. In 1929, the New South Wales Royal Commission on the Coal Industry had asked the Division to examine miners of the South Coast field for signs of pulmonary fibrosis.⁸² The inquiry was meant to clear up doubts about the health effects of stone-dusting (used as a means of preventing explosions), a matter previously considered by the Commission. Moore conducted the inquiry in 1930 with the assistance of the New South Wales Industrial Hygiene Section. 471 volunteers called for by the local union secretary were examined by X-ray for the presence of fibrosis. The investigators found evidence of fibrosis in 25 per cent of those examined. This fibrosis appeared to be of slower onset and less obvious disability than the fibrosis found in miners exposed to high silica dust (e.g. Kalgoorlie). Stone-dusting was not considered a causal factor. Moore and Badham concluded that it was 'highly important' that this type of fibrosis, which was not well researched internationally, be 'placed on a sound pathological and chemical basis'.⁸³

The respective careers of Badham and Moore, both heads of government occupational health bodies, reflect the divergent paths of Commonwealth and State occupational health activity after the Depression. As Director of the New South Wales Industrial Hygiene Section throughout the 1930s Badham had plenty of scope to pursue occupational health research. He went on to make an international reputation for his work on lung diseases of coal and metal miners. In particular he and H. B. Taylor provided further evidence that coal dust led to genuine pneumoconiosis and detailed the differences between this and pneumoconiosis caused by silica. This work was cited favourably by the British Medical Research Council's lengthy inquiry (1936-42) into South Wales' coal miners' lung diseases.⁸⁴ Moore, after the abolition of the IHD in April 1932, went off to head the Kalgoorlie laboratory. His opportunities for research were thus considerably narrowed, and despite the fact that when he died he 'probably had a wider knowledge of industrial pulmonary disease than anyone else',⁸⁵ his contribution remains obscure compared to Badham's.

⁸¹ Moore, *Investigation into the Health of Employees of the Mining Industry in Victoria and Tasmania*, p. 29.

⁸² Details from K.R. Moore and C. Badham, 'Fibrosis of the Lungs in South Coast Miners, New South Wales', *Health*, May 1931, pp. 33-43.

⁸³ *Ibid.*, p. 39.

⁸⁴ Gandevia, 'Australian Contribution to the History of Pneumoconioses', p. 377; 'Obituary', *MJA*, 2 October 1943, pp. 287-8.

⁸⁵ 'Obituary', *MJA*, 26 April 1941, p. 536.

In view of the achievements in the field of mining health in the 1920s, and in particular, the Commonwealth contribution, it is perhaps appropriate to end this chapter on a more positive note. In August 1930 Moore and Badham attended the ILO's first international conference on silicosis which was held in Johannesburg, South Africa. The Rand mines had led the world in research on miners' dust diseases up to the 1920s, so Johannesburg was an apposite choice. Moore attended as the official Australian representative while Badham was personally invited by the ILO, testimony perhaps to his already considerable reputation. W. E. George, the Medical Officer in Charge of the Bureau of Medical Inspection at Broken Hill, was also sent by the New South Wales Government. The purpose of the conference was to review the state of knowledge of silicosis and the various compensation arrangements used.⁸⁶ Moore gave a paper on silicosis in Australia and Badham was asked to act as official recorder of the proceedings (evidently an honour).⁸⁷ Moore and Badham also took the opportunity to present to their fellow experts 77 abnormal X-rays of the New South Wales' miners' lungs they had been examining together. The assembled experts agreed that the X-rays showed the presence of a 'diffuse generalized fibrosis similar to that seen in men affected by asbestos', thus bearing out Moore's and Badham's observations.⁸⁸

In his conference report, Moore observed that arrangements in Australia for the compensation and medical regulation of miners were the equal of anywhere and second in scale only to South Africa.⁸⁹ This was certainly a satisfactory outcome for the Commonwealth Government and one to which it had made a significant contribution. Nevertheless, only New South Wales was represented at the second ILO conference on miners' lung diseases held at Geneva in 1938.⁹⁰

⁸⁶A1928 545/93.

⁸⁷Badham's obituary, *MJA*, 2 October 1943, p. 287.

⁸⁸Moore and Badham, 'Fibrosis of the Lungs in South Coast Coal Miners', p. 37.

⁸⁹Typescript report, p. 42, A1928 195/71, Conferences, Silicosis, Johannesburg, 1930.

⁹⁰*MJA*, 2 October 1943, p. 287.

Chapter 7

The Demise of the Industrial Hygiene Division

The IHD was abolished in 1932 during the course of a 're-organization' of the Health Department. This re-organization was a Depression economy measure on the part of the newly elected United Australia Party (UAP) Government.¹ The abolition of the Division did not signal the complete end of a Commonwealth role in occupational health, but it did mark the curtailment of any continuing public role. No longer was the Commonwealth to co-ordinate and inspire national effort in this field. The Division's demise came to pass notwithstanding generally positive appraisals of the Commonwealth's occupational health activities over the previous decade.

The Commonwealth's role in occupational health was first examined by the 1925 Royal Commission on Health. A joint inquiry into the respective roles of the Commonwealth and States in the field of health had been under consideration since at least 1922,² but State intransigence had delayed action for a number of years.³ Finally, in January 1925, the new Minister for Health, Neville Howse, a doctor and ardent champion of preventive health measures, decided that the Commonwealth would go ahead alone. The Commission was 'to inquire into and report upon public health as a matter for legislation and administration by the Commonwealth, in conjunction with the States where necessary'. One of the specific subjects the Commission was asked to examine in these terms was 'industrial hygiene' or occupational health.

The Commission took much evidence on occupational health practices from Commonwealth and State officials. Union representatives, industrial welfare workers and employers also gave evidence. The Commission's report, delivered in January 1926, dealt favourably with Commonwealth health activities overall. Occupational health was no exception.

In its summing up of the evidence submitted, the Commission concluded that while until recently little

¹Some other Departments were re-organized at this time too; G. Sawyer, *Australian Federal Politics and Law, 1929-1949*, Melbourne, 1963, p. 43.

²*Argus*, 3 October 1922.

³Cumpston, *Health of the People*, pp. 52-3.

had been done in relation to occupational health except in the form of factory legislation, 'greater attention' was now being paid to the subject.⁴ The quickening tempo of legislative change at the State level, the appointment of medical officers in some States, and the spread of industrial medical services were mentioned in this respect. However, apart from a few inquiries such as those at Broken Hill, Kalgoorlie and into the conditions of the Sydney rockchoppers, there was still little in the way of research into the health of Australian workers. There was, in fact, insufficient evidence to establish an Australian 'standard of health', by which the Commission meant that there was a lack of comparable data on occupational morbidity and mortality.

Nevertheless, the Commission was impressed with the work of the IHD. The Division was complimented on its publications and role in organizing the Industrial Hygiene conferences. The Commission found that the Division was in fact acting as a source of expertise for industry and State Governments:

Expert advice is available to employers and employees, and the work of the Division is likely to be of great value in guiding the development of industry along hygienic lines, and improving generally the conditions of workers. Assistance has been given to State Governments in connection with several inquiries and investigations.

The Commission concluded that the Division had been 'organized on the right lines' in carrying out the following activities: the publication of Service Reports and information; the collection of data on mortality and morbidity; the encouragement of industrial welfare services, including the provision by employers of medical, dental and nursing services; the encouragement of routine medical examinations of employees; promoting uniform medical records; and assisting State occupational health authorities and other bodies in investigations and inquiries into occupational health problems. The Commission formally recommended that the Divisions's work 'be extended in all these directions'.

The Commission also made three other recommendations: that provision be made at universities for medical training in occupational health; that the Commonwealth Health Department conduct a physical survey of workers in various industries so as to establish Australian standards of health; and that periodical Commonwealth-State occupational health conferences continue so as to ensure uniformity of records and further action on occupational health.

The Commonwealth role in occupational health was also touched on in the Commission's consideration of some other terms of reference. The Commission had been asked to examine 'the co-ordination of Medical Services of Commonwealth Departments in regard to all matters affecting public health'.⁵ Again the Commission argued for an extended role for the IHD:

The Commonwealth is becoming a very large employer of labour, and the services of the experts in the Division of Industrial Hygiene of the Health Department should be officially utilized in supervision of the health and working conditions of all Commonwealth employees. In this way a standard would be set for other employers. Further, in the new railways that are being planned, there will be need of expert sanitary

⁴For the recommendations on occupational health see 'Report of the Royal Commission on Health', *CPP*, vol. 1926, pp. 42-5.

⁵*Ibid.*, p. 3.

provision.⁶

The Commission recommended that all Commonwealth public sector medical needs be dealt with by medical officers of the Health Department. It is likely the Commission's imprimatur was a factor behind the further development of the CMO system during the second half of the 1920s.

The Commission also touched on occupational health in reporting on the fourth term of reference, the prevention of disease. After dealing with State preventive health activities, the Commission proposed that the Commonwealth could assist the States by both 'inspiring and educating' and through more direct means. In addition to subsidies to the States for approved activities, the Commonwealth could, in its own territories, set up model legislation including provisions relating to occupational health. The Commonwealth could also undertake the periodic medical examination of all members of the public service and the population of the Australian Capital Territory and make 'a systematic study of their illnesses'.⁷

The Commission felt that the investigations into lead poisoning at Port Pirie and silicosis in New South Wales and Western Australia were examples of Commonwealth health activity which could be 'widely extended' without interfering with State rights in regard to health. The Commonwealth laboratories, in particular, were praised both for their general public health services and as bases for special investigations such as those on occupational health. The Commission noted that while the States had difficulty in securing appropriate staff for laboratories, the Commonwealth had no such problem, being able as it was to draw upon the Commonwealth Serum Laboratory. In addition the Commission cited the Commonwealth-State occupational health conferences as an example of 'a method of education and stimulation' which could be applied to other health issues to promote preventive health practices.

Overall, the Commission can be seen to have strongly supported the Commonwealth role in occupational health. The Commonwealth was performing many useful functions, particularly in providing funds and expertise to assist States and employers and in supervising the health of Commonwealth employees.

The recommendations of the Royal Commission on Health were endorsed by a Conference of Health Ministers in 1926 and by the first session of the newly established Federal Health Council in 1927.⁸ Thus with the formal imprimatur of both the Commonwealth and the States, the IHD continued its activities throughout the second half of the 1920s on much the same scale as before. Indeed, its work was even broadened in a number of directions. The systems of CMOs was extended to a number of other cities, the health of munitions workers at the Maribymong explosives factory was monitored, investigations were

⁶*Ibid.*, p. 13.

⁷*Ibid.*, p. 25.

⁸The setting up of this Council had been recommended by the Royal Commission. It was to be an advisory body to promote co-operation of the Commonwealth and States and uniformity of legislation in the field of health. The Council was chaired by the Commonwealth and all the States were represented. 'Report of the Commonwealth Department of Health, 1909-1930'.

conducted on behalf of the Commonwealth Arbitration Court, unions and employers, the huge Western Australian goldfields surveys were conducted, two more Commonwealth-State occupational health conferences held, and a number of reports made to the Federal Health Council on particular issues.⁹

The range of activities being undertaken by the Division in 1930 appears to have been as extensive as in previous years. In March the fourth Industrial Hygiene conference was held, which, it may be recalled, included a joint session with the Federal Health Council. Moore was working with Charles Badham for the New South Wales Royal Commission on the Coal Industry. He had also commenced the inquiry into the printing industry in Melbourne which, later in the year, was to be extended to Sydney. In August he attended the first International Silicosis Conference in Johannesburg and in October gave the first lectures on occupational health to the School of Public Health and Tropical Medicine (SPHTM). A CMO had been appointed in Brisbane and a number of unions had approached the CMOs in Sydney and Melbourne regarding specific occupational health problems. The Division, of course, was also directly responsible for the ongoing work of the laboratory at Kalgoorlie in relation to miners.

However, 1930 was also the year in which the effects of the Depression could no longer be ignored. A massive decline in export income combined with a rapid increase in foreign indebtedness and the virtual drying up of loan funds brought severe pressure to bear on first State and then Commonwealth expenditure. As funds became scarce the States had to wind back their public sector outlays. Very soon they were calling on the Commonwealth to do the same. The Scullin Labor Government, which had been elected on a platform which included a commitment to maintaining Public Service conditions, resisted this pressure. Henceforth Commonwealth expenditure was relentlessly scrutinized by the State Governments and the press waged a fierce campaign against Commonwealth extravagance and duplication of State activities.¹⁰

The growth in Commonwealth health expenditure received much negative comment. The expansion of the Health Department was cited by the press as a typical example of a Commonwealth activity which merely duplicated State activity. For example, the *Argus* in June 1930 attacked the 'enormous' growth of the Health Department from the small Quarantine Service of 1913.¹¹ Commonwealth expenditure on occupational health was sometimes singled out. One article cited an item in the current estimates, 'investigation of industrial disease and lead poisoning', as a typical example of a State function which was being duplicated by the Commonwealth.¹² In a similar vein the Melbourne *Herald* argued that the Commonwealth Health Department:

⁹For example, on the use of X-rays and radium; pulmonary disease in mining in Western Australia; and accident prevention and safety first measures - 'Report of the Commonwealth Department of Health, 1909-1930'.

¹⁰G. Caiden, *Career Service: An Introduction to the History of Personnel Administration in the Commonwealth Public Service 1901-1961*, Melbourne, 1964, pp. 218-23; 'Report of the Commonwealth Department of Health, 1931-32', p. 4.

¹¹*Argus*, 6 June 1913.

¹²Press clipping, source unknown, 28 August 1930, CP567/1, Box 2, Health, Papers used in Preparing the Series "Service Publications", c. 1875-1935. [Despite its title, this item includes a valuable volume of papers on the Depression reviews and function cuts relating to the Health Department.]

duplicated State services - even their publications - and went as far as appropriations for industrial hygiene, although the Commonwealth has been repeatedly denied powers over Australian industry.¹³

Cumpston in his Annual Report for 1930-31 said that the year had been one of 'exceptional stress' necessitating 'the most critical review of the position of the Department' in relation to the 'limits of responsibility of the Commonwealth and States in the field of health administration' and the 'social value of each item in the departmental activities in relation to its costs'.¹⁴ In August 1930 the Premiers agreed that Commonwealth and State services should be examined with a view to eliminating any duplication. Accordingly, early in 1931, Cumpston prepared a long memorandum on the relationship of Commonwealth health activities to those of the States which was submitted to a special Public Service investigator.¹⁵ In this memorandum Cumpston argued that health administration had been developed so that the Commonwealth, State and local government bodies each played that part for which they were 'most fitted, and so to avoid any duplication of activities'. Furthermore, the Federal Health Council reviewed 'all matters of policy and administration with much profit to the whole scheme of administration'.

Regarding occupational health, he emphasized the approval for this activity given by the Royal Commission on Health and the Federal Health Council. He said that the Royal Commission's first and fourth recommendations - extension of the IHD's existing work and the continuation of the Commonwealth-State conferences - had been implemented. The second and third recommendations - a survey to establish an Australian standard of health and the teaching of occupational health in medical schools - had not been acted upon because it had been decided that these would not be of much benefit. He said that the principal functions of the IHD were 'supervising the health of Commonwealth employees [and] ensuring accurate certification in respect of entrants to the Service and invalid pensions'. This work was done more efficiently by Departmental officers than private practitioners and '[i]t was not being done by the States'. In addition there was the Division's work for the Commonwealth Arbitration Court which again was not a State function. Finally, after noting that New South Wales and Victoria had full- or part-time occupational health officers, he said that the Commonwealth had an officer 'devoting his time to Commonwealth industrial matters and to assisting those States which have not such officers'.

In his description Cumpston was clearly ignoring the Division's work in encouraging medical services and better record-keeping among employers, its attempts to co-ordinate State activities (e.g. uniformity of factory and shops administration) and its involvement in investigations in, for example, New South Wales, a State with its own occupational health unit. He was, of course, being careful to screen out any activities which could be regarded as falling within the jurisdiction of the States. The special investigator does appear

¹³*Herald*, 27 August 1930.

¹⁴*Ibid.*, p. 3.

¹⁵A final version is dated 24 February 1931, CP567/1, Box 2.

to have been convinced by Cumpston's arguments, for he concluded that that there were no significant overlaps in the field of health administration.¹⁶

Concurrently with this investigation, Commonwealth Departments were asked to review their expenditure continually in order to increase savings. Scullin himself met with Permanent Heads in August 1930 to stress the urgency of the financial situation. At this meeting he emphasized the importance of spending no more money than was essential and preferably below the targets set in that year's estimates.¹⁷ In this spirit Cumpston circulated a list of revised expenditure targets for all Divisions, including the IHD, which amounted to savings of nearly £30,000 on that year's estimates (of approximately £238,000). On top of this, in the second half of 1931, the Government, as a part of its commitments under the Premier's Plan, passed the Financial Emergency Acts, which provided for the compulsory reduction of all public expenditure including salaries by 20 per cent (though these salary reductions were gradually implemented).¹⁸

Such measures, however, were not enough to stave off more drastic action by the United Australian Party (UAP) Government which took office in January 1932. In February, the Assistant Treasurer, Stanley Bruce, met with the Minister for Health, Charles Marr, and Cumpston to discuss the re-organization of the Department. Expenditure was 'exhaustively reviewed'. The resulting function cuts were extensive enough to require Cumpston to change the classifications of staff so as to accommodate the disappearance of so many positions.¹⁹ The Department was to withdraw from the fields of occupational health, tropical health, tuberculosis, maternal and infant health and venereal disease.²⁰ There were to be no more health conferences, laboratory work was to be limited, expenditure on research was to cease for the time being, and *Health* was to be made a cheaper publication.²¹ In justifying the cut-backs Bruce told Cumpston that 'there are certain administrative functions, admittedly valuable, which we cannot just now afford and which must be suspended - there are others which have not justified themselves which we must now discard'.²²

Although Cumpston was relieved that 'essential services' such as quarantine had not suffered, he was, nevertheless, disappointed about the cut-backs. He noted in his review of the events of that year that 'it is probably correct to say that the community has now been so far educated that interference with essential services would not be tolerated; but the value of progressive inquiry, the deliberate contemplation of

¹⁶A1928 443/17; Health Department, Reorganisation, Section 1, 1932-33; CPD, 27 October 1932, p. 1680.

¹⁷Cumpston, Memorandum, 21 August 1930, CP567/1, Box 2.

¹⁸Sawer, *Australian Federal Politics*, p. 11.

¹⁹Memorandum, Cumpston to Division Heads, 15 March 1932, A1928 443/17.

²⁰'Report of the Commonwealth Department of Health, 1931-32', p. 5.

²¹Cumpston to Minister, 17 February 1932, confirming the outcome of the meeting with Bruce, A1928 443/17.

²²Bruce as cited by Cumpston, 'Report of Commonwealth Department of Health, 1931-32', p. 6.

national problems, and all phases of public health without a direct appeal or an immediately obvious application has not yet become part of the national consciousness'.²³ The work of the IHD evidently fell into this category.

In the unpublished Departmental Annual Report for 1931-32, Cumpston examined the question as to whether or not the abolition of various functions, leaving aside political considerations, had been justified to any degree. He dealt with each Division individually and it is worth quoting his comments on the IHD in full:

The Division of Industrial Hygiene was, in its first years, very active ... The first Divisional Director, after his tour as a holder of the Travelling Fellowship granted by the Rockefeller Foundation, was able to visualize Australian problems in practical form and to form valuable associations with the Federal Arbitration Court. After the transfer to Canberra and the death of this first Director, the Division lapsed into inactivity. External stimulus was lacking and internal inspiration did not seem to come at command. If the abrupt action necessitated by the decision of the Government had not been taken, it would have been necessary to consider definite modifications in this Division.²⁴

There is an element of truth in this analysis but the judgement is unduly harsh.²⁵ It does appear that the experience, drive and breadth of vision of Robertson were critical in ensuring a meaningful role for the IHD during the 1920s. He had many contacts overseas, a good relationship with some large progressive employers, and seems to have been behind the Division's major initiatives. His replacement, Moore, was a person with more limited experience. His training was much more technical, having entered the field as he did through laboratory research. Moore was, in fact, a specialist within the occupational health field, whereas Robertson embraced the whole field, which was more appropriate for an organization charged with inspiring and co-ordinating the national occupational health effort. It is certainly hard to imagine Moore producing a publication like *The Concept of Industrial Hygiene*. On the other hand, by 1929 the Division had largely accomplished a number of goals. The process of cleaning up the mining industry in a number of States had been facilitated; a system of supervision of the health of Commonwealth employees had been instituted; material assistance had been given to the Commonwealth Arbitration Court, employers and unions; and some States had been inspired to commence their own initiatives by way of example and through joint conferences. So perhaps in some ways there was less need for new vision than had been the case at the establishment phase. Administration of ongoing responsibilities was now the predominant mode. Certainly, Moore seems to have been working reasonably well with Badham in New South Wales and for the Commonwealth Arbitration Court on the printing inquiry.

The move to Canberra in 1928 may indeed also have had a dampening effect on the Division's activities. Melbourne, where the Division had been previously located, was home to the Arbitration Court, major

²³*Ibid.*, p. 3.

²⁴*Ibid.*, p. 10.

²⁵One wonders how Keith Moore, as Division Head, felt about Cumpston's comments. For a Departmental Head to make such comments in an official report would appear to indicate either a singular lack of judgement or a peculiarly insensitive approach to staff morale in a time of crisis.

union and company headquarters, and most other Commonwealth departments. Canberra would certainly have posed travel and liaison problems and the Division would have been far removed from the industrial environment which was its focus. All in all the move could not have facilitated the Division's work (Canberra being devoid of industrial infrastructure at this time).

Nonetheless, while it is possible to agree with Cumpston that by 1930 the Division may have lacked some external stimulus and internal inspiration, it is hard to agree that the Division had 'lapsed into inactivity'. As Division's report for 1930-31 testifies, it was involved in a wide range of activities before financial stringency began to take effect. Of course, it is possible Cumpston had in mind lack of innovation rather than inadequacy of ongoing administration.

Cumpston also used other rationales for the Government's decision to wind up the IHD. In responding to Parliamentary criticism of the Department's work, he gave the following explanation for the curtailment of some functions. He said that setting aside economic necessity:

as a result of eleven years experience since these activities were instituted ... it has been found that in many directions the activities of various State Departments have been extended to cover much of this ground. In so far as the initiation of these activities was intended to stimulate public opinion to the point of establishment of similar activities of local application it can be said that they have achieved their object.²⁶

He added that if circumstances warranted further action in such a field, the Commonwealth Government would not hesitate to act promptly.

There was a core of truth in this rationalisation. New South Wales had set up its own occupational health body, Victoria had appointed occupational health specialists, and most States were taking a more active approach to occupational health.²⁷ On the other hand, Cumpston's claim to the review of Commonwealth overlapping and duplication will be recalled: one of the IHD's distinctive activities was to help those States without occupational health officers. All in all it appears that Cumpston's explanations were merely public rationalisations for an essentially political decision.

The re-organization of the Health Department was formally effected in April 1932. As part of the re-organization the Divisional structure was dispensed with and a system of medical officers, modelled on the British system, introduced. Hence the fate of functions rather than Divisions as such is a more accurate guide to actual changes in administration. For example, although both the Marine Hygiene and Laboratories Divisions were abolished, the functions of both were continued along much the same lines - the only major changes being a reduction in staff and different reporting procedures. The abolition of the Divisional structure allowed Cumpston to speak of the function cuts as a 'true reformation and not a destruction' of the Department. The 'opportunity' had been provided for 'reconstituting the Department in

²⁶Draft response to Parliamentary Question, October 1932, A1928 443/17.

²⁷Victoria, however, as has already been mentioned, dispensed with its full time industrial medical officer in 1932 (see Chapter Five).

the light of experience, but the Department was not destroyed'.²⁸

From the meeting with Bruce in February until April, the agreed changes were negotiated with the Public Service Board and the Treasury. Although the IHD was to be abolished, the functions of the CMOs in various cities were to be retained. The CMOs would now report to their State's Chief Quarantine Officer instead of to the Director, IHD, as previously. As to the fate of the other officers, the meeting in February had agreed that after the Director's position had been abolished, Moore would be moved into a vacant medical officer position at the School of Public Health and Tropical Medicine (SPTHM) in Sydney. This position would then become responsible for the examination of applicants for invalid pensions. Similarly, the other Central Office position, Medical Officer of Industrial Hygiene, which for some reason (perhaps economy) had been vacant since Moore was promoted to Robertson's position in 1929, would become a new position in Melbourne, again responsible for the medical examination of applicants for invalid pensions. Frank Kerr, whose Central Office Medical Officer position had been abolished, was to be held against this position. This scheme was part of the Treasury's campaign during the early years of the Depression to reduce expenditure on invalid pensions. Treasury argued that the CMOs were cheaper and more efficient than the private practitioners who had done this work on a contractual basis up till then. Moore in Sydney was also to give advice on 'all aspects of industrial hygiene' as they arose.²⁹

In the event, Cabinet did not agree to this proposal, so both positions were abolished.³⁰ As the shedding of staff was done on the basis of seniority, the failure of the pensions scheme necessitated a further shuffle to accommodate Moore and Kerr, both long serving officers. Moore was transferred to head the Kalgoorlie laboratory - a position for which he was considered particularly suited in view of his 'special experience in relation to silicosis', derived from his work at Bendigo and among New South Wales sandstone workers, and from his inquiries in Victoria and Tasmania.³¹ Frank Kerr was transferred to his old position of CMO, Melbourne, replacing Dr Downes who was transferred to the CMO position in Brisbane. Downes supplanted Dr McCann who was forced to retire. In the course of these transfers, these officers also suffered the compulsory salary reduction which had been legislated for under the Financial Emergency Acts of the previous year. For example, Kerr's salary was reduced to £768 from £948. By July 1932 these staff changes and movements had been completed.

As is evident, the abolition of the IHD did not mean the end of Commonwealth occupational health activities. A number of functions remained with the Health Department and former IHD staff were often

²⁸*Ibid.*, p. 6.

²⁹The shuffling of staff as the re-organization was implemented can be found on A1928 443/17.

³⁰Public Service Board to Cumpston, 10 May 1932, AA 1928 443/17.

³¹Cumpston to Chief Quarantine Officer, Perth, 11 May 1932, A1928 443/17. Dr Lee, who he replaced, was transferred to the Lismore laboratory.

utilized in connection with these. The CMO system was retained. In Melbourne, in addition to his CMO duties, Kerr was expected to give advice on other occupational health matters as required as well as to be responsible for monitoring the health of employees working with TNT at the Small Arms Factory, Maribyrnong. Moore, as well as being responsible for the health of the Kalgoorlie miners, acted as a medical referee for pensions and State compensation cases. The laboratories at Bendigo and Port Pirie also retained their respective roles in monitoring mining health and the incidence of lead poisoning, as well as acting as medical referees in these matters for the State Governments. The Department also seems to have continued to collect the accident statistics of the railways of Victoria, South Australia and New South Wales until at least the late 1930s, though little appears to have been done with them. Although outside the scope of this study, it is also worth noting that the system of occupational health regulation in the maritime industry was retained virtually unchanged (see *Appendix A*).

What had disappeared was the public profile of the Commonwealth in occupational health. No longer was the Commonwealth to provide a consulting service and special expertise for the benefit of industry, unions and the States. No longer was it to be responsible for promoting and co-ordinating the national occupational health effort. The Commonwealth was not going to inspire or set an example. The proselytizing spirit of the post-war period was well and truly dissipated.

The withdrawal of the Commonwealth from a public role in the occupational health field did not go unnoticed. During the House of Representatives estimates debates for the Health Department in October 1932, there was criticism of the dropping of the IHD. Edward Riley, a New South Wales Labor MP, asked the Minister for Health to 'indicate the policy of the Government with respect to industrial hygiene', given the 'failure of the Government to appoint a Divisional Director of Industrial Hygiene'.³² The Health Minister, Marr, responded in the following terms:

Industrial hygiene can be more effectively carried out by the State authorities. The Commonwealth has given material assistance in the direction, particularly in Western Australia and Broken Hill, and in order to provide the most efficient service is quite prepared to co-operate with the States in any work they are carrying on in this direction. Certain vacancies have occurred in the central administration which will not be filled for the time being; but consideration will be given to the necessity for increasing the staff should that be considered desirable.³³

The offer of co-operation was not without basis in that the work of the laboratories in assisting the States was to continue. But the 'vacancies' referred to no longer existed, the positions having been abolished.

Riley was supported by Arthur Hutchin, a Tasmanian Labor MP. Hutchin praised the activities of the IHD:

I regret that the Government has found it necessary to discontinue the division of industrial hygiene. I have had some experience of it, particularly in connexion with the mining industry, and I know that it has done great public service. A layman may imagine that a doctor can do any medical job, but in industrial hygiene, as in other fields of medicine, specialization is necessary. The Federal Department of Health made possible specialization, which ordinarily would not be available through the medical services of the States. State

³²CPD, 27 October 1932, p. 1679.

³³*Ibid.*

medical officers cover a wide field of public health - so wide, indeed, that they are unable to specialize to the extent necessary to do an effective job in connexion with such problems as hookworm, pneumokoniosis, and silicosis. But through the operations of the Commonwealth division of industrial hygiene, and the serum laboratories, particularly that at Kalgoorlie dealing with silicosis, and the other at Port Pirie dealing with lead-poisoning, invaluable service has been rendered to the mining industry and its employees ... Gold-mining has been a notoriously unhealthy industry, particularly in Western Australia, on account of the character of the country in which the gold is found. Over a number of years, the loss of life and breakdown of health amongst miners have been considerable ... [Henry Gregory, a Western Australian UAP MP, interjected: 'Not nearly so bad as it was at Bendigo.'] In the mines of Western Australia, a high percentage of men became permanently incapacitated through silicosis, and a large number died at early ages. The division of industrial hygiene, specializing as only a Commonwealth department could, was engaged in very useful activities in relation to the diseases peculiar to mining. I join with the honourable member for Cook (Mr. E. Riley) in expressing the hope that the elimination of this division will not be permanent, and that an improvement in the finances will soon permit the Commonwealth again to join with the States in specialization and co-ordination; such work will mean much to the general health of the community, and probably save many lives, particularly in the gold-mining industry.³⁴

These protests, however, were to no avail. The estimates were passed unchanged, and the dismantling of the IHD approved.

³⁴CPD, 27 October 1932, p. 1682.

Epilogue

The IHD appears to have disappeared from public purview in a fairly quiet fashion.¹ This is only to be expected as the IHD's demise would have been a relatively obscure element of the general reduction in Commonwealth activity at this time. As such it is unlikely to have bulked large in many workers' minds compared to such things as the cutting of pensions and wages and the omnipresent threat of unemployment.

One comment from a labour quarter that has come to light was made about a year later. A union official, Frank Riley, adverted to the work of the IHD in a series of articles on occupational disease which appeared in *Labor Call* in September and October of 1933. In one article he outlined Robertson's pamphlet, *Health Hazards in Industry*, and commented:

After reading Robertson's pamphlet, it is better understood the reason that the Industrial Hygiene Division of the Commonwealth was so quietly and effectively destroyed. In this pamphlet the workers of Australia are told in plain language the hazards of industry and an indictment is made against the State and Federal Governments for neglecting the health of the worker.²

In another article in which he discussed the IHD's work in the mining industry, he described the dismantling of the IHD as 'a distinct loss to workers', the quiet curtailment of work which was 'beginning to be felt throughout Australia to the benefit of the workers'.³

The very belatedness of Riley's assessment could be seen to undermine the validity of his comments about the value of the work of the IHD. On the Health Department file dealing with the re-organization of the Department these are the only press clippings that appear which relate to the IHD. The bulk of this large file consists of vociferous representations for the overturn of the decision to wind-up the Tropical Hygiene Division. Looking at this file, it would be easy to conclude that the work of the IHD had nowhere near the impact or importance of that of the latter Division.

In assessing the success or otherwise of the IHD some reference must be made to the original objectives, explicit or otherwise, behind its establishment. Commonwealth intervention in 1921 was largely premised on the need to address the dust disease problem in the mining industry and to satisfy the growing demand for some sort of action on the health of working women. Beyond these two major objectives was the more general one of promoting greater awareness of better occupational health practices in Australian industry.

¹For example, there is no mention of its disappearance in the *MJA* or *Argus*.

²*Labor Call*, 5 October 1933, clipping, A1928 443/14, Health Department, Functions of.

³*Labor Call*, 28 September 1933, clipping, A1928 443/14.

There is little doubt that the IHD played a critical part in the cleaning-up of the mining industry. As was indicated in the last chapter, parliamentarians from both sides of the political spectrum acknowledged this fact. The key achievement was in the Western Australian gold mining industry, where occupational disease on a scale which dwarfs that of today's asbestos tragedy, was brought under control. On a smaller scale, the Division contributed to improved conditions among Sydney's rockchoppers, and among miners at Bendigo and in Tasmania. The States had been relatively ineffectual in dealing with the dust disease problem for decades. The availability of Commonwealth expertise and funds proved to be a valuable catalyst for State action. This is not to say the problem of silicosis was solved entirely to the satisfaction of the mining unions. The issue of Commonwealth involvement on a national basis was raised again during the 1930s and 1940s, however nothing came of these moves.

The IHD's achievements in other areas were mixed. On the positive side, the CMO system for Commonwealth employees was instituted, a system which remains to this day. Without a doubt the Division did inspire greater State activity in occupational health. The largest States, New South Wales and Victoria, both appointed specific officers to deal with occupational health. The IHD was also consulted about details for State health and safety legislation in some instances. In addition, the IHD's publications and conferences were important in raising the profile of occupational health, as frequent press coverage of the subject testifies. Nor should the IHD's work for the Commonwealth Arbitration Court be forgotten. The increasing willingness of the Court to accept medical evidence relating to union claims was a big step forward for employees. Finally, the investigations of the IHD generated the first body of research on occupational health in Australian conditions - a subject which is still considered to be relatively neglected in Australia.

On the negative side, the IHD's record on the health of women workers is altogether less memorable. As we have seen, the staff were not allocated in the first year, effectively scotching special attention to the subject. Very little was done in subsequent years. The Commonwealth did seek greater uniformity of protective provisions at the various conferences but apparently with little result. In 1927-28 there was the survey of women's conditions in a number of industries but again with no concrete outcome. Otherwise women probably only benefited through the increased take-up of better health and safety practices by industry - a benefit that this study has not attempted to assess. One suspects that women's health, resources willing, would have required far greater involvement by the Commonwealth in State factory regulation than could have been countenanced. Mining was discrete in its location and its problems, and perhaps more importantly, was the subject of pressure from powerful industrial interests (i.e. unions and employers). Women workers had no such powerful advocates.

The IHD also had relatively little success in generating a more uniform approach to health and safety regulation on the part of the States. Collection of statistics, factory inspector qualifications, and factory and

shop regulations continued to vary widely from State to State. It is clear that most States were simply not interested in subscribing to Commonwealth standards or those developed by other States. The absence of an organization with specific occupational health functions in most States was probably one reason why the issue of uniformity made little headway. More importantly, all States were wary of Commonwealth encroachment. Federation was not too far in the past and the States were still reluctant to see their powers diminished. When in 1921 they agreed to the Commonwealth establishing the Health Department, they said nothing about the handing over of powers.⁴ The States remained reluctant to consider the issue of changes in Commonwealth-State responsibility for health throughout the 1920s. In the final analysis, the States were happy to use Commonwealth funds and expertise but were unenthusiastic about direct Commonwealth involvement in policy setting.

It also seems the IHD had little specific effect on employers in industry, though admittedly this is hard to gauge. Few firms adopted their record-keeping methods or set up industrial medical services. Again the most important limitation was the lack of any direct Commonwealth role in regulating the majority of work-places, other than through the Commonwealth Arbitration Court. Except in the latter forum and the mining industry there was little in the way of direct monitoring of conditions that could be conducted. The Division generally had to rely on publicity and requests for its services. In retrospect, the emphasis on the introduction of medical services does seem a little misplaced. Only large firms were in a position to afford such services and to conceive of the long term returns. Most firms no doubt felt that their workers' compensation premiums and abundance of factory regulations were contribution enough to employee health. And the greater scientific value of such services was unlikely to be of much interest to employers. One gets the impression that Robertson and Lanza were overly obsessed with a type of service more suited to American conditions where compensation and factory legislation was comparatively poor and where state medical services played an insignificant role compared to the situation in Australia. Arguably, here was an area where greater Commonwealth-State co-operation could have reaped rewards in terms of generating employer awareness of new standards and measures.

One major barrier to the IHD's efforts to expand attention to health and safety was the reluctance of the medical profession to co-operate. The profession was unenthusiastic about the new field of work and not keen to work on the contract basis which was usually required. The IHD did attempt to address the supply side through its push for specific training at the SPHTM, but this venture was aborted with the onset of the Depression. Nevertheless, the pool of qualified personnel did expand significantly, particularly in respect of those practitioners dealing with mining health and/or working for government organisations.

My assessment as a whole, is considerably more positive than that presented by Gillespie in his analysis

⁴As noted by Milton Lewis in his introductory essay to Cumpston, *Health and Disease*, p. 9.

of the IHD's work. Gillespie argues that the Commonwealth had 'a restrictive approach to industrial hygiene' and that this was chiefly a consequence of Cumpston's excessive cautiousness about encroaching on the States' jurisdiction and the 'conception of industrial hygiene' subscribed to by industrial physicians.⁵ I would take issue with these points. First, I believe he has underestimated the scale of occupational health activity during the 1920s. In this regard he barely mentions the work in Western Australia and does not refer at all to that in the New South Wales rockchopping industry and in the Tasmanian mines. The mining work at Bendigo is played down and the Division's public service work receives scant attention. Similarly, State activity, except in New South Wales, is not given its due. This study has demonstrated that the 1920s were a period of unprecedented activity in the field of occupational health at both the Commonwealth and State levels.

This, of course, is not to say that more could not have been done. That it was not, I would argue, was not necessarily a consequence of undue cautiousness on the part of a Cumpston worried about States' sensitivities. The Commonwealth initiatives at Kalgoorlie and Bendigo, for example, were the results of negotiations over many years and represented a significant extension of Commonwealth involvement in a field which belonged to the States. Cumpston, himself an ex-State officer, had personal experience of disputes with States from his quarantine days. In my view he was merely realistic about the barriers to more sweeping Commonwealth action.

Gillespie's argument that the 'conception of industrial hygiene' that held sway during the 1920s effectively limited the scope of occupational health work is more significant. He asserts:

Trained as medical practitioners to focus on the individual patient, industrial physicians dealt with the problem before them, the worker suffering from occupational illness, and found it difficult, and lacked the expertise, to look beyond the worker to working conditions. Nor did perspectives drawn from public health particularly help, for while public health looked beyond the individual patient, it focused on the individual disease rather than general socio-economic conditions. Imported into industrial hygiene, the public health model brought an emphasis on specific industrial hazards rather than overall working conditions and work processes; it drew the industrial physician into the laboratory to find scientific precision, rather than into the workplace; and it encouraged the quarantine of the 'susceptible' worker rather than removal of the source of the problem.⁶

The enthusiasm of many industrial hygienists for the purely medical aspects of their work is evident, but I would argue that in general, the leading figures were well aware of the broader issues surrounding their work. Robertson, for example, always displayed a keen awareness of social context in his approach to occupational health. This awareness is evident in his publications and his investigation at Bendigo. Henry Chapman, who conducted the Broken Hill inquiry, is another example of a physician with an understanding of the broader context of his work. Keith Moore was well enough acquainted with working conditions in the Bendigo and Tasmanian gold mines to make detailed recommendations for preventive measures. The CMOs in Sydney and Melbourne also displayed an understanding of the domestic problems their charges

⁵Gillespie, 'Limits of Industrial Hygiene', p. 113.

⁶*Ibid.*, pp. 113-4.

faced and of the need to improve conditions overall rather than to merely focus on the purely remedial medical aspects of their work. Prevention was high on the IHD's agenda - there was little disjuncture between rhetoric and action. The initiative at Kalgoorlie, for example, involved negotiations between unions, employers, and the Western Australian and Commonwealth governments, for the introduction of a package of preventive and compensation measures, not just medical regulation.

Medical intervention was usually deemed to go hand in hand with other preventive measures. Indeed action on occupational health was assumed to be part of a broader process of political determination, requiring the involvement of a range of interests in defining the scope of the problem and the possible solutions. Without such assumptions, state officials charged with dealing with occupational health would have had little ability to address any occupational health problems.

All in all, I believe the IHD made an important contribution to the occupational health achievements of the 1920s. As such it represented a significant area of reform in a period generally considered to be one of indifferent social achievement.

All that remains is to place the Commonwealth effort during the 1920s in the perspective of subsequent State and Commonwealth approaches to occupational health. As noted in the last chapter, the Commonwealth remained involved in occupational health to some extent, while eschewing any continuing public role. The laboratories at Kalgoorlie, Port Pirie and Bendigo continued to operate as did the Munitions Medical Service. The CMO system was also maintained with these officers providing advice on extraneous health and safety issues as required.⁷

The 1930s appear to have been a period of declining interest in occupational health, though there was some improvement towards the end of the decade.⁸ State activity was of an indifferent nature with the exception of New South Wales where the Industrial Hygiene Section there continued to do valuable work. Victoria, as has been mentioned, dispensed with its only permanent occupational health officer, Kate Mackay, in 1932. It did not re-enter the field until 1937 when Dr D. O. Shiels was appointed as full-time Industrial Hygiene officer.⁹ In Queensland, the head of the Public Health Department, Dr Raphael Cilento, maintained an interest in occupational health throughout the 1930s. He was instrumental in getting the Health Act amended in 1939 to provide for the investigation and regulation of health in industry.¹⁰ In the

⁷A continuing advisory role is evident in the number of Health Department files on occupational health issues continued and created in the 1930s. Of interest also is Frank Kerr's claim for reclassification in 1935 in support of which a range of occupational health duties are cited other than those relating to his CMO work; see Kerr's application for reclassification, 12 March 1935, A1928 1020/60, Staff, Permanent, F.R. Kerr.

⁸See the comments to this effect by the editor of the *MJA*, 18 January 1941, p. 81. Gandevia has observed that little literature on the subject was published during this period; 'Occupation and health', p. 220.

⁹'Symposium on development and present state of occupational medicine in Australia', *MJA*, 1 March 1969, p. 478.

¹⁰Queensland developments are outlined by R. Fitzpatrick, *A History of Public Health in Queensland*, St. Lucia, 1987, pp. 167-74.

same year, a Section of Industrial Hygiene was established for the first time. The Section initially carried out investigations into a range of industries including meat, farming, canecutting, spray painting and railways. Due to a shortage of personnel, the Section's work declined during the war. However, in 1946 the Section was turned into a Division and, under the direction of Douglass Gordon, went on to build up a fine reputation for its work during the 1950s. No other States appear to have entered the field until the 1950s.

With the advent of the Second World War, the Commonwealth was drawn back into the field in a much more extensive fashion. Suddenly the Commonwealth was directly responsible for the supervision of vast numbers of munitions workers, as well as many employees in private firms doing defence-related work. A Munitions Medical Service was set up in 1941 and brought under the Health Department in 1942.¹¹ In 1943 it employed some 15 full-time and seven part-time medical officers and 132 nurses. As well, an Industrial Welfare Division was established in the Department of Labour and National Service (DLNS) to oversee working conditions in defence-related industries. The National Health and Medical Research Council (NHMRC) also set up a Committee on Industrial Hygiene in Munitions Establishments to co-ordinate work and consider research needs.

In the context of the war, the contribution of the Industrial Hygiene Division was missed. In 1941 Dr H. Murray, Principal Medical Officer with the Munitions Medical Service, made a formal proposal to Cumpston for the re-establishment of the IHD. Murray expressed great concern about the inadequacy of occupational health services and personnel in most States in the face of the immense pressure of the war on working conditions. It is worth quoting Murray at length here for the insight he provides into the state of occupational health work at this time:

The medical advice on industrial hygiene which can be obtained, either by employers or employees, differs in every State, both in availability and in quality. In New South Wales the Division of Industrial Hygiene has a staff of scientists who are able to carry out observations under actual working conditions in factories, mines, or other work places. The reports issued by this division are always based on much pains-taking scientific work. No such organisation exists in other States; and under conditions of war-time finance, it seems extremely unlikely that any other State will set up a similar organisation.

And yet, with the steady increase in the industrialisation of Australia, it seems probable that there will be an increasing need for expert advice on industrial hygiene. In every State new industries are springing up; and old industries are expanding in all directions; many small "back-yard" factories, formerly almost family concerns, are now employing numbers of hands previously undreamt of, for long hours.

Working conditions in many of the places are exceedingly undesirable; even the more enlightened employers have been so obsessed with the "necessity for production" that other factors, equally important have been lost to sight. The responsibility of the policing of working conditions in these factories lies on the shoulders of the factory inspectors in the various States. Some of these men, whom I have met, are both keen and efficient; others are not so keen, and others not so efficient; but almost all feel the need for an expert advisory body upon whom they can fall back for advice on matters of industrial hygiene.¹²

As the likelihood of State initiatives in the field during the war was 'very remote', he argued that:

The need for an authoritative consultative body, whose standards will be uniform throughout Australia, will be felt to an increasing extent in all States. It is suggested that this need can be met by the resuscitation of the

¹¹To some extent the following summary of war-time developments relies on Gillespie, 'The Limits of Industrial Hygiene', pp. 114-7.

¹²Murray to Cumpston, 27 October 1941, A1928 545/1, Industrial Hygiene, General, 1938-46.

Industrial Hygiene Division of the Commonwealth Health Department. It is also suggested that the excellent work which is being done among miners in Western Australia forms an admirable example of co-operation between Commonwealth and State which well might form a precedent for similar co-operation in other fields.

Cumpston does not appear to have been interested in Murray's proposal as it was not acted upon. Murray floated his proposal again towards the end of the war, but Cumpston responded that existing organisations were adequate to current needs.¹³ As Gillespie has observed, the proposal was evidently falling foul of inter-departmental rivalries.¹⁴

Murray, however, was not alone in his views. The Medical Survey Committee of the Parliamentary Committee on Social Security stated in its report that:

in the reconstruction and maintenance of secondary industry in Australia after this war, organized industrial hygiene should guide especially:

- a) Scientific enquiries into the health conditions and hazards of labour;
- b) Co-ordination of legislation and the enforcement of relevant industrial regulations;
- c) Collection and compilation of uniform statistics of occupational morbidity, etc.; and
- d) Education and propaganda.¹⁵

As well, in 1945 the Pinner Review of Civil Staffing of War-time Activities noted that the lack of resources during the war for occupational health had led to neglect of the health of workers in many parts of the country. Accordingly, there was a need for 'an autonomous research authority' to deal with the issue.

Finally, a number of unions were also keen for the Commonwealth to retain its role in occupational health. Numerous representations on the subject were made to the Prime Minister, J.B. Chifley, and the Ministers for Health and Labour and National Service. Typical is a letter from the workers at a Commonwealth shipyard in Sydney urging that the Commonwealth's occupational health unit (presumably the Munitions Medical Service) be retained and expanded after the war as 'this unit has been a great safeguard to the health of the Industrial workers in war-time'.¹⁶

Murray's proposal was pushed by the Minister for Labour and National Service after the war, but again the Health Department seems to have been obstructive (the new body would have been outside the Health portfolio). In 1948 Cabinet finally decided to take up a Health Department proposal for the establishment of a small Industrial Hygiene and Medicine Section at the SPHTM to conduct research and provide training.¹⁷

With this decision the Commonwealth withdrew yet again from a significant role in setting the national

¹³Gillespie, 'The limits of industrial hygiene', p. 116.

¹⁴*Ibid.*

¹⁵See Appendix A, 'Eighth Interim Report of the Parliamentary Joint Committee on Social Security', pp. 29-30, *CPP*, vol. 3, 1945-45.

¹⁶Rank and File of Commonwealth Shipyard No. 4, Rhodes, to J.B. Chifley, 20 September 1945, A1928, 545/1.

¹⁷Gillespie, 'The Limits of Industrial Hygiene', p. 116.

occupational health agenda. Other than the SPTHM Unit the only other national Commonwealth role was via the NHMRC Committee on Industrial Hygiene which was retained after the war (this Committee did valuable work in preparing the national occupational health standards, the production of which has since been absorbed by the National Occupational Health and Safety Commission). The Industrial Welfare Division also survived in various truncated incarnations until the 1980s, but almost wholly as a source of advice on international standards for working conditions rather than as an active regulator. To some extent the reduction in Commonwealth effort was offset by increased activity in the States, most of whom set up occupational health units in the 1950s and 1960s.

As was noted at the beginning of this study, over the past two decades occupational health has again emerged as a significant public issue. The Commonwealth decision to enter the field yet again, with the setting up of NOHSC, was largely a consequence of a strong push by the Australian Council of Trade Unions (ACTU). The 1983 Accord between the Australian Labor Party and the ACTU called for the setting up of a tri-partite national body to 'bring about improvements in the quality of the working environment'.¹⁸ The Accord commitment was endorsed by employers at the 1983 National Economic Summit.

NOHSC commenced operating in 1984. In December 1985 legislation was passed which made it a statutory authority operating under the working name of Worksafe Australia. The objectives of NOHSC were summarized in the Second Reading Speech of the legislation as:

- the development among the community of an awareness of issues relating to occupational health and safety matters and the facilitation of public debate;
- the provision of a forum where all parties can consult and debate matters pertinent to the subject; and
- the development of a national focus for activities.¹⁹

The Commission consists of representatives from the ACTU, the Confederation of Australian Industry, State and Territory Governments and the Commonwealth Government. The Commission is supported by the National Occupational Health and Safety Office, the operational arm, and the National Institute of Occupational Health and Safety, the technical and scientific arm. The Commission's initial priorities included the development of occupational health and safety training mechanisms, improving the information data base, inaugurating a research grants scheme, a special report on repetition strain injury, setting up the Institute, legislation for the Commonwealth jurisdiction, examination of statistical needs, the preparation of a mandatory chemicals notification and assessment scheme, and the development of national standards.

As is evident, the intended scope of the Commission's work far exceeds that of any Commonwealth

¹⁸Interim National Occupational Health and Safety Commission, *Report*, p. 118 (extract from Accord).

¹⁹NOHSC, *National Occupational Health and Safety Commission*, brochure, November, 1984.

initiatives in the past. Many of the problems are, unfortunately, much the same as those faced by the IHD in the 1920s. Lack of adequate statistics, lack of research into Australian occupational health, lack of skilled personnel, and lack of uniform standards - all were problems in the 1920s and are still so today. Although there is little doubt that NOHSC has made significant progress in a number of areas (e.g. training and research needs), advance in others has been less tangible. In particular, I refer to what is considered the Commission's key priority, the development of uniform standards in conjunction with the States, an area in which negligible advance has been made to date. This, of course, is precisely the area in which the IHD had least success.

Concern about the performance of NOHSC led to the Government commissioning a review in 1987-88. The review recommended a greatly enhanced role for the States in the work of the Commission, and a number of administrative changes. The review's recommendations have been endorsed by the Government.²⁰ It is to be hoped that their implementation will ensure the success of this latest Commonwealth attempt to incorporate occupational health and safety as a permanent part of the public agenda.

²⁰'Minister Accepts General Thrust of NOHSC Review', *Press Release*, Minister for Industrial Relations, Canberra, 3 March 1988 (attaches the list of recommendations).

Appendix A

Health and Safety in the Maritime Industry

Health problems in the maritime industry were also a concern for the Commonwealth Government after the First World War. As in the case of Broken Hill, a severe industrial dispute appears to have been the catalyst for Commonwealth action.

The Seamen's Strike lasted from May to August 1919. The immediate cause was dissatisfaction with an Award handed down by the Commonwealth Arbitration Court in December 1918. The seamen submitted a new log of claims in April 1919, the chief demands of which were: a more substantial increase in wages; a six hour day; the carrying into effect of the provisions of the 1912 Navigation Act with regard to accommodation, with additional provisions for cleaning, attendance, light, bedding, and the application of the menu of the Commonwealth Steamship Line to all ships; increased payments for overtime, working cargo and trimming coal; a life insurance guarantee to be paid to the next of kin of seamen dying at sea, and the payment of wages during sickness.¹ As in the case of the Broken Hill strike, health problems were a key issue as far as the seamen were concerned. The arrival of the influenza epidemic in January 1919 and the implementing of the associated quarantine measures heightened these problems.²

The history of regulation of working conditions in the maritime industry is one of many promises but little action. It was also a subject of which the Prime Minister, Hughes, had expert knowledge. Section 98 of the Constitution gave the Australian Parliament the power to make laws with respect to navigation and shipping. In 1902 a bill was drafted which would have systematized the various State laws and incorporated the relevant provisions of the British Merchant Shipping Act of 1894. However, as Fitzhardinge notes, there was 'a wide difference between the conservatives who wished to do no more than to incorporate the relevant provisions of Imperial law, and those who saw the power as an opportunity to place Australia in the van of the movement for the reform of conditions of employment, in the shipping industry'.³ The Bill that emerged was fairly progressive, being designed 'to secure the well-being of

¹*Roundtable*, December 1919 - September 1920, p. 166; Scott, *Australia During the War*, pp. 671-4; Richard Morris, 'Mr Justice Higgins Scuppered: the 1919 Seamen's Strike', *Labour History*, no. 37, November 1979, pp. 52-3.

²Morris, 'Mr Justice Higgins Scuppered', p. 54.

³L.F. Fitzhardinge, *That Fiery Particle*, p. 178 - the following account is largely drawn from Fitzhardinge.

seamen generally, having special regard to their comfort and health'.⁴ When the Bill was introduced in 1904, the Watson government referred it to a Royal Commission.⁵ The Chair of the Commission went to Hughes. Hughes had had experience of the maritime industry as Secretary and chief organiser for the Wharf Labourer's Union in New South Wales. He had also been the force behind the setting up of the Waterside Workers' Federation in the first years of the Commonwealth and earlier still had sponsored a Navigation bill in New South Wales.⁶

The inquiry while very exhaustive, focused on the recruitment of seamen and onboard living conditions.⁷ The Report concluded that as the industry had changed so much in recent years, a radical change in the conditions of the seamen was needed.⁸ Many of its recommendations were incorporated in the British Merchant Shipping Amendment Act of 1906, enacted by the new Liberal Government through the efforts of Lloyd George - hitherto British shipowners had been reluctant to grant concessions to New Zealand and Australia.⁹ In 1907 a Merchant Shipping Conference was called by Lloyd George to iron out constitutional differences with Australia and New Zealand. Hughes attended as part of the Australian delegation.¹⁰

A Navigation Act, largely based on the Royal Commission's recommendations, was not passed until 1912, when it was carried by the Fisher Labor Government. The Act established a system of regulation on the lines of the Imperial Merchant Shipping Acts and was purported to apply not only to foreign and interstate shipping but also to coastal trade. It imposed 'new protection' conditions: only vessels registered in Australia could operate in the Australian coasting trade, and they were required to provide conditions of employment better than those in most merchant navies. The Act was to come into operation by stages and only when proclaimed.¹¹ Proclamation was delayed by the Cook Liberal Government in response to pressure from British and Australian shipowners who claimed that the Act would lead to large increases in their costs.¹² In 1914 the returned Fisher Government announced it would proclaim the Act in 1916, but proclamation was deferred throughout the war. As Morris notes, the authorities would have been reluctant to proclaim an Act that would disqualify old ships in a situation of extreme shipping scarcity.¹³

⁴*Ibid.*, p. 179, citing the drafter of the Bill.

⁵Sawer, *Australian Federal Politics*, pp. 148-9.

⁶Fitzhardinge, *That Fiery Particle*, pp. 99-127, 75-6.

⁷*Ibid.*, pp. 180-83.

⁸Fitzhardinge, *That Fiery Particle*, p. 182.

⁹*Ibid.*, pp. 183-84.

¹⁰*Ibid.*, p. 183.

¹¹Sawer, *Australian Federal Politics*, p. 93.

¹²B. Fitzpatrick and R.J. Cahill, *The Seamen's Union of Australia, 1872-1972: A History*, Sydney, 1981, p. 47.

¹³'Mr Justice Higgins Scuppered', p. 53.

The success of the seamen in the 1919 dispute saw the Navigation Act proclaimed in March 1920. It was subsequently amended in October 1920 and the new Act brought into force in March 1921. This was to allow, amongst other things, incorporation of the measures recently agreed in the International Convention on Safety of Life at Sea.¹⁴

Brian Fitzpatrick notes that Tom Walsh, Secretary of the Seamen's Union, claimed that the Union through the Arbitration Court and agreements with owners had already gained many of the conditions required under the Act.¹⁵ There was an element of truth in this, especially with regard to hours, but nevertheless the Act represented a real advance in terms of introducing effective compulsory health and safety measures in an extremely hazardous industry. Walsh himself, notwithstanding his rhetoric, approved the legislation. Apparently the legislation was drawn up by Cumpston and his biographer observes that Walsh and a Mr Thompson of the Marine Engineers examined the draft legislation 'which they accepted without change'.¹⁶ Fitzpatrick also notes that the Union jealously guarded the protective provisions of the Act throughout the 1920s.¹⁷

The Act was indeed very thorough in its health provisions. Standards were set for ventilation, lighting, bunks, mess-rooms and sanitary arrangements including properly constructed bathrooms, with hand basins, showers, and hot and cold water available - and hospitals were prescribed. Appropriate medical stores and textbooks were also prescribed. In the case of illness, seamen belonging to ships registered in Australia were entitled to their wages for 3 months, if landed at their home port, or maintenance and medical expenses until recovery and a free passage with wages to their home port. The insurance demand was not granted.¹⁸

Supervision of these detailed arrangements was entrusted to a Division of Marine Hygiene in the new Department of Health. This was not surprising since the Marine Hygiene Division was merely carrying out some of the functions of the old Trade and Customs Quarantine Service which would have administered the Act had it been implemented before the War. Medical officers attached to the Marine Hygiene Division were appointed medical inspectors under the Navigation Act. Their task was to examine all applicants for employment for their suitability for a seafaring life. This was the first example of medical supervision on a large scale in private industry (though the Commonwealth had a big interest in shipping through its own line set up during the war). Furthermore, all cases of illness or injury were to be examined to determine the

¹⁴Sawer, *Australian Federal Politics*, p. 196 and note 90.

¹⁵*The Seamen's Union*, pp. 47-48.

¹⁶Spencer, *J.H.L. Cumpston*, p. 199.

¹⁷*The Seamen's Union*, p. 57.

¹⁸D.G. Robertson, 'An Analysis of Medical Examinations of Seamen Under the Commonwealth Navigation Act, 1921-1926', *Health*, July 1927, p. 102.

liability of the employer in each case.¹⁹

These arrangements continued throughout the the 1920s, though the Bruce Government, in the course of its campaign against the Seamen's Union, did exempt some foreign ships from complying with them.²⁰ Like the IHD, the Marine Hygiene Division was formally disbanded in 1932, however its functions more or less continued under the auspices of the Health Department.²¹

¹⁹*Ibid.*, p. 103.

²⁰The Navigation Act, 1925 permitted the introduction of British and foreign shipping not licenced under the Navigation Act and therefore not required to provide the conditions specified under the Act; Sawyer, *Australian Federal Politics*, p. 238. The Seamen's Union was de-registered in 1925 and remained so for a period of approximately ten years.

²¹Abbott and Goldsmith, 'History and Functions of the Commonwealth Health Department', p. 122.

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