"POPULATE OR PERISH": ASPECTS OF INFANT AND MATERNAL HEALTH IN SYDNEY, 1870-1939

by

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STATEMENT

This thesis is my own original work.

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MILTON JAMES LEWIS
I wish to thank the staffs of the following libraries for their assistance: the National Library of Australia, the Menzies and Chifley Libraries of the Australian National University, the Basser Library of the Australian Academy of Science, the Mitchell Library, and the libraries of the New South Wales Health Commission, the Royal Australasian College of Physicians, Sydney, the Royal Hospital for Women, Paddington and the Women's Hospital, Crown Street, Sydney. I also wish to thank Mr C. Potter of the Royal Society for the Welfare of Mothers and Babies for his cooperation and Dr F.B. Smith of the Australian National University for his interest in the earlier stages of my work. My supervisor, Dr E.C. Fry, has given advice and encouragement generously. My young daughter has played an intangible but important part in helping me to understand certain aspects of the subject.
This study tries to explain the remarkable declines in the infant and maternal death-rates in Sydney between 1870 and 1939 and to indicate significant attitudes shaping the infant and maternal welfare movement. Poor nutrition interacted with infection to decimate the infant populations of Sydney and other Western cities of the late nineteenth and early twentieth centuries. Improvement in the sanitary environment of Sydney from the 1880s was an important factor in the reduction of infant mortality. Improvement in the quality of the metropolitan milk supply was a less clearly significant cause of the reduction. Establishment of infant welfare services was the factor which accelerated the decline in mortality after the early 1900s. The core of infant welfare work was encouragement of breast-feeding. This acted to reduce mortality despite economic disadvantages putting the working-class infant at greater risk. The movement in Sydney, the pioneer movement in Australasia, shared with movements overseas the powerful motivating force of concern about population size and quality.

The movement in Sydney was a blend of state and voluntary effort. Wide acceptance of the notion of individual responsibility for health care limited the advance of state intervention. But state provision and universal eligibility were achieved in infant welfare not only because the saving of infant lives was seen as an important national interest, but because the work did not trespass on the preserves of private medicine. The failure to develop universalism in maternity services had much to do with the fact that it would have required a change in the balance between private and public medicine.
Significant reduction of the maternal death-rate did not occur until the 1930s when the advent of effective chemotherapy and fuller knowledge of the problem of puerperal infection produced a dramatic decline in deaths from sepsis. Reformers urged improvement of obstetric education as the way to reduce the death-rate. Improvement, beginning in the later 1920s, did not contribute much to the reduction of mortality in the short term. Nor did the hospitalisation of birth and antenatal care contribute much in the short term. To a considerable extent, it was the capacity to pay that determined access to good-quality medical care, although the poorer woman could use the charitable services of the public hospital. Unequal access in a maternity care system monopolised by private practice contributed to the failure to reduce maternal mortality significantly before the later 1930s.

Concern about population growth powerfully aided the development of infant and maternal welfare work. It also gave rise to efforts to reinforce the child-bearing and child-rearing responsibilities of women. If education for motherhood now required expert instruction, such was offered by the government baby health clinics. Both Labor and its political opponents supported infant welfare work. They both endorsed population expansion in the interests of national development and defence. Labor did not clearly repudiate the notion of individual responsibility for health care provision until the 1930s. This notion influenced organisation of infant and maternal welfare services as importantly as the desire to encourage the growth of a healthy, native-born population influenced the emergence of systematic infant health work.
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### Abbreviations

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<th>Abbreviation</th>
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<tr>
<td>A.A.S. Report</td>
<td>Report of the Australasian Association for the Advancement of Science (from 1930 the Australian and New Zealand Association for the Advancement of Science).</td>
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<td>A.E.H.R.</td>
<td>Australian Economic History Review.</td>
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<td>A.M.G.</td>
<td>Australasian Medical Gazette.</td>
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<td>A.N.U.</td>
<td>Australian National University.</td>
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<td>A.Q.</td>
<td>Australian Quarterly.</td>
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<td>Arch. Dis. Childh.</td>
<td>Archives of Disease in Childhood.</td>
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<td>A.T.N.A.</td>
<td>Australasian Trained Nurses' Association.</td>
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<td>B.M.A.</td>
<td>British Medical Association.</td>
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<td>B.M.J.</td>
<td>British Medical Journal.</td>
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<td>C.P.P.</td>
<td>Commonwealth Parliamentary Papers.</td>
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<td>D.T.</td>
<td>Daily Telegraph</td>
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<td>H. of R.</td>
<td>House of Representatives.</td>
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<td>Acronym</td>
<td>Full Name</td>
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<td>J. of Hygiene</td>
<td>Journal of Hygiene.</td>
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<td>M.J.A.</td>
<td>Medical Journal of Australia.</td>
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<tr>
<td>M.M.F.Q.</td>
<td>Milbank Memorial Fund Quarterly.</td>
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<td>N.H.M.R.C.</td>
<td>National Health and Medical Research Council.</td>
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<td>N.S.W.M.G.</td>
<td>New South Wales Medical Gazette.</td>
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<td>New South Wales Parliamentary Debates.</td>
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<td>New South Wales Parliamentary Papers.</td>
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<td>R.C.</td>
<td>Royal Commission.</td>
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<td>R.S.W.M.B.</td>
<td>Royal Society for the Welfare of Mothers and Babies.</td>
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<td>Sel. Com.</td>
<td>Select Committee.</td>
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<td>S.M.H.</td>
<td>Sydney Morning Herald.</td>
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Introduction

In this account of some aspects of infant and maternal health in Sydney from 1870 to 1939 I try to offer reasons for the great reduction in the mortality rate of infants and in the rate associated with childbirth over this period. I also describe the responses made to the problem of excessively high infant and maternal death-rates and discuss attitudes and values which shaped these responses. While the study is focussed on Sydney, for much of my period the largest Australian city, it also makes reference to other cities of the Western world because the situation in Sydney had much in common with the situations in urban areas elsewhere.

Sydney pioneered systematic infant welfare work in Australia. The infant welfare movement in that city influenced the development of like work in other parts of the country. From the 1870s Sydney grew rapidly. By 1891 it was "a metropolis by world standards and proud of it...."¹ Other quickly growing Western cities experienced the same high levels of infant mortality, a great deal of it due to the combined action of poor environmental sanitation, poverty, and widespread ignorance of infant care. A powerful motor for the development of infant welfare work round the turn of the century was concern about population size and quality. The motor was common to a number of Western nations at this time. Thus, although not intended to be a comparative study, the thesis sets the growth of infant welfare work in Sydney in an international context where it properly belongs.

The study traverses a number of areas of Australian history: urban, social and women's history as well as the history of medicine, health care, and social welfare provision. I trust it contributes something to all these areas. Primarily, I see it as social history with an urban focus. The importance of urbanisation in Australian history is now widely accepted. Already by the end of last century Australia was, in terms of population distribution, a highly urbanised society. A.F. Weber wrote in the 1890s, "the most remarkable concentration, or rather centralization, of population occurs in that newest product of civilization, Australia".\textsuperscript{2} But exploration of that importance for social history has been rather limited. No comprehensive social history of Sydney covering the period dealt with here has been written. The lack of such a work has been something of a handicap in the preparation of the present study. A social atlas of Sydney, showing the socio-economic status of suburbs from the beginning of the city's rapid growth in the 1870s, would have been useful. I have tried to indicate the connection between the status of certain suburbs and the size of their infant mortality rates in the early 1900s and in the late 1930s. The infant mortality rate has commonly been taken as a sensitive indicator of socio-economic conditions. The evidence relating to Sydney, which I later present, supports this proposition: the working-class suburbs had notably higher infant death-rates than the middle-class areas in the early 1900s. Differentials in this respect continued to exist even at the close of my period, after infant welfare work and other factors had considerably reduced the overall infant mortality rate in Sydney.

\textsuperscript{2}Quoted in R. Lawson, \textit{Brisbane in the 1890s}, Brisbane, 1973, p.3.
It is widely agreed that, at least in the forty years of prosperity from mid century to the 1890s, the Australian workingman and his family enjoyed a better living standard than their European counterparts. Less severe poverty in the lower classes and a healthy climate made for a healthier population. Yet the healthiness, especially as expressed by the infant death-rate, can be somewhat exaggerated, as in the following statement:

In Europe the cities may be described as 'killers of men' — they...killed their inhabitants at a frightening rate by dirt and disease. In Australia the pattern was quite different. The cities, when compared with rural areas, offered a reasonably healthy environment....

Sydney was almost as effective a killer of babies as many other Western cities, and the problem of diarrhoeal and associated maladies was common to a great many cities of the time.

The nature of the early infant welfare movement in Sydney and key attitudes and values which shaped its development point to what Australian cities of the period shared with cities in Europe and the United States, where similar movements arose. They point to a process which has been termed the "universalization of culture" and for which the late nineteenth century city was the vehicle. Within national cultures the cities were the agents of social and cultural change:

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4 The average infant mortality rates of the following English cities, 1877-86, might be compared with those of Sydney, Melbourne and Brisbane: Liverpool, 183 per 1,000 births; Manchester, 174; Leeds, 172; Birmingham, 164; London, 152; Bristol, 145. Sydney had an average rate of 168 per 1,000 in 1878-88 and Melbourne a rate of 169 in the same period. Brisbane's rate averaged 174 during 1883-87. Victorian Year-Book, 1893, vol.I, Melbourne, 1893, p.317. Melbourne's rate averaged 133.6 in 1891-1900 and Sydney's rate averaged 130 in 1896-1900.
...cities in the Western world...were becoming more alike by the 1890s. So the universalization of culture was in fact the spread, through urbanization, of the values of these similar cities throughout the national cultures of the Western world.5

Concern with a declining birth-rate was an important factor directing attention to and creating efforts to reduce the high urban death-rate of infants in Australia as it was in Britain and France round the turn of the century. Infant welfare services, created by combined state and voluntary effort in Sydney, later spread to smaller towns and country areas. Just as the city produced a high infant mortality rate, so it created a social and cultural response to the problem.

The thesis covers some aspects of the history of medicine in Australia. Some space is also devoted to the development of health care and social welfare provision. The organisation of infant welfare and maternity care, like health care generally, was fundamentally influenced by values, which, I suggest, originated in nineteenth century capitalist society. These survived strongly in the area of health care. Individual responsibility for health care provision was only slowly modified. Even the Labor Party did not clearly reject the idea in favour of collective provision until the 1930s. The powerful and privileged position enjoyed by the organised medical profession must in part be explained by community acceptance of the idea of individual responsibility. The survival of the voluntary nature and charity orientation of public hospitals well into this century in Sydney is related to this fact, as is the large role that continued to be enjoyed by voluntary effort in social welfare organisations.

5Lawson, op.cit., p.5.
A sociologically oriented history of the medical profession in Australia would have been useful in the preparation of this study, as would a similar history of the nursing profession. Thelma Hunter has discussed the medical profession's political power at the national level. Bryan Gandevia has very briefly explored the historical reasons for the doctor's high social status in Australia. But more work is very much needed. Likewise, it would have been helpful to possess good histories of the leading maternity hospitals in Sydney like the Royal Hospital for Women and the Women's Hospital, Crown Street. The Royal (formerly the Benevolent Asylum lying-in section) is a venerable maternity institution, even by international standards. At an early stage both hospitals attained levels of safety for the parturient woman as good as the better European institutions. The materials for the writing of such histories are readily at hand. In the areas of medicine covered in this study it is clear that Australian doctors did not ignore advances made in the great centres of learning and practice overseas, despite the distance from such centres. In obstetrics and gynaecology, as in paediatrics, doctors in major centres like Sydney and Melbourne kept well abreast of overseas developments. Systematic infant welfare work began in Sydney at about the same time as early efforts were being made in Britain, France and the United States. One of the first, public antenatal clinics in the world was established in Sydney in 1912.

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From one viewpoint the development of organised infant welfare work was the intrusion of the expert into an area traditionally the preserve of the family. The same decline in the practice of breast-feeding in the late nineteenth century seems to have occurred in Australia as occurred in many other Western countries. Indeed, the expert in infant welfare was primarily concerned to restore the popularity of the practice. Paediatrics emerged as a medical specialty in the later nineteenth century and it was to a large extent concerned with infant nutrition and nutritional disorders. The same inferior substitutes for breast-milk were common in Sydney in this period as were common overseas. Many of the same infant food preparations, to a greater or lesser extent nutritionally unsound, were marketed in Sydney.

My investigation into infant feeding practices in Sydney led me to touch on the question of child-rearing habits. Virtually no historical study of child-rearing and other family behaviour in Australia has been done. There are considerable difficulties concerning sources, as one sociologist of the family has pointed out:

...most family events do not ordinarily leave traces... much less systematic continuous records. Formal events such as births, deaths, marriages, divorces...are likely to be recorded, but these yield only few insights into family patterns. The comments of literary or philosophical figures...are at best the guesses of wise but untrained amateurs. Moreover, both records and comments focus on the top social strata only, leaving nearly in obscurity the family behaviour of the majority of the population.9

Yet there are sources. Medical journals offer some information, even if it is often incidental to more technical discussion. From the late nineteenth century, medical and lay authors published books and pamphlets on infant care for Australian parents. There are the observations of

"wise but untrained amateurs" like Richard Twopeny, who recorded their impressions of Antipodean life in the later nineteenth and early twentieth centuries. Material is also located in the reports of official enquiries like that concerned with the condition of the working classes of the metropolis of Sydney in 1859-60. Literary and biographical sources would yield material the value of which could be assessed by comparison with information from less idiosyncratic sources.

Given the subject of this study, it is hardly surprising that attitudes to women are discussed. Recently a number of a new historical studies of the position of women in Australia have appeared, to the advantage of Australian social history. The thesis argues that the emergence of deep concern about population growth round the turn of the century focussed considerable attention on the reproductive and child-rearing roles of women. It suggests there is much substance to the idea that there was an effort to reinforce these roles by educating women more formally in the fields of infant care and housekeeping. The infant welfare advisory service and clinics educated women in the first area and classes in domestic science were to instruct girls in home duties. I have tried to show the connections between concern about population growth in the interests of national power and maintenance of a "White Australia" on the one hand and the promotion of infant welfare work and reinforcement of traditional female responsibilities in the area of child-bearing and child-rearing on the other.

A very important source of information for the whole of my period has been the local medical journals, supplemented from the early 1900s by the *Australasian Nurses' Journal*. The journals provided technical information on infant and maternal health over a period of seventy odd years, during which the face of medicine changed considerably. In that period germ theory was established and the beginnings of modern chemotherapy appeared. The journals sometimes provided data on social behaviour, for example, infant feeding practices, when little could be obtained from other sources. They also provided information on the policies of the organised profession. The *Nurses' Journal* was useful for some of these purposes, while overall being a less rich mine of information. Another important source has been Royal Commission and Select Committee reports, reports of other official enquiries, and sometimes, parliamentary debates. The annual reports of the medical officer of health for the metropolitan combined districts from the first in 1898 to about World War I are full of information about aspects of the health of Sydney. The reports were incorporated in the annual reports of the Director-General of Public Health for New South Wales when the Director-General's reports began in 1913. The material specifically concerned with Sydney becomes less abundant after this, but much can still be obtained from these bulky sources of high-quality information. From 1927 the Director-General's reports carried the report of the Director of Maternal and Baby Welfare, an important source for the period from the late 1920s. For information on the infant welfare movement prior to 1927, the records of the Royal Society for the Welfare of Mothers and Babies, the records of the Baby Clinics Board and those of the Baby Clinics Committee were vital. Annual reports and other

11A few useful articles for the nineteenth century section of my period were obtained from *The Lancet*, but it was not an important source of material.
publications of the leading Sydney maternity hospitals provided data on maternal health otherwise difficult to obtain.

From the 1880s manuals on infant care and less often, on pregnancy and maternity care, were being published for the lay public in Sydney and Melbourne. Some set out to adapt advice to local, physical conditions like climate and to social conditions such as lack of domestic servants. Some were written by doctors or nurses, others by self-appointed lay experts. From the early 1900s the New South Wales Departments of Health and of Public Instruction distributed free pamphlets on infant care. In the case of P.E. Muskett, a Sydney doctor, the urging of adaptation to local conditions took on tones of positive nationalism, expressed over issues like the loss of infant lives in the cities and the need to adapt diet to an Antipodean environment.¹² This material, which continued to appear in the 1920s and 1930s, was a valuable source of information on feeding practices and other aspects of infant care.

A small number of unpublished theses provided information difficult to obtain from other quarters. Claudia Thame's study of the growth of collective responsibility for health care in Australia enabled me to see infant and maternal welfare provision in Sydney in the wider setting of general health provision throughout Australia.¹³ Thelma Hunter's thesis offered understanding of the long-established attitudes

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¹² See Muskett, An Australian Appeal, Sydney, [1892] and The Art of Living in Australia, London, [1893]. He dedicated The Art of Living in Australia to a united Australia and, identifying himself as an Australian, expressed an "abiding hope for the development of all the great natural food industries of our country". In the preface he deplored the fact that people lived in opposition to their "semi-tropical environment".

and policies of the organised medical profession and of political parties on health care provision at the national level. Neville Hick's study of the debate about the declining birth-rate in the later 1890s and early 1900s brought home to me the significance of the New South Wales Royal Commission on the Birth-Rate and helped advance my understanding of the importance of Sir Charles Mackellar in the genesis of concern about infant welfare.

The thesis falls into two parts. The first, comprising Chapters 1 to 5, deals with infant health, while the second, which includes Chapters 6 to 9, examines aspects of maternal health. Chapter 10 is a chapter of review and of reflections. The first chapter outlines the relationship between the late nineteenth and early twentieth century city and the problem of high infant mortality. The Sydney situation is an example of this relationship. The chapter also discusses the emergence of concern with urban pathology, of which the problem of infant mortality is one instance. The infant welfare movement and the town planning movement were expressions of this concern with urban pathology in Sydney. The outstanding source of infant mortality in Sydney and in many other cities in this period was diarrhoeal disease and associated conditions. I suggest that this was due to an interaction between infection and poor nutrition on a large scale, an infant health problem very common in contemporary Third World countries. Because good nutrition was vital to the solution of the problem, I explore the question of infant feeding in Chapter 2. I point out how the success of the infant welfare movement had much to do with its promotion of

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14 Hunter, op.cit.

breast-feeding, which could reduce infant mortality even in the face of socio-economic inequalities.

Reformers in Sydney and elsewhere were concerned with the quality of the public milk supply because it seemed to be related closely to the health of infants. In Chapter 3 I examine how closely improvement in the quality of the supply was related to reduction of the infant death-rate in Sydney. Since no adequate historical study of the milk supply exists, I had to return to primary sources. There is room for more work, especially on the politics and economic organisation of this important public health utility and large-scale enterprise, in Australian urban history. The history of the development of public health controls over the supply of foodstuffs, fresh and preserved, in Australia needs to be explored. If the history of the milk supply in Sydney is any guide, laissez-faire attitudes were strong well into this century and improvement in the quality of food was rather slow. Lawson has drawn attention to the widespread "risk of ill-health through spoiled or diseased food" in Brisbane in the 1890s. He quoted a typical complaint of the time about "the unsatisfactory method employed in conveying the meat and bread supplies...in open carts and wagons over miles of dusty roads". The complaint continued, "The calico coverings spread over the meat are quite inadequate to afford protection from dust and flies during transit to the city..."\textsuperscript{16}

Chapter 4 deals with the improvement of environmental sanitation in Sydney from what was a scandalously low level in the 1870s. I suggest that this improvement was an important factor in the reduction of the city's death-rate, including the death-rate of infants. Chapter 5 is divided into two sections. The first describes and explains the

\textsuperscript{16}Lawson, op.cit., p.132.
emergence of systematic infant welfare work in Western countries. The second concentrates on the infant welfare movement in Sydney. The larger forces promoting concern about infant mortality are suggested. Discussion of these is taken up again in the concluding chapter.

Chapter 6 introduces the problem of maternal mortality and shows how puerperal infection was as central to this problem as diarrhoeal disease was to the problem of infant mortality. I argue that in a system of maternity care controlled by the private sector, differential access to competent care contributed to the failure to reduce maternal mortality significantly until the mid 1930s, when the advent of the new chemotherapy broke the stalemate over puerperal infection. Reformers concerned with maternal welfare tended to stress the need for better obstetric education, which would lead to better practice, as the key to the problem of maternal mortality. Chapter 7 traces the development of obstetric education in Sydney.

Chapter 8 examines two other changes in the area of maternal health in my period: the hospitalisation of birth and the growth of antenatal care. I try to assess the impact of these changes on the mortality rate. In Chapter 9 some important differences between the organisation of infant and maternal welfare measures are discussed. Connections among attitudes to women, the response to the problems of infant and maternal mortality, and the wider concerns of the infant and maternal welfare movement are explored. The concluding chapter reviews the explanations given for the notable declines in the infant and maternal death-rates in Sydney between the 1870s and World War II. It reflects further on the attitudes and values shaping the infant and maternal welfare movement, relating the movement to the nature of the society in which it developed.
THE CITY AND THE PROBLEM OF INFANT MORTALITY

The most striking fact about the health of infants in Sydney in the period from the 1870s to the 1930s is the very great decline in mortality. From an average of 157 deaths per thousand births in 1871-75 the rate fell to 39 per thousand births in 1936-38. The rate was actually increasing until the mid 1880s, after which there was a steady, downward trend. In the early 1900s a new turning-point was reached, a rather dramatic fall marking the beginning of an uninterrupted decline to unprecedentedly low levels of mortality. The infant mortality rates of Sydney were considerably higher than those of the rest of New South Wales (the country) for the whole nineteenth century section of my period. The gap began to narrow from the early 1900s, but it continued to exist until the later 1920s, and the metropolitan rate fell below the country rate only in the quinquennium, 1931-35. This urban-rural differential obtained in Australia as a whole and reflected the fact that infectious disease was the predominant cause of infant mortality.

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2 See Appendix 1.

3 For convenience I have followed Armstrong in calling the rest of New South Wales, "the country". Sydney never had any important urban rivals and its dominance within New South Wales was manifest from colonial times. In 1871 it possessed 27 per cent of the colony's total population, in 1891, 35 per cent, and in 1911, 47 per cent. J.W. McCarty in C.B. Schedvin and J.W. McCarty, eds, Urbanization in Australia. The Nineteenth Century, Sydney University Press, 1974, pp. 22-23. In 1900 Sydney had nine times the population of Newcastle, its closest urban rival. Ibid, p.15.

Before the turn of the century infant mortality rates tended to be
greater in British and European cities than in country areas. Indeed,
in his classic study of infant mortality Sir George Newman suggested that
the increase in urbanisation in England and Wales during the later
nineteenth century was causally connected with the fact of a stationary
infant mortality rate:

It is rather the habits and customs of town life which
militate against healthy infancy, especially in the artisan
classes, to whom infant mortality is almost confined....
The homelessness of the people is one of the worst features
of town life, and is operating injuriously on infancy...a
careful observer of the life of the poor in a great city...
may not be able to put his finger upon any one item which
is affecting the mother and killing the infant.... But he
will be able to say that the general conditions of domestic
life in a city tenement are such as to make the rearing of
infants a difficult and doubtful undertaking.\(^5\)

Newman clearly illustrated the difference between urban and rural rates
in England and Wales by comparing the mortality of a group of urban
counties with that of a group of rural counties: in the 1870s, the
infant death-rate for males in the urban areas was 175.9 per thousand
births, while that for females was 145.5; in the rural areas the rates
were respectively 139.9 and 112.5; twenty-five years later, the
differential was even greater, the urban rates being 180 and 149.2 and
the rural rates 138.8 and 111.\(^6\) Even in communities like the Australian
States and New Zealand, where the infant death-rate was comparatively

of Health for the London borough of Finsbury, Newman was appointed Chief
Medical Officer of the Board of Education in 1907. With the Secretary
of the Board, Sir Robert Morant, Newman was responsible for the
establishment of the school medical service.

\(^6\)Ibid, p.52. See Appendix 2 for rates by cause of death. In Birth,
Poverty and Wealth, R.M. Titmuss reported higher rates in county boroughs
than in rural districts in 1931. Lessof reported higher rates for the
main urban areas of New Zealand than for New Zealand as a whole for the
1930s. The Determinants and Consequences of Population Trends, U.N.
Dept. of Social Affairs, Population Studies no.17, p.67 below.
low, mortality tended to be greater in urban districts, Newman pointed out.  

The great fall in infant mortality from the early 1900s, in Sydney and in Australia as a whole, was very largely a result of the decline in deaths from infectious diseases. Only at the close of my period did the neonatal death-rate, virtually determined by the number of deaths from diseases peculiar to early infancy and from malformations, show a significant, downward movement.  

In terms of what it contributed to the decline in infant mortality in Sydney the most notable infectious disease was diarrhoea and enteritis. Mortality from this cause stood at 37.4 per thousand births in 1901. It fell dramatically to 19.6 in 1911, declined to 17.7 in 1921, and fell markedly again to 2.1 in 1933. By 1947 it was down to 0.7. In the period 1875-1900 diarrhoeal mortality was almost always greater than 30 per thousand births.

However the problem of a high death-rate from diarrhoeal conditions was not peculiar to Sydney. High mortality rates commonly occurred in other urban areas of Australia, the United States, the United Kingdom and Europe until well into the present century. In 1891 Professor H.B. Allen of Melbourne, reporting to the Premier of Victoria on areas of excessive, preventable mortality, said it was "lamentable that the mortality from these diseases should continue so great" and

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7 Newman, op. cit., p.9.


9 Vital Statistics, 1901. M.O.H. Report, 1911. Statistical Register, 1921, 1933, 1947. In the total of diarrhoeal mortality I have included deaths returned under dysentery, "cholera", diarrhoea and enteritis. "Cholera" was what was known in nineteenth and early twentieth century medicine as cholera infantum, infantile cholera or choleraic diarrhoea.
that the incidence should fall chiefly on children. In 1885 the colony's Central Board of Health had drawn attention to the fact that five-sixths of deaths from diarrhoea were of children under five years of age. In New York City infant mortality from diarrhoeal disease stood at an incredible 84.3 per 1,000 in 1885. By 1901 it was down to 44.9. It was only 17.9 in 1920. By 1961 it was 0.45. During the 1880s and 1890s London had an average infant death-rate from diarrhoea of 23.3 per thousand births. The Midland industrial centre, Leicester, had an average of 48.4 for the same period, while Preston, Lancashire, returned 60.4. The historian of the infant welfare movement in Britain, G.F. McCleary, wrote concerning epidemic diarrhoea, "Its annual visitation was an impressive event, the tragic significance of which it is difficult at this time to realize". G.J. Cuthbert, sometime Director of Maternal and Infant Welfare in New South Wales, has written about infant mortality in the State, "The greatest over-all improvement in rates from all causes is in the decline of diarrhoea and enteritis, which together, during the first quarter of the century...

15. Sir Arthur Newsholme, Fifty Years in Public Health, London, 1935, p.351. Newman pointed out that one of the great causes of the enormous infant mortality, in some years amounting to over half the births, in London from the Restoration until the late eighteenth century was summer diarrhoea. Newman, op.cit., p.43.
represented a dreaded community scourge with the return of every summer". 17 European cities experienced the same, high infant death-rates from diarrhoeal conditions. The average mortality of forty-two German cities in 1906 was 198 per thousand births, and diarrhoeal conditions accounted for over eighty per cent of deaths. The city of Leipzig had an infant mortality rate from diarrhoea which was 55 per thousand in 1900, but which rose as high as 430 per thousand for the summer month of August. 18

Diarrhoeal disease, probably the most common cause of infant deaths in cities of the Western world in the period of their modern growth, remained an outstanding source of infant mortality in economically less developed countries in the 1950s. Costa Rica, with a total infant death-rate of 155 per 1,000 in 1953, had a diarrhoeal mortality of 26.4, while Colombia in 1948 had a diarrhoeal death-rate of 23, and Venezuela, in 1951, 15.2. 19 Three large Brazilian cities in the mid 1950s reported thirty to thirty-nine per cent of all infant deaths as due to diarrhoeal disease. 20 It seems likely that diarrhoeal conditions are an even more significant cause of infant deaths than the vital statistics show because their aetiology is not straightforward and diarrhoeal disease is often linked with wasting states, which may be given as the cause of death. The bacterial pathogens most often involved are Shigella, Salmonella and E.coli. But the proportion of diarrhoeas of early childhood associated with any of these three is

18 See Appendix 7 for infant mortality rates in some German industrial towns in 1901.
19 A.V. Hardy, op.cit., p.312.
comparatively low, rarely reaching forty per cent.\textsuperscript{21} There is some uncertainty, then, in identifying the pathogens involved in many cases. Yet the broad behaviour of diarrhoeal disease, its spread among young children in families and other groups and the fact of the decline in incidence at older ages, indicates most cases originate in infection.

There is a good deal of evidence concerning the effect of malnutrition on capacity to resist infection. Many studies of communities in economically underdeveloped countries have shown that acute diarrhoeal disease and acute upper respiratory conditions tend to occur more often and continue longer among malnourished children.\textsuperscript{22} The interaction between diarrhoea and malnutrition has a markedly adverse effect, often retarding growth. A diarrhoeal attack commonly results in serious deterioration in the nutritional state of the child. In turn this interferes with resistance to other infections and may cause specific nutritional disease, notably kwashiorkor. A characteristic of acute diarrhoeal disease in contemporary, underdeveloped communities is the concentration of cases during or just after weaning. The term, "weanling diarrhoea", has been coined to describe the process in which diarrhoeal disease and malnutrition interact:\textsuperscript{23}

Although the introduction of contaminated foods explains the increase in diarrheal [sic] episodes in the weaning and post-weaning periods, it does not in itself account for the high

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\textsuperscript{21} Enteroviruses are believed to play a part, as well as intestinal parasites like protozoa or helminths. Infections of other body systems, particularly respiratory infections, can cause diarrhoea. The properties of some foods and some nutritional deficiency diseases will produce the condition. Toxins of staphylococci and other bacteria in food can cause sporadic outbreaks. Introduction, Bulletin W.H.O., vol. 21, 1959, p.245. Scrimshaw et al., op.cit., p.226. A.A. Ferris, "The Epidemiology of Infective Diarrhoea", A.J.S., vol.28, 1965, pp. 187-192.

\textsuperscript{22} Scrimshaw et al., op.cit., pp. 64-65.

\textsuperscript{23} Ibid, p.219.
mortality. Even given the factor of a higher dosage of infectious agents, experience elsewhere indicates that such high death rates...are not seen in populations of well-nourished children. The answer seemingly is in an existing synergism between nutrition and infection. As malnutrition develops because of the poor weaning diet, acute diarrheal disease becomes increasingly likely to lead to death. At the same time, diarrheal disease reduces appetite, increases metabolic loss of nitrogen, and leads to further dietary restriction, all of which hastens the lowering of resistance to infection....24

The introduction of food other than breast milk thus presents two stresses: exposure to contaminated food and substitution of food which is poor in quality and often inadequate in amount. I suggest that something like the problem of "weanling diarrhoea" existed in Sydney and other urban areas of the Western world where mortality from diarrheal disease was very high in the later nineteenth and early twentieth centuries. The problem was perhaps not as severe as that experienced in contemporary underdeveloped communities because the infant's diet after weaning, poor as it often was, was not as deficient in quality.25

One implication of the notion of weanling diarrhoea is that the mortality associated with diarrheal disease is more extensive than that directly due to diarrheal infections: failure to thrive may be precipitated by an attack of acute diarrheal disease or maintained by

25 Sydney infants had access to fresh or preserved cows' milk, even if this, when finally consumed, was often in a dirty condition. The question of infant feeding will be fully discussed in Chapter 2. It is worth noting that poor nutrition would have contributed to the lowering of resistance to other infections. Lancaster observed that better nutrition and other ecological factors like smaller families, rather than specific therapy, must have been important causes of the fall in mortality from pertussis, diphtheria, measles and scarlatina in Australia after the turn of the century. Lancaster, M.J.A., July 1956, pp. 101-102. These four infections were never large contributors to total infant mortality in Sydney.
recurrent, less fulminating episodes. There was a very large, if declining, proportion of infant mortality returned in the vital statistics of Sydney from the 1870s to the early 1900s under "atrophy", "marasmus" or "debility", "convulsions" and "dentition". Dr W.G. Armstrong, first medical officer of health for the metropolitan district of Sydney and pioneer of systematic infant welfare work in Australasia, pointed out in 1905 that mortality from convulsions, teething, and atrophy and its synonyms had greatly diminished over the previous thirty years. Deaths from convulsions fell from 18.6 per thousand births in 1875 to 3.2 in 1904, deaths from teething from 8.4 to 0.7, and deaths from atrophy and synonymous conditions from 43.6 to 11.4. These very substantial falls were inexplicable, Armstrong suggested, unless it were assumed more accurate diagnosis and certification had resulted in the transfer of most such deaths to another category in the vital statistics. The only category to which they could reasonably have shifted, given mortality trends, was diarrhoea and enteritis. Further, he offered evidence of close seasonal correlations between the high points in the death-rates ascribed to diarrhoea, atrophy, convulsions and teething. He suggested "atrophy", "debility" and "inanition" were very loose terms and to the extent they conveyed any information, it was of incapacity to assimilate food, "a pathological condition which frequently — probably in the majority of cases — is a sequel to an attack of acute diarrhoea". In 1905 W.F. Litchfield,

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26 See Appendix 3.


28 Ibid, pp. 386-387. R.M. Woodbury, reviewing the causes of infant mortality in eight American cities in 1911-16, noted that many deaths of infants older than one month from "debility", "malnutrition" and "marasmus" were classified in vital statistics under "congenital...
a Sydney paediatrician, attributed about fifty per cent of infant deaths in Sydney directly or indirectly to diarrhoeal disease. His clinical experience led him to include deaths from "dentition" and "atrophy" in the total of diarrhoeal mortality. It would seem then that significant as the infant mortality recorded under diarrhoeal disease was in Sydney in the later nineteenth and early twentieth centuries, much of the mortality returned under atrophy, debility and marasmus, and probably a good deal of that returned under convulsions and dentition, should be added. The combined mortality from these sources constituted a very substantial proportion of total infant mortality in Sydney from the 1870s to the early 1900s.

Diarrhoeal disease and associated conditions were clearly a terrible scourge of infants in Sydney, as they were in many other cities of Australasia, North America, Britain and Europe, in the late nineteenth century.  

28 (Cont.)

debility" and so wrongly exaggerated mortality from causes peculiar to early infancy. Woodbury, Causal Factors in Infant Mortality, Washington, 1925, p.6. More recently, Spence et al., commenting on the reliability of death certification in England, said: "We can now see how little was known about the causes of death and disease even as late as in the early years of this century. Ignorance was cloaked in diagnoses of 'atrophy' or 'debility'". J. Spence, W.S. Walton, F.J.W. Miller and S.D.M. Court, A Thousand Families in Newcastle upon Tyne, O.U.P., 1954, p.25.

29 Litchfield, "Summer Diarrhoea in Infants: From the Public Health Point of View", Trans. Aust'sian Med. Congr., 1905, p.421. In 1909 he suggested that among the acute illnesses which precipitated convulsive states in infants, the most significant was summer diarrhoea. J. of Uni. Syd. Med. Socy., Nov. 1909, p.105. At the 1914 Australasian Medical Congress and again at the Congress of 1920, he argued diarrhoeal attacks were common causes of malnutrition and atrophy in infants. Trans. Aust'sian Med. Congr., 1914, pp. 522-523 and 1920, p.476. Dr W.S. Byrne, writing in 1904, claimed that many deaths indirectly due to gastro-enteritis were returned under other causes such as "dentition" and "convulsions" "...so that we may conclude that the deaths from gastro-enteritis are more numerous by a long way than is set down in the returns of the Registrar-General". A.M.G., Feb. 1904, p.56.

30 See Appendix 3.
and early twentieth centuries. Particularly in its summer epidemic form, diarrhoeal disease was a source of enormous mortality and morbidity, in the face of which doctors felt relatively helpless. Even after the turn of the century, as preventive measures began to reduce the annual mortality, the anxiety tended to persist because the disease could erupt in short-lived but ferocious epidemics. Dr J.T. Mitchell said in 1893 no malady, not even typhoid fever, caused so much anxiety, partly because many parents and nurses allowed the infant's condition to go untreated, seeing it as "only the teeth". Dr G.E. Cussen, writing in 1899, called it the bête noire of the general practitioner and said nothing was so difficult to treat. Dr D. Collingwood, who for many years was physician to the Infants' Home, Ashfield, the oldest of the foundling institutions in Sydney, told the Intercolonial Medical Congress of 1889 that more could be done through prevention than cure. Dr W. Morrison lamented at the beginning of the summer of 1904-05 that "...we can do comparatively so little to prevent it and stay its ravages...we all know from bitter experience how prevalent it is...."

Manuals of infant management throughout the period under study advised mothers not to wean infants during the Australian summer when diarrhoeal disease was so prevalent. Dr James Jamieson, speaking on behalf of the Australian Health Society in the early 1880s, warned: "If a woman who might nurse her child...brings it up on the bottle... and the child gets diarrhoea and wastes away, or is suddenly carried off by convulsions, she does not clear herself of responsibility by

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31 A.M.G., July 1893, pp. 234-237.

32 A.M.G., May 1899, pp. 188-190.


saying it was God's will". In her handbook for Australian mothers, published in 1902, Mrs Annie Elliss of Sydney described summer diarrhoea as "a terror that stalks these tropical lands". She urged mothers to postpone weaning beyond the baby's first summer. P.E. Muskett, a Sydney doctor, who published a number of works on infant and child health in the 1880s, 1890s and early 1900s, advised in his Australian medical guide of 1903, "If it can be avoided, no baby should be weaned during the hot weather.... The reason is that the stomach and bowels will...become affected with a disorder which will, most probably, resist all treatment...." In its pamphlet on infant care, originally produced in 1909, but reprinted in 1911 and 1913, the New South Wales Department of Public Health put the matter rather bluntly: "The first duty of a mother is to her baby.... You should never let your breast milk disappear in summer. It may be the means of saving baby's life if diarrhoea should occur". Even in the late 1920s, Dr Margaret Harper's very popular Parents' Book carried the same advice about the dangers of weaning in the summer.

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36 *The Australian Baby*, Melbourne, 1902.


38 *How To Take Care of Babies during The Summer Months*, Sydney, 1913, p.5. Contemporary, non-official manuals like Nurse Edith Aitken's handbook gave the same advice. See her *Australian Mother's Own Book*, Sydney, 1912, pp. 58-59.

The repeated advice to avoid weaning in the warm weather was of course aimed at prevention. It was prevention, not specific therapy, which eventually brought the infant mortality rate from diarrhoeal disease down. Treatment remained much the same for a long time. The doctor's task was often rendered more difficult because of delay in seeking treatment. In the 1880s purgatives, sedatives and astringents were often administered, while antiseptics were sometimes given to destroy the "morbid matter"; measures to keep body temperature down and dietary modification completed the therapy. At the end of the 1890s treatment was the same, except that there was apparently some disagreement about the value of using antiseptics, and the use of opiates was less common. In the years before World War I more definite recognition was made of the fact that in its later stages the disease was one of nutrition. By the late 1920s hospitalisation was much more common, and new procedures like blood transfusions for marasmatic infants were being tried. Yet it seems doubtful that improvement in therapy contributed significantly to the remarkable decline in the death-rate during the period under study. Therapy had so little changed by the early 1900s, when diarrhoeal mortality first began to fall notably, that prevention must be credited with the major responsibility for the decline. As with typhoid and cholera in England at an earlier time, the measures taken


41 G.E. Cussen, A.M.G., May 1899, p.188.


44 The Medical Journal of Australia concluded as late as 1933 that "...stress must be laid on the prevention of acute gastro-enteritis. Prevention is relatively simple and cure may be difficult, if not impossible". M.J.A., June 1933, p.747.
by the health authorities were becoming effective before the causes and
the modes of communication were unequivocally established.

Medical officers of health in urban areas in the United Kingdom
played a leading role in the recognition and elucidation of the problem
of infant diarrhoeal disease.\textsuperscript{45} Theories about the origins of the
disease were various. Systematic studies were carried out by Dr G.B.
Longstaff in 1880, Dr Edward Ballard in 1888, and Dr (later Sir) Arthur
Newsholme in 1899. Longstaff concluded that the condition was caused
by pollution of air, water, and food with some product of the
decomposition of organic matter; his approach reflected the contemporary
understanding of how other "filth" diseases, particularly typhoid, were
transmitted. The Local Government Board published an exhaustive report
by Ballard, who directed attention to contamination of the soil as the
source of the poison infecting air and food.\textsuperscript{46} In 1899 Newsholme,
drawing together all the available evidence, offered some general
conclusions. This 1899 paper has been seen as a major factor in the
inauguration of the infant welfare movement in England.\textsuperscript{47} Certainly,
it was the study of diarrhoeal disease, awareness of the magnitude of

\textsuperscript{45} This was only one among the many consequences of "urban pathology"
which the medical officers of health publicised; they "gave local
government in the second half of the nineteenth century an authority
and expertise hitherto lacking, and they supplied a lead in the
agitation for, and administration of, sanitary legislation which laymen
were quick to follow". A.S. Wohl, "Unfit for Human Habitation", in
p.603. Wohl argued their reports constituted an important influence
in Victorian urban reform, "the never-ending supply of facts, figures,
and reasoned emotion which flowed from their pens" forcing consideration
of causes other than character defects, for urban poverty. \textit{Ibid},
pp. 617-618.

\textsuperscript{46} Newsholme, \textit{op.cit.}, pp. 350-351 and 356. W.M. Frazer, \textit{A History of
been medical officer of health of Islington.

the mortality, and the realisation it was preventable by relatively simple means, which promoted the emergence of organised infant welfare work in England.\textsuperscript{48} It was this problem in particular which, centring on the question of proper feeding and hygienic care of the infant, called into being the advisory service, the central weapon of the infant welfare movement. The weapon was especially suited to the attack on diarrhoeal mortality. The work of the English public health doctors on the problem of infant diarrhoeal disease directly inspired W.G. Armstrong, who studied for the Cambridge diploma of public health in England in 1894-95 and who was appointed first medical officer of health for the metropolitan district in 1898, to try and reduce infant mortality in Sydney by an assault on the same problem of diarrhoeal disease.\textsuperscript{49}

Newsholme\textsuperscript{50} suggested \textit{inter alia} that epidemic diarrhoea was mainly an urban disease and "as a fatal disease" was "a disease of the artisan and still more of the lower labouring classes to a preponderant extent".\textsuperscript{1} Subsequent studies confirmed the claim that a disproportionate amount of mortality was suffered by infants of the working classes.

\textsuperscript{48}McCleary, \textit{op.cit.}, pp. 6-7.


\textsuperscript{50}In 1899 he was medical officer of health for Brighton. From 1908 he was medical officer of the Local Government Board and in this position played a key role in the infant welfare movement. He presented three influential reports on infant mortality, published as supplements to the annual reports of the medical officer of the Board, 1910, 1913 and 1914. These reports revealed the full extent of the problem in England and Wales. One of his most important contributions was his demonstration that the main source of infection in infant diarrhoeal disease lay in the home. It shifted attention from contamination of the milk supply to domestic influences, especially the role of the mother. While concern continued to be directed to improvement of the cleanliness of milk, Newsholme's work helped establish concern with breast-feeding and the teaching of mothercraft as the central locus of infant welfare work. See Newsholme, "Domestic Infection In Relation To Epidemic Diarrhoea", \textit{J. of Hygiene}, April 1906, pp. 139-146, and Frazer, \textit{op.cit.}, pp. 331-332.

\textsuperscript{1}Quoted in Newman, \textit{op.cit.}, pp. 150-151.
In London the districts "most densely populated with the poorer classes" suffered the worst effects of epidemic diarrhoea. A study done in Birmingham in the early 1900s revealed that "for practical purposes all the deaths [from diarrhoea] occurred in small houses occupied by the artisan classes...this enormous mortality among infants is limited to the working classes". In Glasgow the mortality from diarrhoea varied from 1,698 per million in the Dalmarnock Ward, and 1,686 in the Calton Ward, to 238 per million in the Park Ward, and 201 in Kelvinside. That the infants of the poor were more liable to diarrhoeal disease, because "the conditions of life and the infant's environment is frequently not conducive to robust health", was also recognised in Australia.

At the turn of the century poverty remained the greatest barrier to healthy living for the majority of the urban working classes in England and Wales. It was reflected in the higher diarrhoeal mortality of infants of the lower classes and in the class differentials in total infant mortality. Yet Newsholme and other investigators had found that while material factors influenced infant mortality, another factor, the quality of maternal care, operated powerfully on the situation as well. The quality of maternal care influenced the infant's welfare as a factor in its own right. The work of Newsholme and others showed the importance of breast-feeding as a preventive measure against diarrhoeal infection. Exposure to infection through contaminated food

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3 Ibid, p.175.
5 A.M.G., Feb. 1914, p.131.
was avoided. "Breast-fed infants have only one-tenth of the average proclivity of infants to fatal diarrhoea", concluded Newsholme. The infant's nutritional state was usually better: "It is possible that condensed milks may have formed an important prae-condition of diarrhoea by causing defective nutrition...." The role of the mother in breast-feeding and more generally in providing proper care for the infant thus came to be seen as the key to the problem of reducing infant mortality. Mothercraft and the promotion of breast-feeding became the watchwords of the organised infant welfare movement in various countries. Moreover, since the pursuit of breast-feeding and the practice of sound mothercraft reduced mortality even where the infant's material environment was poor, the infant welfare movement in Sydney and in other places enjoyed a good deal of success in reducing the death-rate without having to come to grips with the basic problem of urban poverty and class differences in mortality.

6 J. of Hygiene, April 1906, p.145.

7 Idem.


9 In 1915 H.T. Ashby pointed out that in many cities the district where Jewish families predominated usually had a lower infant mortality rate than other parts, despite overcrowding, poor housing and much poverty: Cheetham, a section of Manchester almost wholly inhabited by Jews, had a rate of 110 per 1,000 in 1911, while the rate for Manchester as a whole was 154 per 1,000. Ashby suggested this was because "the Jewish parents look after their children extremely well: the mothers stay at home and breast-feed...." Fresh, not tinned, foods were used, and temperate habits meant there was money for food and clothes. Infant Mortality, Cambridge Uni. Press, 1922, pp. 24-25. Some more recent studies have also put much weight on the quality of maternal care. A study of infants in Newcastle upon Tyne in the late 1940s found that

Continued...
It is not surprising that the infant welfare movement enjoyed much success by concentrating on improving the quality of maternal care because a large component of mortality round the turn of the century resulted from diarrhoeal and associated conditions, the prevention of which lay in avoidance of infection and a reasonable standard of nutrition. Good nutrition protected the child against the more serious consequences of diarrhoeal and other infections. Leading figures in the infant welfare movement in England and in Australia were careful to point out economic inequalities were not primarily responsible for the high level of infant mortality. Sir George Newman wrote in 1906, "Poverty is not alone responsible, for in many poor communities the infant mortality is low.... It is difficult to escape the conclusion that this loss of infant life is in some way intimately related to the social life of the people".¹⁰ The eminent medical man, Sir Charles Mackellar, who with Armstrong must be seen as a pioneer of infant welfare work in Sydney, wrote in 1917,

There is no doubt that poverty in some cases is a contributing cause as it is often associated with ignorance and usually with overwork [of the mother].... But although history shows that in the older countries of the world poverty is often associated with infant mortality, yet even there it is not by any means the only, or even the chief cause.¹¹

He went on to suggest that good mothercraft was the deciding factor. Good mothercraft was the core of what was communicated by lady health

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9 (Cont.)
the capacity of the mother was "the chief single factor in the welfare of the infants". Spence et al., op.cit., p.168. See also F. Grundy and E. Lewis-Faning, Morbidity and Mortality in the First Year of Life, Cardiff, 1957, p.72 and pp. 122-123.

¹⁰Newman, op.cit., p.vi.

¹¹Mackellar, The Mother, the Baby, and the State, Sydney, 1917, p.5.
visitors and later, clinic nurses. Since doctors were not necessary to this task, inroads on the preserves of private practice could be minimised. A set of infant welfare clinics, which were maintained by public funds and offered a service open to all, was thus fitted into a system which was based predominantly on private care purchased by the individual.

So popular did the doctrine of maternal ignorance become that Newsholme himself felt obliged to protest and to draw attention to the effects of unequal economic circumstances. He remarked it was "a comfortable doctrine for the well-to-do person to adopt...it goes far to relieve his conscience in the contemplation of excessive suffering and mortality among the poor".\(^\text{12}\) The working-class mother was not alone in her ignorance of the principles of infant care, Newsholme argued. But her ignorance was dangerous because it operated in an environment where housing and sanitary conditions were inferior, where prompt, adequate medical assistance for her baby and herself were often not to be had, and where care of her baby had to compete with other household duties for which she was solely responsible. What was needed was that "the environment of the infant of the poor should be levelled up towards that of the infant of the well-to-do".\(^\text{13}\) Commitment to rectifying maternal ignorance characterised early infant work in Sydney. At the beginning of his work W.G. Armstrong had decided against the establishment of milk depots as a means of reducing infant mortality. He was impressed by the importance of educating mothers and considered the promotion of breast-feeding more valuable than the issue of "a


\(^{13}\)Ibid, p.71.
The encouragement of breast-feeding and the teaching of mothercraft remained central to the infant welfare campaign in Sydney.¹⁵

The solution offered by the infant welfare movement to the problem of infant mortality was fitting. It also had the merit of being simple to organise and cheap to maintain at a time when public funds for health were very limited and when state intervention was virtually confined to control of environmental diseases and to the subsidising of voluntary bodies like hospitals which gave charitable aid to the sick poor. In its widest perspective a great deal of the problem of excess infant mortality was a result of urban poverty. Economic aid to the poor, a basic change in the economic order, would itself have drastically reduced the burden of infant deaths borne by the poorer classes. From this viewpoint the infant welfare movement, though effective in helping to reduce mortality, had the effect of softening one of the social consequences of undue economic inequality. It did not affect the system which produced gross differences of economic circumstance. In some respects there are noteworthy parallels between the infant welfare movement and the town planning movement.

¹⁴ M.J.A., Oct. 1939, p.642. Milk depots for infants were established in other Australian cities as part of the campaign against infant mortality. The Lady Talbot Institute operated in Melbourne and the Lady Chelmsford Institute in Brisbane.

¹⁵ Armstrong was influenced by French as well as English work. The influence of English medical officers of health, particularly Newsholme, has been noted already. New approaches aimed at reducing infant mortality were first tried in France. Professor Pierre Budin established a clinic, the first consultation de nourrisons, at the Charité Hospital, Paris in 1892. At the clinic babies were examined and weighed, breast-feeding strongly urged, and if necessary, a supply of sterilised milk provided. In 1894 Dr Léon Dufour established at Fécamp the first consultation organised outside an obstetrics hospital. He called it a goutte de lait and the institution soon spread to other provincial centres. M.J.A., Oct. 1939, p.642.
which emerged in Sydney at about the same time. Both were responses to urban pathologies and sought to solve glaring social problems. Both were predominantly middle-class in composition and directed their efforts to the problems of the urban working class. Inspired by British ideas, the town planning movement became active round the turn of the century. It offered the physical solution of better housing, parks, playgrounds and slum clearance to the social problems of crime, delinquency, overcrowding and ill-health. In 1913 a town planning association was formed. It was dominated by middle-class professional and business men like the leading architect, John Sulman. The exception was R.F. Irvine, a radical and Professor of Economics at the University of Sydney. He was the only key figure of the movement to appreciate that town planning would have to be linked with economic planning if social reform was to be achieved. The movement never dealt adequately with the basic question of maldistribution of economic resources. Irvine withdrew from the movement in 1917 apparently because of its failure to accept the political nature of planning. It is clear that the planners were motivated by a humanitarian concern for the conditions of the urban working class. But expediency and self-interest were also

16 Leonie Sandercock has a useful account of the town planning movement in Sydney in Cities for Sale, M.U.P., 1975, Chp.I. The kindergarten movement emerged in Sydney in the mid 1890s. It too was a response by the middle and upper classes to the problem of the slums. The kindergarten was viewed as a tool of urban social reform. The slum child was taught middle-class values like industriousness, cleanliness and self-discipline, and through the child, it was believed the whole family could eventually be taught middle-class norms. See P. Spearritt, "The kindergarten movement: tradition and change", in D.E. Edgar, ed., Social Change in Australia: Readings in Sociology, Melbourne, 1974, pp. 583-596.

17 Slum reform was an important objective. Archdeacon Boyce in 1896 foresaw "catastrophe in health or crime or both" if the slums were not removed from Sydney. An outbreak of bubonic plague on the city's waterfront in 1900 created a crisis. The Sydney Harbour Trust was created and given responsibility for administration of the wharves and redevelopment of the notorious Rocks slum area. Sandercock, op.cit., p.17.
involved because slums were seen to produce crime, violence and disease. They reduced the efficiency of the work force and tended to breed political discontent. In sum they threatened social, political and economic stability.

Humanitarianism undoubtedly inspired the efforts of leading figures in the infant welfare movement in Sydney such as Armstrong, Mackellar and the Hon. S.R. Innes-Noad, first President of the Royal Society for the Welfare of Mothers and Babies, successful businessman and prominent Nationalist Party member. But deep concern about population increase also motivated Mackellar and those running the Royal Society. Proposing establishment of the Society in 1918, Neville Mayman, President of the Benevolent Society, argued,

Having regard to the wastage in population caused by the war, an imperative obligation is laid upon New South Wales, and indeed all the Australian States, to initiate without delay a strenuous and continuous effort to save the life of every infant born, and to encourage the birth rate by practical means.  

C.K. Mackellar was the key figure of the Royal Commission on the Decline of the Birth-Rate of 1903. The enquiry was the high point of the intense debate about Australian population growth which took place over the two decades from 1890. Mackellar and most of his fellow Commissioners were political conservatives and social meliorists who saw improvement of the condition of the least privileged as their public duty. It was Mackellar who proposed the Commission request extension

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of its terms of reference to include "A general investigation of the mortality of infants in New South Wales; whether it is, to any extent, preventable; whether it is increasing; and its relation to the prosperity of the State". Plainly, the Commissioners saw contracting population growth as a threat to the existing social order:

In whatever way the waning birth-rate of New South Wales is viewed, whether its effects on the health, character, or social worth of individuals; on the value of the family [by which they meant the large family] as the basis of national life; on the quality and dignity of civic life; on the character of the people; on their social, moral, and economic progress; on their national aims and aspirations; or on their capacity to survive in the rivalry of nations; and whether it is viewed in the light of history or of science, it is seen as a grave disorder sapping the vitals of a new people, dispelling its hopes, blighting its prospects, and threatening its continuance.

The views of the Sydney Chamber of Commerce on population growth and economic expansion were quoted approvingly. These were essentially that anything restricting the growth of population of the country was "a menace and a detriment to its prosperity and progress". The Commission was concerned as well about the maintenance of European control of the country: "The future of the Commonwealth, and especially the possibility of maintaining a 'white Australia', depend on the question whether we shall be able to people the vast areas of the continent which are capable of supporting a large population". This last concern was not peculiar to conservatives. The need for a "White Australia" was a widely established belief, held by radicals and the

21 Quoted ibid, p.113.
22 Quoted ibid, p.134.
24 Ibid, p.53.
Labor movement as well. At the first Federal elections in 1901 each of the three political parties fighting the election prominently featured establishment of a "White Australia" in its programme. During the debates on the Immigration Restriction bill, the instrument for excluding people of non-European stock, no controversy occurred over the principle of exclusion. Argument had to do with the method to be adopted.  

I have suggested that in certain respects the town planning and the infant welfare movements were alike. Both were responses made round the turn of the century to important social problems associated with urban poverty. The leading personnel of both movements were middle, and, in some cases, upper middle class. In neither case was any basic change in the economic inequality which was ultimately responsible for the problems discussed. However the infant welfare movement did have a significant impact on the level of infant mortality in Sydney. It is impossible to assign any precise weight to each factor involved in the remarkable decline of the infant mortality rate. But the pattern of mortality and the trend in the rate were such that they strongly indicate organised infant welfare work exerted considerable influence during the first decade or two of this century. The fact is that the mortality rate began to fall markedly from about 1904, which was when Armstrong introduced his welfare measures. A very large part of this decline was due to the falling death-rate from diarrhoeal and associated conditions. This was the beginning of the uninterrupted downward trend  

25 A.T. Yarwood, Asian Migration to Australia: The Background to Exclusion 1896-1923, Melbourne, 1967, pp. 19 and 22. This assertion of the right to control the racial nature of Australian society was central to the nationalism of the time. Small and isolated, the new Australian nation was acutely conscious of the great populations of Asia. The necessity of peopling the continent with Europeans was seen as self-evident. G. Greenwood in G. Greenwood, ed., Australia. A Social and Political History, Sydney, 1955, p.204.
which marked the modern period. It is true that all the mainland States of Australia experienced a similar fall about 1904. Some common factor like more favourable climatic conditions or improvement in municipal sanitation resulting from the plague epidemic of 1900 probably played an important part in precipitating the notable decline of 1904. But a marked, downward trend in the mortality rate in Sydney was sustained, so that long-term forces were presumably at work as well as these unique influences.

Mortality from diarrhoeal and associated conditions fell dramatically from 61.4 per 1,000 births in 1901 to 21.9 per 1,000 in 1911. By 1933 it had fallen to 2.2 per 1,000, and was only 0.7 per 1,000 in 1947. There had been a slow downward movement from the mid 1880s to the early 1900s. This earlier, slow decline must largely be explained by improvement in the cleanliness of the city environment: the provision of an abundant and safe water supply and an efficient sewerage system. Improvement in the quality of the metropolitan milk supply from the 1880s probably contributed to this slow downward trend in infant mortality. These two forces continued to influence the situation in the early 1900s. But alone they seem unable to account


27 F.S. Hone pointed to the fact that there had been five to six years of drought round the turn of the century. The hot, dry summers presented fine conditions for the spread of diarrhoeal disease. Hone, M.J.A., May 1925, p.444.

28 Armstrong suggested the epidemic had this effect even in those States which escaped it. M.J.A., Oct. 1939, p.648. The year in which the infant mortality rate began to fall significantly was also the beginning of a period of rising living standards in Australia as indicated by an upward movement in per capita consumption. See N.G. Butlin in K. Hancock, ed., The National Income and Social Welfare, Melbourne, 1965, p.5. According to J.F. Nimmo, the Australian consumption standard probably increased more than five per cent in 1901-10. Nimmo in A.I.I.A., Australian Standards of Living, M.U.P., 1939, p.175.
for the dramatic fall around 1904. The most obvious new factor was Armstrong's advisory service which was specifically directed at reducing mortality from diarrhoeal and associated maladies. The core of Armstrong's approach was encouragement of breast-feeding. It remained the watchword of the infant welfare movement. In the following chapter I propose to look at the question of infant feeding. I will treat the question of the nature and larger aims of the infant welfare movement in a more detailed manner in Chapter 5.
Early authorities on infant welfare placed feeding at the centre of the problem of infant mortality. Newman claimed in 1906 that "suitable infant feeding...is a greater factor than any other single thing" in the prevention of deaths in the first year.\(^1\) Another authority asserted that "beginning with the second week of life, infant feeding is clearly the chief factor in the mortality".\(^2\) The relationship between feeding and mortality, especially mortality from diarrhoeal conditions, was stressed by nineteenth century medical writers. In a period before full understanding of the role of pathogens and of dietary elements like vitamins there was a tendency for excessive feeding to be confused with improper feeding as the cause of illness and mortality.\(^3\) Australian doctors, like their colleagues in Britain and Europe, argued the dangers of over-feeding, often side by side with warnings about the use of inappropriate artificial foods. This medical evidence suggests that the use of nutritionally inferior substitutes for breast-milk was widespread in Sydney as elsewhere in Australia in the later nineteenth century. Doctors regularly blamed mothers' ignorance. They only rarely acknowledged that lack of means might have played some part in the


\(^3\)See Wickes, p.501.
resort to poor substitute foods. It was not until rather recently that the combination of scientific knowledge, adequate technology and economic development provided safe alternatives to breast-feeding for the majority of babies in Western countries. As early as 1859 Sydney mothers were being accused of overfeeding their children and so helping to create the high level of mortality then prevailing. Dr Isaac Aaron, former health officer of the City of Sydney, told a parliamentary enquiry into the condition of the working classes of the city that infant mortality in Sydney was generally as great as that found in some of the most unhealthy places in England. He thought a major cause was the insanitary condition of the environs of the houses inhabited by the working class. But the personal habits of the people contributed:

They are in the constant habit of over-feeding their children — fearfully over-feeding them — and to that I attribute a great deal of the mortality, either directly or indirectly — directly, by the bad effects on the system, by the food itself being indigestible; and indirectly, by rendering the system less able to resist other influences by lowering its tone.

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4 Two modern students of infant care pointed out, "With higher material standards of living, including running water, efficient sanitation and a modern stove, it requires little effort to take the necessary hygienic precautions; and, in a more affluent society, the total cost of artificial feeding is no longer an important consideration". J. and E. Newson, Patterns of Infant Care in an Urban Community, Penguin, 1965, p.35. It is estimated that in contemporary America, Britain and Australia fewer than thirty per cent of women are breast-feeding six weeks after delivery. See D. Llewellyn-Jones, Human Reproduction and Society, London, 1974, p.125.

5 Sel. Com. Report on Condition of Working Classes of Metropolis, 1860, pp. 34-35. Dr Alfred Roberts told the enquiry that diseases of the digestive organs (diarrhoeal disease) were particularly common among the poorer classes of the city. He blamed mothers' mismanagement of infants for infant digestive diseases. He believed the ready availability of domestic work meant that lower-class girls could avoid the rigorous training in domestic service which in Britain prepared them so well for responsible motherhood. Ibid, pp. 130-134.
In the mid 1880s T.M. Kendall, late Senior Assistant Surgeon to the St Vincent's Hospital, Sydney wrote,

> During the short period of my practice here, I have been greatly struck with astonishment at the ignorance displayed by young mothers in the management of their offspring. In great measure I think this ignorance is due to the very early age at which women marry in this colony.

He believed the tradition of learning infant care within the family had broken down. The complaints about maternal mismanagement continued in the 1890s. In 1894 the Australasian Medical Gazette, organ of the B.M.A. branches in Australasia, lamented the fact that colonial mothers insisted on supplementing breast-milk soon after birth with all sorts of inappropriate foods.

Ignorance was the most frequently cited cause of improper feeding, but parental indulgence was sometimes mentioned. R.E.N. Twopeny, keen observer of urban Australia of the 1880s, had some interesting contrasts to make between the life-styles of the middle classes in England and the Australian colonies:

> Nurses are more expensive and mothers less fastidious than in England. Consequently, baby lives in the family circle almost from the time of its birth. Nurseries are few and far between. He is lashed into a chair by his mother's side at meals; he accompanies her when she is attending to her household duties, and often even when she is receiving her visitors.... There is no getting away from him, unless you shut yourself up altogether. He squalls at concerts; you have to hold him while his

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6 A.M.G., June 1885, pp. 228-229. In a rare example of a doctor recognising lack of means as an important factor, he observed that the small income on which couples commonly married and the large number of children typically reared deprived the individual infant of adequate care.

7 A.M.G., June 1894, p.205.
mother gets out of the omnibus, and to kiss him if you are visiting her house.8

The indulgent approach to infants seems to have been continued with children of older years. Indeed, children of all social levels appear to have enjoyed a freer family environment than was the case with most English families. Twenty-five years before Twopeny, Fowler observed that the Australian youth "for shrewdness, effrontery, and mannish affectation makes your London gamin pale into utter respectability".9 Thirty years after Twopeny another observer of Australian mores, Jessie Ackermann, commented on the "independence" of the Australian child. She regretted that "the great majority of children are sadly deficient in the personal charm of pleasing manners, which is by no means a 'station of life' defect" and that "children are often given too much liberty along apparently harmless lines".10

If mismanaged feeding was a common problem, what substitutes for breast-feeding by the mother were employed? Wet nursing was a long-established substitute. In England the practice of hiring wet nurses became very popular about the end of the eighteenth century. It grew less common in the course of the nineteenth century, and by 1900

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8Twopeny, Town Life in Australia, London, 1883, pp. 82-83. Elsewhere Twopeny discussed the problem of obtaining servants in Australia. They were in shorter supply, less amenable, and more costly than in England. Nurse-girls were usually young, untrained, and irresponsible. The position was considered to be the "lowest stage of servant-galdom". As a result many mothers preferred to do without such help, but they devoted themselves to their children "often at the expense of their husbands, and certainly of all social relations". Ibid, p.54. M.S. Brown suggested that one important reason for the failure of the upper classes in Australia to develop a distinctive type of family was just this persisting problem of obtaining competent domestic servants. See Brown in A.P. Elkin, ed., Marriage and the Family in Australia, Sydney, 1957, pp. 91-92.

9Quoted in Brown, loc.cit., pp. 97-98.

10Ackermann, Australia from a Woman's Point of View, London, 1913, pp. 87-89.
was apparently rare. In Australia the use of wet nurses was still being discussed in medical and lay literature on infant care around 1900. But the practice seems to have become uncommon after that time. At one social extreme the well-to-do employed wet nurses and, at the other, foundling institutions used them to feed abandoned and motherless infants in their care. In the 1870s the Sydney Benevolent Asylum, where indigent unmarried women were accoucheed, employed inmates who were feeding their own infants to suckle foundlings. The women were allowed two shillings per week for the service. The Infants' Home, Ashfield, one of the main centres for the care of abandoned babies in Sydney, suffered some opposition in its early years because it used wet nurses who were commonly thought to be immoral persons. In 1876 the institution announced to subscribers that since a good supply of cows' milk was available, the use of wet nurses could be reduced. The Home's report for 1897 announced that every effort was made to provide breast-milk for motherless infants. No mention of the use of wet nurses is made in subsequent reports. In 1903 Philip Muskett

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11 Wickes, pp. 336 and 418.

12 S.W. Mansfield, R.C. on Public Charities. Second Report, 1873-74, Minutes of Evidence, p.38. In Melbourne single women resident at the Victorian Infant Asylum while they cared for their new-born babies were often used as wet nurses in the 1890s. A.J. Wood, A.M.J., July 1893, p.325. Wood argued that if the parents had the means and a suitable wet nurse was available, wet nursing was to be preferred to bottle-feeding.

13 The institution was founded in the early 1870s to care for foundlings, infants "whose birth is the reproach of unfortunate mothers", and offspring of widows or deserted wives in poor circumstances. It was originally called the Sydney Foundling Hospital.

14 Second Annual Report, 1876, p.11. In 1889 the Home reminded the public that it did not admit the illegitimate infants of married women or of wet nurses. Fifteenth Report, p.7.

15 Twenty-third Report, 1897.
still advised parents that wet nursing was the safest alternative to maternal breast-feeding, but he observed "the matter of expense often stands in the way". However, for the great majority of mothers hand-feeding was the only alternative to breast-feeding.

Heavily starchy foods appear to have been used widely in infant feeding in Sydney and other Australian cities from the outset of my period. In the early 1870s Dr James Jamieson said it was commonly but wrongly believed that arrowroot was nourishing and easily digestible. Sago and maizena were also popular and too often they were used instead of milk, Jamieson claimed. The Sydney Benevolent Asylum issued a ration of arrowroot or sago for infants of women applying for relief. Arrowroot and sago were regularly served to children resident in the Asylum. Milk was sparingly provided. It did not figure in the children's diet, except perhaps in tea, and nursing mothers, who were inmates, could only receive a ration of half a pint per day when permission was given by the medical officer. This dietary pattern was probably the same as that generally followed by the poorer classes of the city.

Until the early twentieth century at least, the consumption of fresh milk among the less well-to-do in Sydney was very limited. In 1875 the New South Wales Medical Gazette claimed the city's poor were


17 Jamieson, How to Feed Infants, Melbourne, 1871, Chp.4.


19 Ibid, pp. 104-105. Relief rations provided by the Benevolent Society in the 1890s included "light food" such as sago and arrowroot for infants and invalids. R.C. on Public Charities. Second Report, 1898, p.xv.
debarred by the cost of milk from using it to feed their children. In the early 1900s it was claimed that working-class mothers, finding fresh milk expensive, restricted its use in infant feeding. Moreover, they believed it was not a particularly nutritious food. Boiled, grated flour was a rather popular alternative to milk for infants of poor families. One of the dangers to infant life cited by T.M. Kendall in the mid 1880s was the feeding of "tops and bottoms", which was the term for this cooked flour preparation. Kendall believed the use of such food produced slow starvation.

Patent infant foods and processed milks were available from the beginning of my period, although they seem to have become more widely used from the 1890s. The first condensed milk in "tin boxes" was produced by Nestlé's in 1866. Because of its cheapness, consumption of condensed milk very quickly increased. The cheaper brands, which naturally were purchased by the poorer, were very low in fat content and thus deficient in vitamins A and D. Infants fed on such milks often looked well but in fact were being poorly nourished and were low in vitality. Dried milk was being made from the 1850s. At first there were problems in preventing sedimentation when the milk was reconstituted.

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20 N.S.W.M.G., July 1875, p.304. Milk then cost eight pence per quart. This was approximately the retail price paid in the early 1920s. Attitudes as well as lack of means may well have restricted the use of fresh milk as an infant food. It was suggested in the 1890s that the "almost universal custom" of using arrowroot or cornflour was due to the belief that milk alone was an inadequate food. See Healthy Mothers and Sturdy Children, Melbourne, 1893, p.89.

21 Australian Home Journal, 2 July 1906, p.44.

22 A.M.G., June 1885, p.229.

23 T.S. Mort, the Sydney entrepreneur, was involved in experiments in the making of "desiccated milk" in the 1860s. He patented a method, but did not go on to market the product.
From the early 1900s large-scale processes, involving roller-drying or spray-drying, permitted the marketing of extensive amounts of dried milk in Europe.24

In the later nineteenth century a rapid development of patent infant foods took place. The eminent German chemist, von Liebig, produced what he considered to be the perfect infant food in the early 1860s. It never became popular. A medical authority wrote of it in 1876, "sensible parents will be content to leave the recipe for some coming race who may prefer art to nature".25 A variety of farinaceous preparations were marked in England: Boaden's food, made from barley and wheat flour; Prince of Wales' Food, from potato flour; and Plumbe's, made from pea, bean and potato flour. The next generation of foods used malted cereals: for example, Mellin's and Horlick's preparations. By 1883 twenty-seven brands were being offered to the public. To a varying extent they were all unsuitable as food for young babies.26 In the welter of competing claims both parents and doctors found it difficult to evaluate the different products.

Many of the patent foods and dehydrated milks sold in Britain were available in Australia from early in my period. In the late 1870s Dr C.D. Hunter warned parents against the claims made by the "numerous patent foods" advertised by chemists.27 Advertisements for Allen and Hanbury's malted farinaceous food and Benger's special foods were

24 Wickes, p.421.


26 Wickes, p.422.

appearing in the Australasian Journal of Pharmacy in the mid 1880s. Following something of a debate in professional circles over the proper feeding of infants in the mid 1890s, the Australasian Medical Gazette decided to pronounce authoritatively on the use of patent infant foods. Nestlé's was seen by the journal to be a good supplementary food for healthy babies over the age of six months. Mellin's or Benger's was recommended for sickly children over the age of six months, while Horlick's Malted Milk or Carnick's Soluble Food was thought to be useful for the same purpose. By the 1890s, various patent foods were quite popular, but their cost meant the less well-to-do did not usually use them. Condensed milk was a widely used infant food because of its convenience and keeping capacity, the unreliability of much fresh milk marketed in Sydney, and comparative cost. A.C. Carmichael, member for an inner-city electorate, told Parliament in the debate on the Pure Food bill of 1908 that in the poorer areas of Sydney condensed milk was used largely to the exclusion of fresh milk. He said, "Hon. members know that among the poorer classes, a mother... purchases condensed milk as a substitute for the food which should be provided by nature". The danger with condensed milk, as doctors so often warned, was that in diluting it to make it palatable, the mother rendered it nutritionally inferior to what the infant needed for sound growth. In any case some


30 In the early 1900s the Nestlé and Anglo-Swiss Condensed Milk Company, Sydney offered the public a choice of two infant foods: its established Milk Food, and a new Starchless Milk Food, specially developed for infants with digestive problems. See A Book for Mothers, Nestlé Co., 2nd ed., (c.1908).

brands were deficient in fats to begin with. The widespread use of patent foods and condensed milks for infant feeding in Britain in the late nineteenth century is thought to have been responsible for a good deal of infantile scurvy and rickets.\textsuperscript{32}

The evidence concerning the quality of many foods fed to infants suggests much under-nutrition existed in Sydney. Poor nutritional status and infection would have interacted to produce the high level of mortality from diarrhoeal and associated conditions characteristic of the infant mortality pattern in nineteenth and early twentieth century Sydney. A high incidence of rickets accompanied the use of nutritionally poor infant foods in Britain. There is ample evidence of rickets among the infant population of Sydney.

In 1891 Dr Philip Muskett of Sydney wrote that "conditions do exist in the large Australian cities which are unmistakably favourable to the development of rickets". He continued, "That it does exist I am thoroughly convinced, although with but rare exceptions, it is only a mild form of the malady, which peculiar feature, I shall endeavour to show, is entirely due to the semi-tropical nature of the climate".\textsuperscript{33}

\textsuperscript{32}Drummond and Wilbraham, \textit{op.cit.}, pp. 449-451.

\textsuperscript{33}A.M.G., July 1891, p.286. Rickets results from a deficiency of vitamin D and of calcium. To build healthy bones the body needs calcium salts and these cannot be utilised without vitamin D. In the later nineteenth century Cheadle had stressed the role of diet in the aetiology of rickets, so establishing the view that rickets was a fat deficiency disease. In 1919 Professor Edward Mellanby showed experimentally that the dietary factor was a fat-soluble substance, later identified as fat-soluble vitamin D. His views seemed to be at variance with those of another school which stressed the role of fresh air and sunlight in preventing rickets. The two viewpoints were reconcile when it was found the ultra-violet rays of the sun produce vitamin D in the skin. A child with rickets can be treated by the administration of vitamin D directly or by the use of sunlight treatment or ultra-violet therapy. The value of cod liver oil (as a source of vitamin D) was known empirically as early as the later eighteenth century. It was used in the treatment of rickets in parts of England and in Scotland at that Continued...
Perhaps because they were used to the more serious rachitic conditions found in Britain, early Australian doctors saw no evidence of rickets in colonial infants. The notion that rickets did not exist in Australia became established. Muskett's challenge to this established idea was soon supported by evidence from doctors practising in other parts of the Australian colonies. Whether rickets had become more common by the 1890s because of an increase in the use of patent foods and other deficient preparations or whether earlier doctors missed seeing rachitic conditions because they were less manifest than in Europe is uncertain. Muskett and others stressed that the average case was less serious.

A.J. Turner, surgeon at the Hospital for Sick Children, Brisbane suggested in 1892 rickets in Australia was less severe because older children, being better fed, recovered quickly, and children here enjoyed more sunlight and fresh air than those in many English cities. He also suggested that rickets had a larger impact on mortality than was at first obvious. He said,

Though rickets rarely appears on the mortality returns as a cause of death, there is no doubt that it indirectly largely influences the mortality of the first two years of life. It is well known for instance how readily rickety children succumb to attacks of bronchitis or whooping-cough. Our relatively low mortality from these diseases must be partly ascribed to our fewer cases of rickets and not entirely to the direct influence of the climate.

33 (Cont.)
time, and it was later used in Holland and Germany. Rickets was one of the most common causes of convulsions in older infants before the routine administration of vitamin D. It will be remembered that convulsions were a significant cause of infant mortality in Sydney in the later nineteenth century. Drummond and Wilbraham, op.cit., pp. 176-182. Wickes, pp. 496-497.

34 In 1868 Gee found that thirty per cent of children under the age of two years admitted to the Hospital for Sick Children, Great Ormond Street, were rachitic. Wickes, p.496.

A.J. Wood, medical officer to the Children's Hospital, Melbourne made the same point about better recovery from rachitic conditions than in Britain. He was sure that rickets, particularly in an incipient form, was very common among colonial, bottle-fed children. But the more pronounced symptoms like bow-legs and curved forearms were not nearly as common as in England and Scotland because generally

the lower classes in the colonies have a much more plentifully supplied table than the same classes in the old country, and that as soon as the children become old enough 'to have whatever is going', they are quickly cured of the results of injudicious bottle-feeding.  

In 1903 Muskett was still maintaining rickets was common among infants in Australian cities. He wrote, "...the malady is of very frequent occurrence here. But the rickets is not of such a severe type as it often is in the old country". Yet in 1908 W.F. Litchfield, arguing from experience at the Royal Alexandra Hospital for Children and at the Women's Hospital, Crown Street concluded rickets was not common in Sydney and when the condition did occur, it was mild in form. While Muskett may have exaggerated when he claimed rickets was "very frequent", Litchfield's conclusions do not close the matter. Dr Harvey Sutton estimated from surveys of school children in Victoria in 1910-15 that twenty to thirty per cent had suffered from rickets. He said he had made similar findings in Sydney. Tests of young children at school in Sydney in the early 1920s revealed that about ten per cent were significantly below the height-weight standard for their age. Sutton suggested this was the result of rickets in infancy, vitamin-deficient

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diets at early ages, and infectious disease. A survey done by the New South Wales Department of Education on the health of children in public schools in 1908-9 revealed some interesting physical differences between children of different social classes. Ninety-eight schools in the Sydney area were visited. Children at schools in well-to-do areas were above average in height and weight, superiority being most evident in older age-groups. Children in schools in poor areas were below average, especially in weight, and this was more marked in higher age-groups.

In 1929 a survey involving over 200 infants admitted as outpatients to the Quay Street section of the Renwick Hospital for Infants was done. This section of the Hospital was located in a lower-class area of Sydney. On clinical evidence fifty-two per cent were found to have indications of rickets. The disorders were mild to moderate in form. In 1923 a series of 111 infants were examined at the Royal Alexandra Hospital for Children for evidence of rickets. Just over twelve per cent showed signs of the condition. Most of the rachitic infants had been fed on dried or sweetened condensed milk. No breast-fed child showed evidence of rickets. It seems, then, that rickets, arising from poor diet but generally presenting in a mild form, existed on an appreciable scale in Sydney in the later nineteenth and


40 A.M.G., April 1910, pp. 224-226. In a survey of three Melbourne schools, the results of which were reported in 1914, Sutton found 48 per cent of those known to have been artificially fed as infants and only 17 to 26 per cent of those who were breast-fed for at least six months had signs of rickets. Trans. Aust'sian Med. Congr., 1914, p.541.


early twentieth centuries. As might be expected, infants in working-class families were more likely to suffer from the condition. A diet of condensed milk, a substitute infant food common in poorer areas of the city, was often associated with clinical cases of rickets. As Muskett observed, many infants in Australian cities, while probably less burdened by deficiency diseases than their English cousins, suffered the consequences of poor post-weaning diets.

Harvey Sutton suggested in 1920 that the "crusade in favour of breast feeding" in Sydney had very much helped to reduce the infant mortality rate and to reduce the incidence of rickets.\(^{43}\) The advisory service initiated by the first metropolitan medical officer of health, W.G. Armstrong, in 1903-4 was a very important factor in improving the nutrition of infants in the city. The great strength of his approach lay in his double-pronged attack on the problem of infant disease and mortality. By the promotion of breast-feeding the service reduced the use of poor-quality foods in the early critical months. It thus helped promote better resistance to stresses like infections and rickets. Above all, it acted upon the great killer of city babies, diarrhoeal disease.\(^{44}\) Breast-feeding considerably reduced the risk of death from intestinal disease because, first, it offered protection against infection


\(^{44}\)In the mid 1930s Newsholme pointed to the great decline in the incidence of rickets which had taken place in England. He believed it was one of the outstanding achievements of the infant welfare movement. He also pointed to the connection between rickets and diarrhoeal disease: "One cannot fail to be struck with the parallelism between the decline in the prevalence of epidemic diarrhoea and of rickets...as rickets is a disease of malnutrition, it is certain that the reduction of rickets has been largely due to the reduction of diarrhoea, with its immense drain on nutrition and the occurrence of prolonged 'marasmus', which in the past has figured so largely in the list of causes of death in infancy". Fifty Years in Public Health, p.362.
and secondly, it increased capacity to resist infection. Where artificial feeding was unavoidable, Armstrong's service advocated nutritionally sound substitutes for breast-milk and stressed the need for hygienic preparation of the infant's food and for domestic hygiene in general. The notable decline in mortality from diarrhoeal and associated conditions in Sydney in the early years of this century was not merely coincidental in time with the rise of infant welfare work, it was causally connected with this factor.  

W.G. Armstrong carried out a number of surveys of infant feeding practices in cases where infants died from diarrhoeal disease. These showed the connection between poor nutrition and diarrhoeal conditions. The evidence gains weight when viewed together with the evidence of earlier medical writers. Of 116 infants who died of diarrhoea in the City of Sydney (Sydney less the suburbs) in 1903, only 5 had been wholly breast-fed at the time of the illness and 30 had been artificially fed from birth. Of 111 babies being fed on substitute foods, 56 per cent were being fed solely or chiefly on condensed milk. In 1904 there were 65 diarrhoeal deaths in the City, of whom fewer than 3 per cent were wholly breast-fed, 18 per cent were fed on condensed milk, 21 per cent wholly or in part on cows' milk and 55 per cent wholly or partly on other artificial foods. In 1906, 52 babies died of diarrhoeal disease. Of these 6 only were being fed entirely on breast-milk, while 15 were receiving condensed milk only, and another

45The longer-term effects of better infant nutrition are to be seen in the fact that a survey of approximately 16,000 New South Wales school children carried out in the late 1930s revealed a definite improvement in average height and weight on the average established by a 1918 survey. M.J.A., Feb. 1939, p.240.

46M.O.H. Report, 1903, p.15.

47M.O.H. Report, 1904, p.15.
were receiving condensed milk plus other artificial foods. The small proportion of fatal cases who were breast-fed and the popularity of condensed milk and other nutritionally less desirable foods supports the view that poor nutrition contributed to diarrhoeal mortality.

Breast-feeding undoubtedly conferred considerable benefits on the infant. The promotion of breast-feeding was the main thrust of Armstrong's campaign. The campaign successfully promoted the practice. By 1911 his health visitors were reaching almost 4,500 new-born infants a year. This represented about twenty per cent of all infants whose births were registered in the metropolitan area in 1911. Among infants visited in the City of Sydney the percentage of wholly breast-fed increased from 72.2 at the start of the campaign to 94.2 in 1914. The emphasis on breast-feeding remained primary after the baby clinics took over from Armstrong's original scheme. Unfortunately, the practice of giving detailed figures in annual reports fell away. However it is clear that the proportion of women who breast-fed remained high. The

48 M.O.H. Report, 1906, p.16.

49 There was a great deal of evidence collected by medical officers of health in England on the connection between hand-feeding and high infant mortality, and more specifically on the connection between hand-feeding and high diarrhoeal mortality. Some examples are given in Appendix 4.


1 D-G Report, 1914, p.79. From 1913, with the introduction of the Commonwealth maternity bonus, which encouraged speedier notification of births, the average age of babies at the first visit fell from 5½ to 3 weeks. The high percentages for 1913 and 1914 must be partly discounted because of the earlier age at the first visit, it being known that the practice of breast-feeding fell away with the lapse of time. In 1909 the visiting service was extended from the City to the surrounding working-class suburbs. The proportion of infants wholly breast-fed in these suburbs increased from 86 per cent in 1911 to 91 per cent in 1913. After 1914 the clinic system replaced the visiting service. M.O.H. Report, 1911, p.13 and D-G Report, 1913, p.86.
Director of Maternal and Baby Welfare, E.S. Morris, said in 1928, "The chief aim...of the Centres is to encourage and to help establish the breast-feeding of all babies. Artificial feeding is only advised when it is found...that it is necessary to complement the breast milk".\(^2\)

In 1929 it was estimated that about seventy-five per cent of all babies under nine months attending the clinics were wholly breast-fed. In some areas the total was a high as ninety to ninety-five per cent.\(^3\)

The two-pronged attack on diarrhoeal and associated mortality by Armstrong from the early 1900s was focussed on the poorer areas of Sydney — the City and the predominantly working-class inner suburbs. It has been shown previously how a disproportionate burden of diarrhoeal mortality fell on the infants of the urban lower classes in Britain. Armstrong's scheme was consciously aimed at the most vulnerable groups in Sydney society, at those who were least likely to obtain prompt, adequate medical treatment for their sick infants and who were more prone, from ignorance or poverty, or both, to provide a nutritionally inferior diet when breast-feeding was discontinued. It would be useful then to compare the infant mortality rates of three middle-class suburbs with those of three working-class suburbs in 1901, just before the introduction of organised infant welfare work in Sydney, and in 1911 a few years after it had been in operation. Unfortunately, the vital statistics did not give mortality by cause at the level of the municipality. But it may reasonably be presumed that diarrhoeal and associated mortality was just as significant at this local level as it

\(^2\)D-G Report, 1928, p.32.

\(^3\)D-G Report, 1929, p.32. The Director of Maternal Welfare noted in 1930 that the degree of breast-feeding was lower than normal because in industrial areas depression conditions meant many mothers were so undernourished themselves they were forced to resort to artificial food for their infants. D-G Report, 1930, p.31.
was at the metropolitan level.\textsuperscript{4}

<table>
<thead>
<tr>
<th>Infant Deaths per Thousand Births</th>
<th>1901</th>
<th>1911</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mosman</td>
<td>75</td>
<td>38</td>
</tr>
<tr>
<td>Strathfield</td>
<td>44</td>
<td>80</td>
</tr>
<tr>
<td>Lane Cove</td>
<td>26</td>
<td>51</td>
</tr>
<tr>
<td>Waterloo</td>
<td>166</td>
<td>102</td>
</tr>
<tr>
<td>Redfern</td>
<td>162</td>
<td>96</td>
</tr>
<tr>
<td>Alexandria</td>
<td>193</td>
<td>92</td>
</tr>
</tbody>
</table>

Source: M.O.H. Reports, 1901 and 1911

In 1901 the three working-class suburbs, Waterloo, Redfern and Alexandria, had markedly higher rates than Mosman, Strathfield and Lane Cove.\textsuperscript{5} In 1911, when the mortality rates of the working-class

\textsuperscript{4}It should be noted that the number of deaths at the municipal level was so relatively small that rather slight changes tended to be reflected as fairly large fluctuations in the mortality rate. The infant mortality rate has traditionally been accepted as a sensitive indicator of socio-economic conditions, especially the post-neonatal rate. During the first month of life the influence of biological factors is much greater. Many studies have shown infant mortality tends to vary inversely with socio-economic status. See, for example, R.M. Titmuss, Birth, Poverty and Wealth, London, 1943, for England, and R.M. Woodbury, Causal Factors in Infant Mortality, Washington, 1925, for the United States. Early writers on infant mortality were well aware that significant differences in mortality between areas of the same city or town commonly reflected differences in socio-economic status between the areas. See H.T. Ashby, op.cit., p.24 and Newman, op.cit., pp. 186-189. W.P.D. Logan in the 1950s drew attention to the fact that, in spite of the great reduction in infant mortality in England and Wales over the previous thirty years, no narrowing of the differences between the rates of the various social classes had taken place. See Logan, "Social Class Variations in Mortality", Brit. J. of Preventive and Social Medicine, vol.8, 1954, p.135.

suburbs had fallen significantly, they were still higher than the highest rate recorded by a middle-class suburb. Yet the working-class suburbs experienced considerable falls between 1901 and 1911. It might reasonably be suggested that these significant declines were at least partly due to the impact of Armstrong's advisory service. The service did not include the three middle-class suburbs in 1911.

In this chapter I have tried to present additional evidence in support of the proposition that many infants, and particularly infants of working-class families, in Sydney in the later nineteenth and early twentieth centuries were poorly nourished. Poor nutrition and widespread infection interacted, as is frequently the case in contemporary, underdeveloped communities, to produce a high level of infant mortality from diarrhoeal and associated conditions. I have also tried to show that Armstrong's campaign had a significant impact on this very large component of total infant mortality. Cows' milk was a common substitute for breast-milk. Reformers in Australia and overseas, concerned at the excessive rate of infant deaths, gave much attention to the question of the purity of urban milk supplies. The next chapter will examine the relationship between the quality of the metropolitan supply and the decline in infant mortality in Sydney.
Animal milk, particularly cows' milk, has been used as a substitute for breast-milk in the feeding of infants in the Western world at various times since the Graeco-Roman period. Writers on infant feeding last century almost always advocated the use of modified cows' milk as the best substitute. The later nineteenth century saw the development of efforts in the United States, England and Australia to organise the supply of cities with milk from country areas. Dairying ceased to be a local industry as technological and economic forces transformed the supply of liquid milk to city-dwellers into a large-scale business operation.

London was one of the first great cities to experience these changes. The railway brought the milk from the surrounding countryside, but there was an almost complete absence of processes for safeguarding the purity of the milk on its journey from farm to consumer. Urban dairies, the traditional sources of city milk, were fast disappearing from London by the 1880s.\textsuperscript{1} The town dairies were adversely affected by changes in the balance of transport costs. It was now less costly to bring milk into London than to bring fodder in and take manure out of the city. A series of epizootics added to the difficulties of the

\textsuperscript{1}In the 1850s there were possibly 24,000 cows in the metropolitan area. Drummond and Wilbraham, \textit{op.cit.}, p.355. By the 1890s the suburbs around the metropolis were supplied by producer-retailers located on the periphery of the city. Central London received its milk from more distant areas, from farms situated thirty to fifty miles away or from cooling depots located along the railways fifty and more miles distant from London. E.H. Whetham, "The London Milk Trade, 1860-1900", \textit{Economic History Review}, vol.XVII, 1964, p.379.
urban dairies. Apart from the growth of rail transport itself, important technical developments like the introduction of the tin-plated churn with a tight-fitting lid between 1870 and 1880 promoted the expansion of the country milk trade. A significant rationalisation of commercial organisation took place between 1895 and 1905, a number of large dairy combines evolving out of various local firms. Technical advances such as the cooling of milk in country depots, pasteurisation and bottling followed: "By 1914, the London trade was dominated by four or five wholesalers, equipped with country depots, a huge supply of churns, regular contracts with the railways, pasteurising plant and cold stores in their town dairies". Generally the technical and economic development of the milk supply of Sydney was similar to that of London, except that significant changes often occurred later.

The author of a recent study, M.W. Beaver, suggested that the significant fall in infant mortality in England and Wales at the beginning of this century was associated with the development of "a pathogen-free supply either in a fresh, condensed or dried form". Another influence might have been "the increasing availability and cheapness of cows' milk". While wanting to allow a good deal of weight for the infant welfare services provided by health visitors and midwives, he has argued that the influence of clean milk began to operate on infant mortality in England earlier than that of the advisory services. He further proposed that the "cornerstone of the infant welfare movement was a safe supply of milk and the emphasis was on safe

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3Beaver, p.254.

artificial feeding..." I believe his proposition that the cornerstone of the infant welfare movement was a safe milk supply is very questionable. The emphasis, as I have suggested previously, was primarily on breast-feeding, just because there was no generally reliable source of substitute food for the majority of infants. Moreover, if the experience of Sydney is any guide, Beaver exaggerated the impact of pasteurisation in its early years. It is difficult to accept that in the early 1900s pasteurisation ensured clean and pathogen-free whole milk to any large extent. It is difficult to accept because of the methods then used and because, even if safe on departure from the pasteurisation plant, the milk was very vulnerable to contamination en route to the customer, given the way the product was then distributed. However the case in England, I suggest that in Sydney a safe and clean milk supply did not exist at the time when the modern decline in infant mortality began in the early 1900s. This is not to assert that a cleaner milk supply played no part in the decline of infant mortality. Rather, it was probably less important than the promotion of breast-feeding practices and domestic hygiene, which were the main objectives of the infant welfare movement.

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6 Writing as late as 1950, W.M. Frazer expressed dissatisfaction with the quality of the milk supply in England: "...the majority of consumers have to be satisfied with accredited milk which is clean but not safe, pasteurised milk of the ordinary kind which is safe, but is sometimes produced from consignments of rather unsatisfactory milks, and undesignated milk which is not free from the risk of infection by pathogenic organisms and is oftentimes far from clean". Frazer, op.cit., p.466.

7 Some additional evidence is available from a study done in the United States in the 1930s. C-E.A. Winslow and D.F. Holland, "The Influence of Certain Public Health Procedures upon Infant Mortality", Human Biology, vol.9, 1937, pp. 133-174. The study set out "to determine whether the influence of...the pasteurization of milk and the provision of infant welfare clinic service [sic], could be shown by sound

Continued...
Modern bacteriological knowledge made an important contribution to the improvement of urban milk supplies. The 1880s saw a series of investigations by Robert Koch and other scientists, which identified important bacterial pathogens. In the 1890s numerous studies in the bacteriology of milk were carried out. In 1890 Babcock's invention of a simple method of assessing the butter fat content of milk enabled accurate measurement of quality to be established. Just before World War I the work of chemists and biologists revealed the high nutritional value of milk. Soon after, as the significance of vitamins became more widely appreciated, efforts were made to encourage the consumption of more milk. Yet well before the advent of germ theory and modern epidemiology, milk was being named as the means by which typhoid, scarlet fever and diphtheria were sometimes spread. The study of milk-borne diseases took on new strength as bacteriology expanded understanding of the agents involved. In 1901 the great Koch had publicly expressed his doubts that milk from tuberculous cows was a danger to humans. In the early 1900s various

7 (Cont.)
statistical analysis to have had specific demonstrable influence upon the infant mortality rate of certain American cities". Ibid, p.134. The data concerning the development of pasteurisation failed to reveal a relationship between the progress of pasteurisation and the decline in infant mortality significant enough to warrant the assertion of a causal connection. But the data on pasteurisation was incomplete enough for the authors to warn that their finding should "not be taken as creating any substantial doubt as to the value of the practice of compulsory pasteurization". Ibid, p.172. Yet even the rather limited material available concerning the growth of the infant clinic services permitted the demonstration of the value of the services. For the decade, 1920-29, when the fullest development of clinics took place in the period studied, there was a significant statistical relationship between the fall in the infant death-rate in the cities included in the study and the ratio of visits to clinics by the infant population. Ibid, p.173.

8 One historian has shown that medical and scientific writings on the subject of milk increased greatly from about 1889, the period of growth being sustained until about 1915 when there was a marked falling away of interest. C.E. North, "Milk and Its Relation to Public Health", in M.P. Ravenel, ed., _op.cit._, pp. 237-238.
research workers showed conclusively that the bovine form of tuberculosis is transmissible to humans, especially children.

The connection between infant mortality and cows' milk had been noted early in the nineteenth century. But doctors in Germany and France were the first to pursue systematic studies of the relationship between milk infections and infant deaths. In 1886 Soxhlet of Munich urged that cows' milk intended for infant feeding be boiled or sterilised for about thirty-five minutes to destroy any pathogens. Dr A. Caillé of New York publicised Soxhlet's methods in the United States. In 1907 the American, C.E. North, showed that commercially acceptable quantities of milk could be heated to temperatures required to destroy pathogens without distorting taste or appearance. The process used became known as the "holding method" of pasteurisation.\(^9\) The movement for pasteurisation came to England from the United States. In America the practice had spread quickly to the large cities, but smaller ones were slower in requiring pasteurisation to be carried out. The basic reason why large distributing companies introduced the practice was that it improved the keeping quality of milk. Official recognition of the need to regulate pasteurisation was slow coming in England, as it was in New South Wales. The first regulations concerning pasteurisation were introduced in England in 1922. Regulations relating to cleanliness of milk however had existed from the 1880s, the local authorities being the enforcing agents.\(^10\) In the United States the

\(^9\) In the 1880s machines were developed in Denmark for the rapid heating of large quantities of milk, the heating being followed by rapid cooling. The "flash method" was being used in Germany and the United States in the 1890s, but the machinery was not absolutely reliable and large-scale adoption was delayed.

\(^10\) In 1885 the first of a series of Dairies, Cowsheds and Milkshops Orders was made by the Privy Council under the Contagious Diseases (Animals) Act, 1878. They dealt with cattle inspection, cleanliness of milk receptacles, and protection of milk from contamination. Undoubtedly they improved the cleanliness of milk. Frazer, op.cit., pp. 463-466.
first legislation relating to milk was enacted by Massachusetts in the 1850s. It prohibited the adulteration of milk. Bacterial standards were first proposed by New York in 1901, the standard being one million organisms per c.c. The proposal was not implemented.

At an early date New South Wales adopted legislation concerning adulteration of milk, an Act to do with adulteration of food and drugs being passed in the 1870s. The New South Wales law was patterned on English legislation. In 1850 The Lancet had appointed a commission to investigate adulteration of food. Public opinion was roused and a parliamentary enquiry followed. As a result, the Adulteration Act of 1860 was passed. It was amended by the Act of 1872. The legislation made illegal adulteration of food or drugs or the addition of injurious substances. Administration having proved difficult, a new law, the Sale of Food and Drugs Act, 1875, which permitted local authorities to appoint public analysts, was passed. The appointment of such analysts was made compulsory by an Act of 1879. The New South Wales law on adulteration had likewise proved difficult to administer. It appears to have fallen quickly into disuse.

Like London and other Western cities prior to the coming of fast, rail transit from country areas, Sydney depended at the outset of my period on urban dairies for its public milk supply. Dairying had also developed in the 1840s in the Illawarra district of the colony, south of Sydney. Butter from Wollongong was being sold on the Sydney market in 1849. Milk from the district was sold in Sydney at an early date. In 1856 Wollongong milk was advertised for sale at one shilling

11 Frazer, op.cit., p.226.
a quart at a depot in the City. But dairying south of Sydney was mainly devoted to the production of butter, a less perishable product, until the later 1880s when railway development enabled South Coast dairymen to send fresh milk to the metropolitan area. The factory method of butter production spread quickly through the Illawarra area during the 1880s. The first factory in New South Wales was established by the New South Wales Fresh Food and Ice Company at Mittagong in 1882. The firm encouraged the creation of farmer cooperatives, and within a few years there were a number of factories in the area. While butter production dominated dairying in the Illawarra district until the later 1880s, liquid milk for the Sydney market was being brought from an adjoining area from the later 1870s. The firm which pioneered the trade was T.S. Mort's New South Wales Fresh Food and Ice Company.

Of all his various entrepreneurial ventures, Mort is perhaps best known for his role in the development of refrigeration for use in the export of meat. He supported E.D. Nicolle's experiments with refrigeration in the 1860's and made an unsuccessful attempt to ship a consignment of frozen meat to England in 1877. But he was also interested in the use of refrigeration to promote the growth of other colonial primary industries like milk and fish. Mort had acquired a large estate at Bodalla, south of Sydney, in 1856, and in 1864 he turned it over to dairying. The distance from Sydney prohibited the transport of liquid milk and Mort was forced to specialise in the making of cheese.


and butter. In 1867 he and Nicolle patented a technique of making powdered milk by a process of freezing and desiccation. The new product would have required extensive commercial promotion, and powdered milk was soon abandoned when Nicolle improved his refrigerating equipment to the point where frozen food could be sent in insulated railway vans.

Mort now worked on a plan to bring fresh country milk to Sydney. The southern tablelands, being served by the railway, were an appropriate collecting area. 15

Mort's intentions were first disclosed to the public when the Sydney Morning Herald reported in July 1875 that he had been visiting the Berrima district to interest farmers in supplying him with milk. 16 It said he was prepared to take up to 20,000 quarts a day. It pointed out to farmers the financial advantage of selling milk regularly to Mort compared with using it for butter production. 17 Mort indicated he hoped to sell milk at a retail price of four pence per quart, half the price charged by urban dairies. The Herald saw humanitarian concern as well as personal profit in Mort's plan. It said,

"...by devoting his capital and freezing invention to meat preserving, he could gain a much larger return...but, feeling that for a long time the enormous death-rate among infants in Sydney has been largely brought about by the use of impure and poisonous milk, he is about...to make an effort to supply Sydney with pure and unadulterated milk from the country districts.... What a boon it will be to Sydney if this project can be carried out successfully, and if so the miscalled milkmen of Sydney will soon find their occupations gone." 18

15 Ibid, pp. 102-103.


17 S.M.H., 17/7/75, p.10.

18 S.M.H., 17/7/75.
A bitter, if intermittent, paper war on local dairymen had been going on for some time. Just after the public discussion of Mort's plan, the Herald reprinted from the New South Wales Medical Gazette a strong attack on the city's dairymen. The Gazette shouted indignantly that even at eight pence per quart local dairymen said they could not afford to sell milk without added water: 19 "Pure milk being beyond the reach of many of the lower order, infants are fed on farinaceous foods mixed with water.... Thus it happens that the children of the poor grow up rickety and weak...." It called upon the legislature to attend to the quality of the milk supply and to "see that a barefaced imposture is detected, exposed, and punished". 20

To carry out his plan to bring country milk to Sydney and his project concerning the export of frozen meat, Mort formed the Fresh Food and Ice Company in July 1875. 21 The company's first supply of country milk left Bowral in October 1876. During the first month 6,400 gallons of milk were sent to Sydney. The trade gradually increased to 2,000 gallons per day. In the beginning only four or five delivery carts were needed in Sydney. But by 1886 thirty-four were carrying milk to customers. When supply was greater than demand, surplus milk was made into butter at the company's factory at Mittagong. In the later 1880s it seems that suppliers ceased sending milk for a time. Supply resumed early in 1889 when a new price was negotiated.

19 N.S.W.M.G., vol.5, July 1875, p.303.
20 Ibid, p.305.
21 He held £100,000 worth of fully paid shares in it. After his death in 1878 the handling of frozen meat was abandoned. Moderate dividends were distributed by the company from the 1880s. It experienced serious reverses early in this century, but recovered, paying good dividends until the 1920s. It was absorbed by Peters Consolidated Milk Industries in 1952. Barnard, op.cit., pp. 210-211.
The New South Wales Fresh Food and Ice Company remained the major supplier of country milk to the Sydney market until at least the end of the nineteenth century. Sands's Sydney and Suburban Directory for 1890 listed two other firms as suppliers of country milk: the Country Milk Company and the South Coast and West Camden Cooperative Company. In 1890, the Farmers' and Dairymen's Milk Company, which was quickly to become a major milk distributor, was formed. A cooperative of country dairymen and city vendors, the company initially distributed 500 gallons per week. By 1904, it was handling 30,000 gallons per week. In 1901 it established a pasteurising plant at its Sydney depot. In the early 1900s it claimed the plant was the largest in Australia.22 In 1900 the Dairy Farmers' Cooperative Milk Company, destined to become the largest of the distributing companies in Sydney, was established by a group of South Coast dairymen who wanted to become independent of the existing distributors.23 By 1912 it was doing well enough to pay its first dividend. In 1927 the directors decided to consolidate the position of the company, and in 1929 Dairy Farmers absorbed two large competitors, the Farmers' and Dairymens' Company and the Camden Vale Company.24 During the sometimes stormy parliamentary debate of 1931 on the organisation of the metropolitan milk supply, Labor members charged that Dairy Farmers had set out to obtain monopoly control of


24 The Macarthur Onslow family in association with other Camden farmers had formed the Camden Vale Company in 1920, the family providing the bulk of the initial capital.
milk distribution. The share of the total supply enjoyed by country milk grew considerably in the period from 1900 to World War I. In 1903 it accounted for fifty-five per cent of the total supply. By 1912 it accounted for sixty-nine per cent. The share enjoyed by raw milk produced in dairies located in the Sydney area fell accordingly. In 1934 country milk supplied about seventy per cent of the metropolitan market. The rapid decline of the share held by local dairies in the years before World War I was due to three factors, the rising value of land as the city grew, the high price of fodder, and the cost of wages in a situation where urban dairymen distributed as well as produced milk.

The first attempt to improve the quality of Sydney milk by legislative means was the Adulteration of Food Prevention Act of 1879. The law would seem to have been largely unused. Up to 1884 only one prosecution had been brought and this resulted in a dismissal.

During debate of the 1896 Public Health bill, the member for Warringah, D. Thomson, asserted, "The fact is that the present Adulteration Act which has been in existence since 1879 has been practically a dead

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25 In 1930-31, 17.4 million gallons were distributed, Dairy Farmers distributing 9.9 million, the New South Wales Fresh Food and Ice Company 3.3 million, the rest being handled by a number of smaller companies. Figures quoted by the Hon. W.T. Ely, Minister for Health, N.S.W.P.D., vol.129, sess. 1930-32, 2/9/31, p.5891.


27 Adulteration of milk was a long-established practice in Sydney. In 1859 Dr W.J. Williams complained about the watering of milk. Williams noted the water was not always clean. He told the Sydney Philosophical Society milkmen had been seen adding water to their milk from a filthy pond at the junction of Newtown and Parramatta roads. The Lancet, vol.2, 1859, p.657.

The failure of the first legislation on milk was partly due to the fact that local authorities were notoriously reluctant to proceed against those carrying out adulteration. The lack of public analysts also hindered the effective operation of the Act.

The next piece of legislation concerning milk resulted from growing attention to the communication of diseases via the milk supply. Milk-borne typhoid fever was uppermost in the minds of those responsible for the Dairies Supervision Act of 1886. This focus reflected contemporary epidemiological concentration on the water and milk supplies as primary modes of typhoid dissemination. Dr C.K. Mackellar, later to play such an important role in the development of the infant welfare movement, introduced the legislation in the Legislative Council in 1886. It was based on a section of a Public Health bill drafted and introduced by him the year before. The health bill had not proceeded beyond a first reading. The Dairies Supervision legislation was an emergency measure taken by the Jennings Government in response to a Board of Health report on an epidemic of typhoid traced to a dairy in the suburb of Leichhardt. The epidemiological enquiry was the first of its kind in Australia and was carried out by Dr John Ashburton Thompson, deputy medical adviser to the Government and subsequently President of the Board of Health. Thompson found that the well on the Leichhardt dairy had been polluted by sewage from

\[N.S.W.P.D.,\ vol.85,\ sess.\ 1896,\ 6/10/96,\ p.3757.\]

\[The\ concept\ of\ the\ human\ carrier\ was\ not\ generally\ accepted\ until\ the\ 1900s,\ although\ it\ was\ suggested\ by\ Robert\ Koch\ and\ his\ associates\ following\ their\ study\ of\ the\ cholera\ epidemic\ in\ Germany\ in\ 1892-93.\]

\[Thompson\ had\ gained\ the\ Cambridge\ diploma\ of\ public\ health\ in\ 1882.\ Through\ the\ good\ offices\ of\ Dr\ Mackellar\ he\ was\ appointed\ temporary\ medical\ officer\ to\ the\ Board\ of\ Health\ in\ 1884.\ Mackellar\ was\ President\ of\ the\ Board\ of\ Health,\ 1882-85.\]
surrounding houses. He warned against the use of water from domestic wells. He bluntly concluded,

In order to act...the Government would have to interfere with the present untrammelled freedom enjoyed by cow-keepers; and therefore, as no doubt this class has its spokesmen,...and as there are sure to be found certain other persons who will seriously apprehend a rise in the price of milk and a hypothetical increase of infant mortality in consequence, it is well to know that the general public voice seems likely to greet such a measure with unqualified approval.32

The Act came into force in September 1886. By the close of 1888 it operated throughout the County of Cumberland and in the municipalities of the South Coast from which a large proportion of the metropolitan milk supply came. After two years of operation the Board of Health expressed much dissatisfaction with the inspecting of dairies carried out by local authorities.33 The Board complained the need for a pure water supply was little understood by the municipal inspectors. That the Board was justified in emphasising the danger of polluted water on dairies was clearly shown by the fact that in 1886-90 there were four serious outbreaks of typhoid in Sydney traced to polluted wells on suburban dairies. There was the one in Leichhardt in 1886, there was one in St Leonards in 1887 and another in the same area in 1889, and there was one in Randwick and Waverley in 1890.34 By the mid 1890s the Board reported considerable improvement in the sanitary condition of metropolitan and country dairies.


34 Ashburton Thompson found that although the water mains were connected to the dairy to which the 1890 outbreak was traced, well water was used to clean the milk cart. He believed it was probably used to wash the milk cans as well. Report on Typhoid Fever at Waverley and Randwick, 1890, pp. 6-7.
The reports of the metropolitan medical officer of health in the early 1900s give some insight into the condition of urban dairies, the health of dairy herds and the condition of milk shops. In 1901, twelve per cent of 537 dairies located in the metropolitan combined districts, an area somewhat larger than the metropolis, were classified as in bad condition. Over 400 dairies still used pail closets and only twenty per cent had a ready supply of hot water for cleaning purposes. Municipal supervision of shops selling milk was not at all adequate. By 1904 Armstrong, the metropolitan medical officer of health, reported great improvement in the sanitary state of milkshops in Sydney. Whereas milk had been often dispensed from an open bucket, the contents exposed to flies and dust, shopkeepers were now required to keep milk stored in ice-chests or clean, well-constructed boxes. By 1910 the proportion of metropolitan dairies classed as bad had been reduced to 4 in 339. Thus a considerable improvement in the cleanliness with which milk was produced and retailed in Sydney was gradually achieved in the period before World War I. Improvement was very much due to the determined efforts of the central health authority, sometimes with little cooperation being given by local authorities.

From the late 1890s the health authorities set out to eradicate the practice of adulterating milk. The addition of water not only reduced the nutritional value but involved risks of infection if well

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35 M.O.H. Report, 1901, p.11.


37 M.O.H. Report, 1910, p.15.

38 The Public Health Act of 1896, the first general health legislation in New South Wales, contained provisions relating to the adulteration of food.
water was used. The health authorities became concerned as well with the use of chemical preservatives like boracic acid. Such additives were considered especially dangerous to the health of infants. Armstrong claimed an immense amount of adulteration occurred in Sydney. He was critical of the local authorities' failure to stop these practices despite their powers under the Public Health Act. In 1901, 212 samples were analysed and more than 60 per cent were found to be adulterated, more than 40 per cent with preservatives. Between 1901 and 1903 the proportion of milk samples containing chemical preservatives fell from over 40 to 2 per cent. The council of the City of Sydney took the lead in acting against adulterators. Suburban municipalities were generally much less active.

In 1903 new regulations prohibited the use of sulphurous acid, salicylic acid, benzoic acid and boric acid in milk and milk products, except in the proportion of 0.001 grains per pint or pound. The Board's policy of rooting out adulteration started to have results. At least one large distributor of country milk admitted it was forced to introduce pasteurisation because of harassment over its use of preservatives. Dr C.P.B. Clubbe, surgeon to the Children's Hospital, Sydney, told the Royal Commission on the Birth-Rate, 1903-04, he

39 Antiseptics like boracic acid were used to destroy the lactic-acid bacteria in milk and so to delay the process of souring. They had no effect on pathogens.

40 M.O.H. Report, 1901, p.12.

41 The permitted amount was so small compared with what was considered necessary for effective preservation that in effect preservatives were forbidden. The use of thirty-five grains per pound of butter was allowed. Appendix B, Progress Report on Use of Preservative Matters in Food, 1903, p.96.

42 Letter from manager of Farmers' and Dairymens' Company, 11/12/03, appended to Report of Board of Health on Preservatives in Milk, 1904, p.4.
understood the milk distributing companies had been in the habit of using boric acid until a short time before. 43

The Board's aim of stopping the use of preservatives in the interests of improving the quality of the milk supply led it to involvement in controversy over their use in concentrated milk. The publicity given to the issue probably helped stiffen consumer resistance to the use of preservatives. 44 In 1903 the Board refused a request from the Bacchus Marsh Concentrated Milk Company of Victoria and the New South Wales Concentrated Milk Company for exemption of concentrated milk from the regulations for one year. 45 A parliamentary select committee was formed to enquire into the use of preservatives in food. 46 It urged that the use of thirty-five grains of preservative per pound of concentrated milk be accepted. 47 The city's medical profession rejected the findings of the committee. A meeting of the B.M.A. expressed opposition to the use of boric acid in ordinary or concentrated milk. The Board of Health remained determined in its opposition to the use of boric acid. It informed the Government that not only was there

44 See Armstrong's comments, M.O.H. Report, 1906, p.20.
45 The product had in the previous couple of years become a serious competitor with whole milk. The concentrated milk was first pasteurised and the water content then reduced, though not to the extent of condensed milk. It was distributed in Melbourne and Sydney in the same manner as fresh milk. It had been popular for some time as a source of milk on ships. It was increasingly used for feeding infants. The Bacchus Marsh Company had been producing the milk in Victoria from 1890-91 and had begun operations in Sydney early in 1902.
46 N.S.W.P.D., vol.11, 20/8/03, p.1745. The timing of its establishment and the conclusions it reached suggest it was an interested attempt to see that the use of preservatives in concentrated milk was permitted. In the course of debate W.H. Wood (Eden-Bombala) claimed this was the case. Ibid, p.1746.
47 Progress Report on Use of Preservative Matters in Food, 1903, p.5.
a danger to public health from long-term ingestion of the preservative, but because it suppressed the souring process, it permitted stale milk to be unknowingly fed to infants. Moreover, by enabling dirty milk to be disguised, its use negated the efforts of the health authorities to encourage cleanliness in production and distribution. Acting on the Board's advice, the Government refused to alter the regulations. Following a court decision against them in 1904, the two companies marketing concentrated milk in Sydney ceased to sell the product in New South Wales. In 1908 the Wade Government introduced a Pure Food Act which strengthened the hand of the Board of Health in acting to put down adulteration. Over the years to World War I an increasing number of metropolitan municipalities carried out their obligations by collecting milk samples for analysis. Adulteration became more difficult to impose on the public without penalty.

Under the Dairies Supervision Act of 1886 the Board of Health tried to deal with the problem of milk-borne tuberculosis by inspection of dairy herds. The tuberculin test having become available in the later 1890s, the Board promoted its use. One common way by which the infection is spread from animal to man is contamination of milk with faecal matter of infected beasts. The slow improvement of the condition

48 Report of Board of Health on Preservatives in Milk, 1904, pp. 2-3. Boric acid was commonly used as an antiseptic by doctors from the outset of my period. Deaths had been associated with its use. Two modern doctors, reporting a non-fatal case of poisoning of an infant after treatment of napkin rash with powdered boric acid, concluded: "The main clinical features were vomiting and diarrhoea.... This type of poisoning may readily be confused with infective gastroenteritis.... Boric acid is a potentially dangerous drug and is only feebly antiseptic". P.C. MacGillivray and M.S. Fraser, Arch. Dis. Childh., vol.28, 1953, p.488. Since it was widely used in milk until around 1903, it is an open question how much diarrhoeal disease it may have caused among Sydney infants.

49 M.O.H. Report, 1904, p.17.
of dairies reduced the risk of infection by this means. Identification of diseased animals in herds was probably more important as a preventive measure. The figures concerning tuberculous animals from metropolitan herds destroyed between 1901 and 1913 perhaps indicate a declining incidence of diseased beasts on urban dairies. The risk of infection from urban herds was theoretically high because urban dairies sold raw, untreated milk. An advisory board on tuberculosis, which reported to the Government in 1913, warned there was room for improvement in the programme of prevention. Looking more broadly at the hygiene of the milk supply, the board recommended introduction of a bacteriological standard inter alia because it was well known that "...one of the most important of the factors contributing to infantile mortality is the ravages of epidemic diarrhoea, a disease intimately related to an impure food supply, particularly that of milk".

Interest in the condition of the metropolitan milk supply notably increased in the years just before World War I. The McGowen Labor Government demonstrated a good deal of concern about this and other health problems. In 1913 T.R. Bavin, President of the Royal Commission appointed by the Labor Government to enquire into food supplies and prices, produced a sectional report on the milk supply. Bavin recommended establishment of a central authority to control the metropolitan supply. He was particularly concerned about the effect of the quality of the supply on infant welfare. He thought it was something of a reproach to Sydney that milk guaranteed fit for infants

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50 The board worked under the chairmanship of Dr R.T. Paton, soon to be Director-General of Public Health in New South Wales. Report of Advisory Board on Tuberculosis, 1913, p.7.

1 Ibid, p.40.
was not marketed. He therefore proposed that a grading system, whereby milk of guaranteed quality and purity would be available for infant feeding, be introduced in Sydney.

The onset of the First World War interrupted the process of enquiry into the state of Sydney's milk supply. With the return of peace the process began again. In 1922 Dr Robert Stopford (Balmain) moved in the Legislative Assembly for establishment of a select committee to look yet again at the problem. Stopford told the Assembly,

I have had a great deal of experience of infantile diseases, and the fact that gastro-enteritis is so prevalent is due to the conditions which prevail in connection with the distribution of milk in New South Wales and I say that the first duty of any Government is to preserve child life.

Stopford wanted a bacteriological standard introduced and, like Bavin, recommended a system of milk grades.

The Stopford Committee's work was overshadowed by the report of the New South Wales Board of Trade on the metropolitan milk supply, which was presented in 1923. The Board of Trade report favoured introduction of a bacteriological standard and creation of a central authority to administer the supply. Its overall evaluation of the Sydney supply was as follows: "The milk supply of Sydney and suburbs is a comparatively good supply. It needs improvement in the public interest, but, nevertheless, it gives no occasion for public alarm so far as consumption by all but the infant section of the population is

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concerned". The Board was impressed by evidence of rickets, infections and defective dental conditions among Sydney children, much of which, it suggested, could be eradicated by greater consumption of milk. Perhaps the most arresting statement by the Board was the assertion that it confidently expected the milk supply would reach a standard adequate for general consumption, but it did not believe a standard fit for infant consumption could be attained without a price increase such that general consumption would be greatly curtailed. Fortunately, the Board added, dried milk was readily available for infant feeding, and its use was growing. Dr J.S. Purdy, metropolitan medical officer of health, had told the enquiry,

Undoubtedly, if pure fresh milk can be obtained, it is much the best diet for children, but substitutes such as dried milk are better in the summer than the milk we distribute to-day. If we could feed every infant in Sydney on dried milk, Glaxo or Lactogen, from October to April, we would probably reduce the infantile mortality from gastro-enteritis.6

The baby health clinics felt unable to recommend generally the use of fresh cows' milk, given its condition when fed to infants. Powdered milk, supplemented by fresh fruit juice, was suggested instead. Dr Robert Dick, a senior officer of the Health Department, told the Board enquiry,

The baby clinic nurses do not recommend fresh milk, the reasons being that the conditions of housing may be so bad that it is impossible to keep milk, even if it were good on arrival at the house; secondly, that very often there is no dairyman in the locality who can be recommended as likely to supply good sound milk; and thirdly, that the majority of suburban dairymen, even though they nominally produce and supply their own cows' milk, mix it with pasteurised milk.7

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5 N.S.W. Board of Trade Report on Milk, 1923, p. 3.
6 Ibid, p. 164.
7 Ibid, pp. 164-165.
As late as 1923 then, the quality of the public milk supply was so poor that mothers were advised to feed their babies on dried milk preparations.

Before proceeding to discuss creation of a central milk authority and the great improvement in the quality of the supply which resulted, I want to present some evidence of the degree of cleanliness of Sydney milk from the early 1900s. Overall, the evidence suggests no very marked improvement in this respect was attained before the 1930s. In 1909 the Director of the Government Bureau of Microbiology, Dr Frank Tidswell, reported that investigations of fresh milk as delivered had revealed the milk averaged round 610,000 bacteria per c.c., and milk purchased from shops averaged 1,700,000 per c.c. Thirteen samples of pasteurised milk bought from shops in Sydney were found to contain from 2 to 43.5 million bacteria per c.c., the average being 16 million. Left to stand over night in the laboratory, the milks had bacterial levels ranging from 45.5 to 221 million per c.c.⁸

⁸Report of Govt. Bureau of Microbiology, 1909, pp. 113 and 120. To test the effect of keeping milk in an ordinary ice-chest, Tidswell carried out the following exercise: two samples of milk, each with an initial bacterial level of 69,000 per c.c., were obtained; one was left at room temperature for twenty-four hours, after which time it contained 21 million per c.c.; the other was kept in an ice-chest for the same period, following which it contained 3.6 million per c.c. Ibid, p.123. The above figures might be compared with the following figures relating to some European and American cities:

<table>
<thead>
<tr>
<th>Year</th>
<th>City</th>
<th>Bacteria per c.c.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1885</td>
<td>Amsterdam</td>
<td>2.5 - 10.5 million</td>
</tr>
<tr>
<td>1889</td>
<td>Munich</td>
<td>200,000 - 6 million</td>
</tr>
<tr>
<td>1901</td>
<td>New York</td>
<td>250,000 - 30 million</td>
</tr>
<tr>
<td>1905</td>
<td>Moscow</td>
<td>100,000 - 7 million</td>
</tr>
<tr>
<td>1907</td>
<td>London</td>
<td>20,000 - 8 million</td>
</tr>
<tr>
<td>1907</td>
<td>Berlin</td>
<td>43,000 - 11.5 million</td>
</tr>
<tr>
<td>1909</td>
<td>Chicago</td>
<td>10,000 - 18 million</td>
</tr>
<tr>
<td>1910</td>
<td>Copenhagen</td>
<td>400,000 - 32 million</td>
</tr>
</tbody>
</table>

In the summer of 1921-22 the Bureau examined samples from three large distributing companies and from two of the 400 suburban dairies. Almost uniformly high bacterial levels obtained for all samples, although proportions of samples of dairy milk containing one million and more bacteria per c.c. were somewhat greater. In the summer of 1922-23 further work on milk samples from local dairies was done. Five dairies were involved. The dairy enjoying the best results still had twenty-two per cent of its samples with bacterial counts of one million or more per c.c. In the case of the least satisfactory dairy seventy-nine per cent of samples were above the limit.

Investigations for the presence of the bacilli of tuberculosis were begun in the early 1920s. A series of experiments with raw milk from various suburban dairies in 1921-23 seemed to indicate Sydney's dairy milk was virtually free of tuberculosis bacteria. Further tests were done in 1925-26, when milk from twenty-three dairies was used. Milk from one dairy was found to be infected. In 1927 another series of tests, involving milk from 121 dairies, was carried out. No evidence of tuberculosis in experimental animals inoculated with milk residues was discovered. After the establishment of the Milk Board, a system of regular testing was introduced. In 1937 the Board decided to require all dairymen-vendors to have their herds tested annually. From mid 1938

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9 D-G Report, 1921, pp. 92-94.

10 D-G Report, 1922, pp. 134-135. From 1925 an official bacterial standard had existed, the limit being one million micro-organisms per c.c. in the period, October to April, and half a million during May to September. The standard was apparently not treated as mandatory, and the intention was to persuade dairymen and vendors to improve the quality of milk gradually. See Capt. the Hon. W.F. Dunn, Minister for Agriculture, N.S.W.P.D., vol.III, 9/3/27, p.2178.


a dairymen-vendor's registration was made conditional on certification that his herd was free of tuberculosis.13

Early in 1927 the Lang Labor Government introduced the Metropolitan Milk bill, the main provision of which was the creation of a Milk Board to control the Sydney supply, to fix prices, and if necessary, to enter directly into trading. According to the Minister in charge of the bill, the Government's principal aim was to achieve the provision of a better, purer milk supply. It hoped also to end the inefficiencies which made for high retail prices yet low returns to producers. The bill established grades of milk, including one intended for infants.14 Parliament was prorogued before the bill could get beyond a first reading. In 1929 the Bavin Nationalist Government introduced its own legislation. The Metropolitan Milk Act of 1929 gave the Milk Board, which began to function in 1930, the task of registering all dairymen and vendors involved in the metropolitan supply, of fixing prices, of supervising the production and distribution of milk, and of establishing grades of milk.15 The first Milk Board

13 W.F. Murphy, The Milk Board of New South Wales, Sydney, 1949, p.90.


15 Murphy, op.cit., p.9. By-laws under the Act fixed four grades: (1) raw milk which was to contain a maximum of 500,000 micro-organisms per c.c. and no bacillus coli in one-hundreth part of one c.c. (2) pasteurised milk, as treated by the holding or flash methods, and to contain not more than 200,000 micro-organisms per c.c. and no b.coli in one-tenth part of one c.c. (3) special raw milk, to be obtained from certified tubercle-free cows and to contain no more than 50,000 micro-organisms per c.c. and no b.coli in one-tenth part of one c.c., and to be distributed in bottles. (4) special pasteurised milk — the same as special raw milk and in addition to be pasteurised by the holding method and distributed in bottles. The grades were included in the Pure Food regulations in 1932. See Milk. The Sydney and Newcastle Milk Supply, 1941. The 1929 legislation differed from Labor's bill of 1927 in two respects. First, it conferred no reserve trading powers on the Board, and secondly, it allowed for representation of the distributing companies on the Board, although they were not given voting rights.
enjoyed only a brief life. It was unable to stabilise prices in the face of opposition from the distributing companies. Back in power, the Lang Government introduced new legislation in 1931. While the immediate reason for the new Act was the need to stabilise milk prices, the Act was also aimed at ensuring the reconstituted Milk Board had full control over the milk supply. The Minister responsible for the legislation in the Legislative Assembly, the Hon. W.T. Ely, said,

The fixation of prices and stabilisation of the conditions of supply...are only incidental to the main purpose of the bill, which is designed to serve the interests of the whole community. The provision of an adequate supply of milk of good quality is a matter of major importance to the community and the milk supply is primarily a public health utility.

The new Board implemented plans aimed at improving the hygiene of the supply. It is really only in the period after its establishment that the metropolitan supply achieved modern standards of hygiene. Supervision of production and distribution was improved. Encouragement was given to the introduction of more efficient pasteurising methods. In the late 1930s new by-laws concerning milk grades were introduced. They required much lower bacterial levels than previously. The growth of bottled milk sales contributed to better hygiene, but the most significant growth took place after the Second World War.

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16 In August 1930 the Board set a minimum price to be paid to producers and a maximum retail price. The companies then announced they would not purchase milk from producers but would receive it as agents. They would dispose of it "to best advantage". The Board lost prosecutions it brought against three distributors. Murphy, op.cit., pp. 10-11.

17 Quoted in Murphy, op.cit., p.21.

18 Bottles were used as early as 1911 in Sydney. However the company pioneering their use was unable to survive competition from established firms. The Dairy Farmers Company started to bottle milk in 1925. But by 1934 less than five per cent of the metropolitan supply was bottled. By 1955 virtually all household deliveries in Sydney were of bottled milk. During the 1930s the number of dairymen-vendors selling raw milk steadily fell, the decline being quite rapid after 1939.
Diarrhoeal disease and associated conditions were a very important source of infant mortality in Sydney until well into this century. From the beginning of efforts to improve the quality of the milk supply there was an appreciation of the connection between the purity of milk and the level of infant mortality. From the turn of the century it became increasingly common for reformers and critics of the milk supply to emphasise the relationship between the purity of milk and infant diarrhoeal mortality. The Royal Commission on the Birth-Rate listed among the causes of mortality in Sydney the "Injurious quality of milk" under commonly found conditions of supply and use, the "Injurious effects of chemical preservatives in milk" and in milk preparations for infants, and "The undue incidence of 'Summer Diarrhoea' or 'Acute Gastro-intestinal Catarrh'". Enquiries into the state of the milk supply in 1913, 1922 and 1923 were likewise concerned with the problem of infant health. But how much did improvement in the quality of the public milk supply contribute to the decline in mortality from diarrhoeal conditions?

Some improvement in the cleanliness of milk must have resulted from the efforts of the health authorities after the passing of the Dairies Supervision Act, 1886. Of course any improvement has to be seen in relation to what could only have been a generally low level of dairy hygiene. From about 1900 the authorities also achieved considerable improvement in the hygiene of retailing milk from shops. The policy of suppressing adulteration by water, which was implemented at this time, reduced the risk of infection from contaminated wells and other sources. The prohibition of the use of chemical preservatives forced greater care in production and distribution, although the full impact of this

measure took some time to be felt because many local authorities were slow to carry out their duties.

Heat treatment of milk in the home or by commercial processes is another important means by which to improve the cleanliness of milk. Evidence concerning the practice of domestic heating of milk in Sydney is rather limited. But what there is suggests that at least until the early 1900s such practices were probably not a reliable preventive measure. John Ashburton Thompson, deputy medical adviser to the Government, said in 1886 that greater public awareness of the fact that milk could carry typhoid had not resulted in the habit of boiling milk becoming more common. Indeed, just because individuals could not be relied upon to protect themselves in this way, he proposed the State take general preventive action. Discussing preventive measures against milk-borne tuberculosis in 1897, Thompson commented:

> The Board [of Health] has accumulated a very considerable body of actual experience in connection with outbreaks of typhoid fever in earlier years...; and the fact revealed by its inquiries seems to be that while scarcely one family in fifty even professes to boil its milk, still fewer boil it with a semblance of regularity.20

Yet in 1905, W.F. Litchfield, a Sydney doctor specialising in infant and child health, suggested that sterilisation of infant food "in the shape of boiling the milk, or by the use of sterile foods", had been "more or less universally adopted of late years".21 From 1903, as part of his campaign, W.G. Armstrong advocated the boiling of cows' milk before it was used in infant feeding. Moreover, the typical baby reached by his campaign was the child of a working-class family, who

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20Report of Board of Health for 1897, p.35.

otherwise was unlikely to have been seen on a regular basis by a doctor. So the advice about heating milk to sterilise it not only reached a significant proportion of mothers, but was influencing mothers of a social group unlikely to be educated by other sources. The domestic boiling of milk probably helped improve the purity of milk fed to infants, but its influence would seem to have become greater after the turn of the century.

Commercial heating of milk undoubtedly had some effect on the safety of milk. But quite apart from the question of its efficiency in the early years of its use, its effect was limited in two notable ways. First, about 40 per cent of the total supply round 1900 and about 30 per cent from 1912 to the 1930s was not pasteurised. It was sold raw. Secondly, some of the safety acquired from pasteurisation was lost as a result of careless and unhygienic methods of retailing at a time when most milk was not bottled. No great improvement in this respect was instituted until the Milk Board's reforms of the 1930s.

There must be doubts about the effectiveness of pasteurisation processes used by the distributing companies. Pasteurisation in any case was not used by all the companies before 1900. The Farmers' and Dairymens' Company installed equipment in 1901. Armstrong told the Royal Commission on the Birth-Rate, 1903-04, that the companies no longer used preservatives, but relied on pasteurisation and chilling. But Dr Frank Tidswell told the same enquiry that he believed pasteurisation, as it was done in Sydney, was not reliable. The companies were very variable in their approach. Until 1930 there was no official prescription of the method to be followed. The Health Department reported as late as 1926 that only one of thirteen flash-method plants had a recording thermometer. Some reservations might well be felt.

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22 Milk. The Sydney and Newcastle Milk Supply, 1941.
then about the efficiency of commercial pasteurisation until the 1930s.

Public health measures and other factors produced an improvement in the quality of the milk supply in Sydney from the 1880s. This improvement would seem to have been more pronounced after about the turn of the century. But I think care must be taken not to overestimate the contribution made by a cleaner milk supply to the decline in infant mortality from diarrhoeal and associated conditions. It will be remembered that thirteen samples of pasteurised milk from shops averaged sixteen million bacteria per c.c. in a test done in 1909. The great majority of samples from distributing companies and two suburban dairies analysed in summer 1921-22 had counts of one million or more bacteria per c.c. Moreover, evidence presented to the Board of Trade enqiry in the early 1920s indicated the milk supply was still unreliable, at least for infant feeding purposes. The Board enquiry heard evidence from various Sydney doctors praising dried milk as a safe alternative to fresh milk as it was generally supplied. The baby health clinics were so wary of fresh milk that they routinely advised the use of dried milk, even to mothers in poor areas. The Board report endorsed these views.

The great turning-point in the infant mortality trend occurred in the period between 1900 and World War I when, if anything, the milk supply was less clean than in the 1920s. I suggest that another factor began to affect the situation at this time, and this was the infant welfare campaign inaugurated by Armstrong in 1903. Superimposed on improvement in the quality of the milk supply and on general improvement in the sanitary condition of Sydney, the infant welfare movement pushed the trend in the infant mortality rate decisively in a downward direction. The improvement in Sydney's water supply and waste disposal services directly affected typhoid mortality in the city. The mortality at all
ages from typhoid fell more markedly than infant mortality from diarrhoeal and associated conditions, because the connection between environmental sanitation and typhoid infection is more direct than that between sanitation and infant diarrhoeal infections. Yet the reservoirs of infection, from which infants contract diarrhoeal disease, are the intestinal illnesses of the rest of the community. Any improvement in the sanitary condition of the environment, even if it is mediated, must be an important factor in the decline of infant diarrhoeal mortality. In the next chapter I trace the history of environmental sanitation in Sydney from the 1870s.
Chapter 4

ENVIRONMENTAL SANITATION OF SYDNEY

The history of the Victorian city in Britain, one historian has written, is, from the viewpoint of community health, the history of "fever", especially typhoid fever.\(^1\) The same can properly be said of Victorian Sydney. The control of the intestinal infections and the high mortality they produced began with the introduction of ordered sanitation of the city's environment. This meant primarily, but not exclusively, the introduction of reliable water supply and sewage disposal systems. T.A. Coghlan, the colony's Statistician, wrote in 1899,

The comparatively high death-rates which Sydney so long exhibited were not due to natural causes. Seated on the hilly shores of Port Jackson, its situation is all that could be desired, and the configuration of the ground on which it stands is especially adapted to the requirements of a perfect drainage system. What Nature with lavish hand had bestowed was, however, until recently, in danger of being destroyed or polluted;...no small part of the mortality of Sydney...arose...from diseases which sanitary precautions might have averted.\(^2\)

The general death-rate from typhoid in the metropolitan area fluctuated considerably in the nineteenth century section of my period. However, it always remained at a high level. In the later 1870s it reached a high point of more than 80 per 100,000 of population. It rose even more dramatically in the 1880s, reaching a maximum of

\(^1\)G. Rosen, "Disease, Debility, and Death", in Dyos and Wolff, \textit{op.cit.}, p.629.

90 per 100,000 in the middle of the decade. Thereafter there was a very notable decline. Despite fluctuations the trend is clearly downwards. By 1900 it was approximately 23 per 100,000, and by 1920, 5 per 100,000. By the end of my period it was an unimportant cause of death in Sydney. The general mortality rate from diarrhoeal disease was prone to fluctuate considerably. Like the typhoid death-rate, it reached its apogee in the mid 1880s, climbing to 36 per 100,000 of population. While fluctuations occurred subsequently, the downward trend is evident. The movement in the diarrhoeal mortality rate closely followed the movement in the typhoid rate, the great difference being that the decline in diarrhoeal mortality lagged behind the decline in mortality from typhoid. Improvement in the sanitary environment of the metropolis operated favourably and powerfully on both rates. But other significant factors seem to have influenced the diarrhoeal rate.

Cumpston explained the lag of the diarrhoeal rate as follows:

The reason for this...[is] the incidence of these diseases has been amongst young children. In this section of the population other measures of direct application are necessary besides those measures of general sanitation which have been sufficient to control typhoid fever... several years must elapse before the influence of all the infant welfare work is generally appreciated in the statistics of mortality.

I argued in previous chapters that better nutrition and domestic hygiene have been important influences on infant diarrhoeal mortality. Any improvement in environmental sanitation, while important, must be supplemented by advances in these areas, if the death-rate from

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5 Ibid, p.9.
infant diarrhoeal disease is to be really affected. Commencing in the years before World War I, Armstrong's infant welfare campaign attacked problems in both these areas. And it was directed at the social group most vulnerable to mortality from infant diarrhoea and associated conditions. The campaign first reached the poor of the City of Sydney and soon after was extended to the working-class inner suburbs.

Writing in 1905, Armstrong reviewed the sanitary history of Sydney over the previous thirty years. He traced the great improvement in the sanitary condition of the city. The water supply had been reliable since the later 1880s. The sewage disposal situation had been steadily improving with the spread of the sewerage system after 1885. Armstrong observed that the Botany swamps, the city's water catchment area prior to 1888, were "liable to pollution from many sources, and the district of Botany itself has been for many years a hot bed of diarrhoea and typhoid fever".6

The growth of Sydney outpaced the capacity of the water supply and the adequacy of sewage disposal facilities.7 Only when the sanitary condition of the city reached crisis point did the authorities take action to provide adequate systems. In the period, 1871-91, Sydney experienced a spectacular growth of population. It had an average annual growth rate of 5 per cent in the first decade and 5.5 per cent in the second decade. Such a rate of population growth was not attained


7 M.W. Flinn has pointed to the continuing pressure of population growth on sanitary conditions in British towns from the mid nineteenth century: "Had these towns been equipped...with efficient sewerage and cleansing services and adequate water supplies, their disproportionately fast growth during the third quarter of the nineteenth century would not necessarily have exacerbated the public health problem". Introduction to A.P. Stewart and E. Jenkins, The Medical and Legal Aspects of Sanitary Reform, Leicester Uni. Press, 1969 (first published in 1866), p.8.
again. The population expanded from almost 138,000 people in 1871 to just over 383,000 people in 1891. The suburbs enjoyed a notable growth, particularly in the 1880s.

The metropolitan area grew spatially as well. From the 1880s there was a great expansion in urban railway construction. Sydney, like other Australian cities about this time, ceased to be a "walking" city and became a "public transport" one. Until the 1880s, except for some areas in the eastern suburbs and North Sydney, suburban development remained near to the only railway line, the line to Parramatta, which had opened in 1855. During the 1880s the lines from Strathfield to Hornsby and from the city to Sutherland were finished. In the 1890s the line from Milson's Point to Hornsby and that from Sydenham to Belmore were completed. So by the mid 1890s most of the suburban railway system was built. Wage-earners could now live in suburbs serviced by the railway and located some distance from the city centre. Steam ferries transported commuters living in harbour-side and nearby areas. Steam trams provided transport to areas between railway lines or to areas unserved by the railway. The first tram ran from Redfern to the city in 1879. Legislation in 1880 provided for construction of tram lines by the Commissioner of Railways and links were soon constructed to the eastern suburbs of Woollahra, Randwick and Waverley and to the nearer suburbs of Waterloo, Newtown, Marrickville

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8 Davis and Spearritt, op.cit., pp. 2-3.

9 Average Annual Increase

<table>
<thead>
<tr>
<th></th>
<th>City, %</th>
<th>Suburbs, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1871-81</td>
<td>2.9%</td>
<td>7%</td>
</tr>
<tr>
<td>1881-91</td>
<td>0.7%</td>
<td>8.25%</td>
</tr>
</tbody>
</table>

Source: Census of N.S.W., 1891, p.120.

10 J.W. McCarty in Schedvin and McCarty, op.cit., pp. 16-17.
and Glebe. The tramway system continued to grow rapidly up to World War I.  

The end product of the two decades of remarkable growth was that "Sydney in 1891 was a metropolis by world standards and proud of it, accepting only London as its superior".

The pattern of Sydney's growth in the later nineteenth century has been described in terms of concentric zones, the symmetry of the model being modified in reality by the shape of the harbour and by the hilly terrain. It was further complicated by the siting of industry and the actions of land developers. Later, the pattern was modified by the ribbon development associated with suburban railway lines and the interstitial development made possible by the tramways and omnibuses. As Sydney grew, the commercial and administrative core expanded and working-class residents were pushed into the previously fashionable surrounding areas: "The wealthy moved far away or retreated to elite enclaves, whilst the middle class pioneered each outskirt suburb, then in turn moved on". Trollope rated the social standing of the various harbourside and near harbourside areas in the early 1870s in the following manner: "Woolloomooloo has become almost

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12 Fry, p.6.

13 Idem. In 1905 E.C. Buley drew attention to the concentric pattern. Buley described the journey of a prosperous squatter from his town residence to the city: "He catches the train not a hundred yards from his house...as it approaches the city the car passes through several zones of suburbs, each of a different class. Next to his own suburb is one of detached villas...then comes a region of wooden cottages, all neat and comfortable; and finally, stucco terraces, rather dingy and crowded.... Suddenly a corner is turned and the city area is reached". Australian Life in Town and Country, London, 1905, p.75.

14 Fry, p.6.
as big as Sydney and much more fashionable"; Elizabeth Bay, Rose Bay, Double Bay and Rushcutter's Bay contained the various villa residences of the wealthy families; St Leonard's was "fairly fashionable", Balmain less so, and the township of Pyrmont was "not fashionable at all". By the late 1890s Woolloomooloo and Pyrmont were best described as working-men's suburbs, and Balmain was mainly so. Other suburbs were described in the following way:

Alexandria, Annandale, Arncliffe, and Auburn are usually classed as working-men's suburbs. Ashfield is a residential suburb, with many fine houses.... Botany is devoted to factories.... Burwood and Bondi to gentlemen's residences. Canterbury is a scattered suburb.... Darlinghurst is...a favourite place of residence for business people. Darlington is principally occupied by working-men's cottages; Darling Point and Double Bay... are regarded as the fashionable quarters.... The other fashionable suburbs are Elizabeth Bay, Pott's Point, Rushcutter's Bay, Hunter's Hill and Ryde, Point Piper, Rose Bay, Randwick, Woollahra and Strathfield.... Homebush is a very scattered district.... Glebe Point is a favourite place of residence for business men.... Newtown is a thickly populated place.... Paddington is a business suburb.... Redfern...is thickly populated.... The numerous suburbs on the North Shore line are much sought....

By the 1890s, then, a pattern of residential zoning was established. There was an inner area of working-class housing from the Rocks, a slum soon to be rebuilt in the scare following the plague outbreak of 1900, around Darling Harbour to Pyrmont, Camperdown, Redfern, Surry Hills, Paddington and Woolloomooloo. Glebe and Balmain were in the process of being included in this heavily populated zone. Less populous suburbs surrounded this inner area: Leichhardt, Petersham, Marrickville, St Peters, Alexandria and Waterloo. This area

17 Idem.
extended down the western railway line to include Ashfield and Burwood, and down the southern line through St Peters into Rockdale. The more well-to-do wage-earner lived in this second area. The prosperous and the wealthy lived on the peninsulas and bays as far as the South Head, in the suburbs east of the inner zone, or in exclusive areas some distance from the centre like Strathfield or Hunter's Hill.  

Even before the sanitary condition of Sydney was shown to be critical in the mid 1870s, attention had been drawn a number of times to the worsening condition of the environment and the threat posed to the health of citizens. In the later 1850s the Philosophical Society concerned itself with the sanitary condition of the city, appointing a committee to investigate the matter in 1856. The appointment of a City Health Officer was considered to have made the committee's work superfluous. Soon after, a select committee, enquiring into the condition of the metropolitan working classes, focussed attention on various sanitary defects. Witnesses pointed to the poor personal hygiene of working-class people and blamed it on the difficulties they faced in getting readily available water in the home. The administrators of the water supply had gradually withdrawn street fountains to force connection of houses to the water mains. But many owners of poorer-class houses, already receiving high rents, refused to make such improvements. The committee was told sewerage facilities in the city area were poor. Of 1,446 houses inspected, only 356 had water closets.  

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18 Fry, p.7.

The suburbs developed in the 1860s without a parallel growth in water main connections. In 1867, the year when a commission of enquiry into the water supply requirements of Sydney was appointed, tanks and wells were still extensively used in the suburbs. The residents of Balmain were dependent on a few privately-owned wells, rainwater and a small creek. Glebe was well supplied with mains, but some houses were not connected. Marrickville, Newtown and Camperdown depended on tanks and wells, relying on water carters in dry weather. St Leonards relied on wells, rainwater, and on a creek which was liable to pollution. Eastern suburbs like Randwick were wholly dependent on wells, tanks, water carts and, where available, springs. In response to public concern over the capacity of the existing water supply to meet a growing demand, a commission of enquiry was appointed in 1867 to recommend a reliable, alternative source of supply. After two years of taking evidence, it finally recommended the Upper Nepean scheme. There was delay while dispute raged over this choice. The sanitary state of the city grew worse. In 1870 a Sydney doctor, calling for public health reforms, said Sydney displayed the same environmental evils as cities of comparable size overseas. Early in 1874 Professor Archibald Liversidge revealed to the public that his analysis of water as supplied to the Union Club in the City showed the liquid to be "filthy and unfit for use". About the same time a series of articles was published in the Sydney Morning Herald showing how unfit the Botany watershed was for the collection of the city's water.

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20 Clark, op.cit., pp. 162-163.

21 A.M. Brown, N.S.W.M.G., Nov. 1870, pp. 33-40.

The condition of sewerage facilities was just as parlous. The Medical Gazette claimed many cesspools in the city had not been cleaned out for ten to twenty years. Overflow from cesspools was a considerable and constant nuisance. Calling for reform, the medical journal remarked that "...the various emanations" were "of so unpleasant a character, that one sniff of them by a sensitive nose is sometimes enough to cause headache".23

Public concern about sanitary conditions finally forced the legislature to act, and a board of enquiry was established in 1875. The Medical Gazette welcomed the investigation. It added it believed typhoid was commonly being spread in Sydney because fluid from cesspools was seeping into the shallow wells which were so common in the suburbs.24 One contributor to the Gazette, Dr S.T. Knaggs, suggested the deaths of a Governor, a couple of Ministers of the Crown and a few senior city officials might be needed to elicit reforms.25

The revelations of the Sewage and Health Board, the board of enquiry established in 1875, were devastating. The Board's first report revealed that 4,700 of Sydney's 5,400 water-closets were directly connected with the water mains in such a way that household drinking water could easily be polluted by sewage. An inspector of nuisances told the enquiry of his visit to a house in Castlereagh Street, City, where he found the water-closet blocked. Drawing a tumberful of water from a tap in an adjoining yard used for household purposes, he found it contained solid faecal matter. The Board warned similar accidents...
could well be common. The Board called for immediate legislative action to empower the City Council to cut off water where such defective connections existed. The Water Pollution Prevention Act was hurried through Parliament. It required correct fittings to be installed within one year of the passing of legislation. In its second report the Board drew attention to another sanitary problem demanding immediate action. This was the management and emptying of cesspits in the City and suburbs. The Board said the municipal authorities appeared to have little power to regulate such matters. Waterloo was particularly affected because of the sandy soil in the area. The Board warned if nothing was done the whole district would soon become "unfit for human habitation".

It continued, "...where these evils exist much sickness prevails...children are said to be sickly, and...the Registrar General's returns show an excessive rate of mortality". The Board recommended councils be given the duty of cleaning out cesspits, and the legislature passed the Nuisances Prevention Act, 1875, which required councils to assume this responsibility. The Act also required them to employ inspectors of nuisances.

The Board concerned itself with certain localities which were notoriously unhealthy. Two such vicinities were Surry Hills and the Shea's Creek area. Concerning the area around Shea's Creek, one of the Board's committees reported,

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27. Ibid, p.7.


29. Idem.
...the whole of the subsoil of the low ground appears to be saturated with the sewage, giving out the most offensive fumes. Many of the houses have been constructed in what are now green fetid pools, and complaints of illness and mortality during the hot weather of last summer were general; no language can adequately describe the foul and noisome filth of the drains in the immediate vicinity.30

The same dreadful conditions existed in other parts of the City.

Another committee reported on houses in Bourke Street and adjoining streets, saying

...the damp ill-constructed houses, the total neglect of all provisions for ventilation or drainage; the state of Bennett's paddock — which may be described as a swamp of putrid organic matter, supplied by the houses adjacent to it, — the filthy condition of the so-called street to which Blanche Terrace faces, which is so saturated with waste material...as to be converted into a bog, together with the accumulation of decomposing animal and vegetable substances, almost everywhere around, are the efficient causes of the reported unwholesomeness of a locality, which, under proper sanitary conditions, would be undoubtedly one of the most healthy and delightful in the City.31

The Board concerned itself as well with overcrowded areas and dwellings, filthy premises, deficient drainage and refuse disposal, cowyard nuisances and other sanitary problems. Its committee on crowded dwellings and areas reported the worst type of overcrowding was found in "closely packed rows of small badly-constructed tenements at the back of large dwellings and in courts and lanes leading out of the main streets".32 Houses unfit for habitation were found to be

30 Eighth Progress Report, 1876, p.3.
31 Ibid, p.4.
32 Eleventh Progress Report, 1876, p.6.
"unfortunately very numerous in Sydney". The Board said the only solution to Sydney's waste disposal problem was a complete system of underground sewerage. A Board of Health was needed to ensure that municipalities collected refuse and carried out other sanitary duties:

The disgraceful condition of the back yards and closets ...in many parts of Sydney... should alone be sufficient to show the necessity for sanitary legislation...as

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33 Ibid, p.8. The importance of domestic hygiene in the prevention of infant diarrhoeal disease has already been discussed. See Chapter 1. Yet for many, poorer working-class families living in the inner-city area in the nineteenth and early twentieth centuries, it must have been very difficult, even where the resolve was strong, to maintain a reasonable level of hygiene, because housing conditions were so bad. In the older parts of the inner city in the early 1860s many dwellings consisted of just two rooms; they were grossly overcrowded, and lacked bathing and washing facilities. One observer, Robert Fitzgerald M.L.C., said "if you go down some of the places, you are obliged to put your handkerchief to your nose, the smell is so bad". Even better cottages lacked indoor sinks, fitted pantries, suitable stoves and clothes' closets. Unable to maintain cleanliness in such conditions, the average mother became careless and soon neglected the care of her children. M. Cannon, Life in the Cities. Australia in the Victorian Age, Melbourne, 1975, p.264. No improvement in the housing of the inner-city poor had taken place by the end of the century. Some tenements off Gloucester Street, Church Hill were described by a commission of enquiry in the late 1890s as follows: "Hart's Buildings consist of about sixteen, more or less dilapidated tenements in a confined, low-lying, dirty square, which is the common yard of the neighbourhood.... The square was like a vault. In summer it must resemble a furnace". R.C. on Public Charities, Second Report, 1898, p.96. Writing in 1901, W.G. Armstrong said of Sydney's worst housing: "...in a year's public health work in the poorest...portion of London — Whitechapel — I never came across dwellings in as bad a condition structurally as some of those I have seen in Sydney slums. Only that our climate has stood our friend, I cannot conceive how the death rate from phthisis and other preventable diseases has stood as low as it has done, when I think of the damp, ill-ventilated, and overcrowded hovels which so many of the people occupied". Further, sewer connections were often so faulty as to constitute "a serious source of danger". A.M.G., Nov. 1901, p.462. Professor R.F. Irvine, who was appointed by the Labor Government in 1912 to look into provision of workingmen's housing in Europe and America, said that in parts of Redfern, Surry Hills, Wolloomooloo and Waterloo the quality of housing was as poor as anywhere in Europe. He observed, "But for our good climate there would be little to choose between life under these conditions and life in the worst existing slums of London". The climate permitted women and children to spend the day outside for most of the year. While not clean, the streets and lanes were to be preferred to small, dark, unventilated rooms. R.C. Report on Housing of Workmen, 1913, pp. 16-17.
many as forty or fifty persons have to make use of one closet, and it is almost impossible to convey an adequate description of the repulsive character of these structures.34

The Board also remarked on the "noxious effluvia" from sewage deposited on the harbour shores. Other nuisances like cow-yards, clandestine cattle slaughtering establishments, and noxious manufacturing concerns were briefly mentioned: "...the stench from the head of Darling Harbour was offensive to a degree which we could scarcely have credited...the air reeked with poisonous exhalations from the drainage polluting the harbour".35 One of the Board's committees wrote of a cow-yard in Market Row, off York Street, City,

We searched the neighbourhood carefully to find out the source of the stench, and we strongly suspect that it emanates from a cow-yard.... It is paved with brick... the bricks seem to be so saturated with the droppings and filth from the cows that we felt convinced the stench...must proceed from this place.36

There was no problem then in explaining the high death-rate in Sydney, the Board concluded. Indeed, it was incredible that epidemic disease had not been more severe. The Board recommended legislation to establish a Board of Health be enacted. It proposed, moreover, that an adequate sewerage system for the metropolis be built. After some delay both proposals were implemented, although it took another health crisis to bring the Board into being.

In 1877 W. Clark, an eminent English civil engineer, brought out by the Government to advise on the city's water and sewerage

34 Eleventh Progress Report, 1876, p.11.
36 Idem.
problems, endorsed the Sewage and Health Board's sewerage scheme. Construction began in 1880. Work also began on the new water supply system, the Upper Nepean scheme. The new supply system was completed in 1888.\textsuperscript{37} Real estate advertisements in the \textit{Sydney Morning Herald} now included the words, "Nepean water laid on".\textsuperscript{38} The construction of the original sewerage scheme was completed in 1889. The Western Suburbs scheme was drawn up in 1888 and completed in sections in 1898-1900. The North Sydney system was built in 1891-98. Smaller systems were completed in Willoughby-Chatswood, 1899, Randwick, 1900 and Manly, 1902. By the early 1900s the areas originally to be included in the total scheme were served by the system. In 1915 a scheme for the far northern suburb of Hornsby was completed, and the far western suburb of Parramatta received underground sewerage in 1910.

At the same time as the Government was building the main sewers, diverting the flow of the old City system from the harbour to ocean outfalls, it built stormwater channels to replace the natural creek courses which crossed the City and nearby suburbs. The medical adviser to the new Board of Water Supply and Sewerage, Dr T.M. Kendall, had no doubt that the stormwater channels helped reduce mortality from intestinal diseases:

\ldots they have turned foul creeks and ditches into clean concrete channels...so that there is no stagnation of slop-waters....

In the Borough of Macdonaldtown, where such diseases as Typhoid Fever and Diarrhoea were so rife that it might be called the hot-bed of disease, since the stormwater


\textsuperscript{38}Clark, \textit{op.cit.}, p.227. See Appendix 8 for figures showing the increase of population served by the water supply, 1888-1938, and population served by the sewerage system, 1890-1938.
sewer has been constructed, the incidence of these diseases has been so reduced that this borough may now be called healthy.39

There seems little doubt that by the turn of the century, with a clean water supply established and the main sewerage systems completed, Sydney was a considerably healthier city. The death-rate from intestinal diseases had fallen notably. The mortality of the city and seven adjacent suburbs from typhoid and diarrhoea in 1889 was 34.8 and 112 per 100,000 of population respectively. In 1897, after completion of the main sewerage systems, the mortality was 15 and 71 per 100,000 respectively. The prevalence of typhoid was markedly reduced as well: in 1897 the 8 sewered areas of Sydney had an average of 98 cases per 100,000 of population, while the 31 unsewered districts had an average of 171 cases.40 That a proper system of sewage disposal and a reliable water supply were desperately needed is shown by the reduction in the deaths from intestinal disease. It is also indicated by the description of sanitary conditions in many parts of Sydney as late as the 1880s. In 1886 Dr F.H. Quaife said of the Eastern Suburbs, some of which included the most prestigious residential areas in Sydney,

Even in the higher parts of our suburbs we are met by gutters full of dark, ill-smelling water...we are forced to steer along the middle of the street to avoid the odours of the gutter on either side.... In some gutters the stench is so peculiar that one cannot help thinking that faecal matters have overflowed....

Citing a personal experience in Paddington during a period of very heavy rain, he continued,


...I noticed a horrible stench all along [the lane]...
the rain had overflowed the tops of some cesspits...
the diluted filth ran down the yards and through the
lower floors of the houses.... Can it be wondered...
that milk coming from dairies in such low-lying places
should be unfit for use.41

Typhoid above all other epidemic diseases was the threat to
Sydney's health. From the 1880s sanitarians like Dr C.K. Mackellar
and Dr John Ashburton Thompson took every opportunity to use the typhoid
returns to urge practical and legislative reforms in public health.
But smallpox, not typhoid, was in the event the spur to creation of the
Board of Health in 1882. Until that date the colony possessed no
central health authority. In terms of deaths the smallpox epidemic of
1881-82 was the most serious ever experienced in Australia. Twenty-six
per cent of 154 persons known to have been infected died. Except for
two cases, the outbreak did not spread beyond Sydney.42 During the
first months the Port Health Officer, Dr H.G. Alleyne, was solely
responsible for dealing with the emergency. As the infection spread,
popular alarm mounted. The Government responded by appointing a
temporary board of advice. Almost seven months after the epidemic
began, the Government had the Infectious Diseases Supervision Act, 1881
passed. The Act created the Board of Health, which began to function
from the beginning of 1882. While it was given powers adequate for
coping with the epidemic, it was hardly endowed with powers to deal
with the colony's whole range of public health problems.43 In a

41Quaife, "Notes on the Sanitary Condition of the Eastern Suburbs",

42W.G. Armstrong, "The Establishment of a Central Health Authority in

43Another permanent result of the smallpox epidemic was establishment
by the Government of the Coast Hospital, later the Prince Henry
Hospital, as an isolation centre for victims of epidemic disease.

Continued...
cumulative process ending in the Public Health Act of 1896, executive powers were given to the Board of Health. Centralisation of control in the Board's hands had much to do with the continuing ineffectiveness of local authorities in public health matters.

Public opinion in Sydney became increasingly critical of the performance of municipal authorities in the health area. In 1885 the public learnt that the City Council had allowed nightsoil to be dumped in close proximity to the watershed of the metropolitan water supply. When the danger was pointed out by Dr Mackellar, the Council grudgingly put an end to the practice. In June 1885 a public meeting at the Town Hall urged the Government to introduce a general health bill as soon as possible. The colony's medical journal, the Medical Gazette, wrote scathingly of municipal councillors as men whose election may depend on their religious belief... or their capacity for underground engineering, and who frequently seem possessed with the idea that bathing is unwholesome and that...it is not objectionable for well or water supply to be in close contact with the contents of the closet.

Later in 1885 C.K. Mackellar, Representative of the Government in the Legislative Council, introduced a Public Health bill. Because

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43 (Cont.)
Quickly constructed, it was taking patients by January 1882, and it relieved the need to use the Quarantine Station at North Head and the hulk, "Faraway", to accommodate smallpox sufferers. Later it was used to house patients of the typhoid outbreaks of the 1880s and 1890s, the plague epidemics of the early twentieth century and the influenza pandemic of 1919. Ibid, pp. 404-405.

44 See edit., A.M.G., June 1885, p.224 and Jan. 1886, p.102.

45 A.M.G., July 1885, p.253.

46 A.M.G., Jan. 1886, p.103.
of a change of Government, the bill did not get beyond the first reading stage. Mackellar had repeatedly urged introduction of a Public Health Act. To the medical section of the Royal Society of New South Wales he had suggested in 1882 that compulsory reporting of infectious diseases, prohibition of cesspits and a Public Health Act were all greatly needed. Again, in 1884, before the Royal Society he had urged the passing of legislation as a necessary means of eradicating typhoid fever from Sydney. Sanitary reformers like Mackellar, Thompson and Dr H.N. MacLaurin frequently pointed to the recurrent typhoid outbreaks as evidence that a Public Health Act was desperately required.

MacLaurin, when President of the Board, wrote concerning the outbreak of typhoid traced to the Leichhardt dairy in 1886, "From the story of this outbreak we can all see the absolute necessity of some form of sanitary legislation...." In 1892-93 MacLaurin was in England. While there he gathered information on sanitary legislation and administration. In a report to the Colonial Secretary of New South Wales, he suggested that a general health Act was needed. Nothing resulted immediately from MacLaurin's recommendations.

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47 A.M.G., June 1882, pp. 117-119.

48 Presidents of the Board of Health were Mackellar, 1882-85, the Hon. Dr H.N. MacLaurin, 1885-89, Dr F. Norton Manning, 1889-92, Dr T.P. Anderson Stuart (Dean of the Faculty of Medicine at Sydney University), 1893-96, and John Ashburton Thompson, 1896-1913. Before 1896 the position of President and Chief Medical Officer of the Government was a part-time appointment. In 1895 a commission concerned with organisation of the Public Service recognised that a full-time officer should be head of the Health Department. In July 1896 Ashburton Thompson assumed the post. The creation of a Ministry of Health and the retirements of Thompson and Dr F. Tidswell, head of the Bureau of Microbiology, in 1913 were the occasion for reorganisation of the Health Department. The Bureau and the Metropolitan Charities and Hospitals Department (which controlled State hospitals and asylums) were included in the Health Department. Dr R.T. Paton became head of the new Department and was given the title of Director-General of Public Health.

49 Report on Typhoid Fever in Leichhardt, 1886, p. 5.
In 1895 the Medical Gazette called for a general health Act. Such legislation, it argued, had been responsible for the decline in the general death-rate in England and in Victoria, and New South Wales was lagging behind the times. In September 1896 legislation was introduced by the Reid Government. The Act, the authorship of which was shared between Ashburton Thompson and B.R. Wise Q.C., took effect from the beginning of 1897. It conferred considerable power on local authorities for the prevention of infectious disease, the abolition of nuisances, the closing of unhealthy dwellings and polluted water sources, and the taking of action against purveyors of adulterated food. The Board of Health was given the powers of a local authority and might make enquiries in any matter concerning the public health. The Board, as the central health authority for the colony, occupied a position analogous to that of the Local Government Board in England. Indeed the Act followed the main lines of the English Public Health Acts, except for factors relating to local conditions. The Board exercised a supervisory role in relation to the local authorities, only supplanting them in executive matters when they failed to carry out their responsibilities.

The Public Health Act, 1896 provided for the appointment of full-time medical officers of health in the two most populous urban centres, Sydney and Newcastle. In April 1898 Dr W.G. Armstrong was appointed to the post of medical officer of health for the metropolitan combined sanitary district, while Dr Robert Dick became medical officer of health for the Hunter River combined sanitary district. The positions were obviously modelled on those so well established in English cities. The first occupants of the posts in New South Wales

brought to bear on their work the same skills and attitudes as those so effectively used by their English counterparts. As mentioned previously, Armstrong was directly inspired by the efforts of leading English medical officers of health like Newsholme to reduce infant mortality. Soon after his appointment he began the first systematic attempt in Australasia to reduce infant mortality from diarrhoeal and associated diseases.

It is clear from the contents of Armstrong's early annual reports that a great deal of his time was taken up with organising disposal services for excreta and refuse. Despite extension of the sewerage system, much needed to be done to improve these services. Armstrong's efforts in these directions undoubtedly added to the impact of the sewerage system in improving the sanitary environment of Sydney. Dr F.H. Quaife wrote nine years after his dismal picture of the sanitary condition of the Eastern Suburbs presented above,

There has been of late years a decided decrease in zymotic disease in these boroughs, especially where the sewers are in action, and particularly in the case of enteric fever.... It used to be quite endemic in the denser portions, and most of the cases now occur outside the sewered limits.¹

Yet the sanitary improvement must not be overestimated. In 1898, almost 1,600 cesspits still were in use in Sydney. Only four local authorities operated an interchangeable pail system. Regulations about pails and apparatus were often not enforced.² The disposal of garbage was in particular not very well managed. The opportunities for flies to breed and for other health hazards to flourish were many. Only one

¹Quoted in Cumpston and McCallum, op.cit., pp. 118-119.
²M.O.H. Report, 1898, pp. 2-3.
municipality, North Sydney, used an incinerator. The City of Sydney still tipped its refuse on waste land near Moore Park. Dumps were commonly used by other local authorities, and even worse, the waste matter was often not covered systematically. Yet the early years of the present century saw a good deal of progress. J.H.L. Cumpston dated the beginning of modern sanitary improvement from about the turn of the century:

...it was only with the commencement of the twentieth century that Australia as a whole developed an informed and sensitive sanitary conscience. Consequently, the history of the intestinal infections has two phases — the nineteenth century of increasing incidence, of explosive manifestations, of general fluctuations and of spasmodic but inefficient control; the twentieth century of progressive and orderly control to a point far below that of any period of the nineteenth century.

The coming of plague to Sydney in 1900 caused a great stir of sanitary activity among local authorities. The first epidemic started in January 1900. Public indifference to Health Department warnings turned into panic with the first fatalities in February-March. A second outbreak began at the close of 1901, and outbreaks recurred until 1909. Plague appeared again in 1921-22. Armstrong said of the 1900 outbreak,

The citizens needed rousing from a slumber of fancied security and indifference towards their sanitary surroundings. The awakening was a rude one, and produced a panic among the public that can hardly be forgotten.... The warnings of sanitarians, which had been hitherto generally spoken to unheeding ears, began to have weight with the public when illustrated in so forcible and terrible a manner. Public opinion pressed

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3 It should be said in defence of municipal authorities that they were generally short of funds and lacked essential, trained staff like sanitary inspectors.

4 Cumpston and McCallum, op.cit., p.8.
strongly for reforms in the sanitary administration of the metropolitan boroughs, the faulty and backward condition of which had become patent.5

A Board of Health inspection of houses in affected areas of the city revealed a large number in very bad condition. A cleansing operation organised by the Department of Public Works, involving 3,000 workers, was carried out. To forestall future neglect, the Government accepted responsibility for paying half the salaries of sanitary inspectors, in return for which it exercised a veto over appointments and dismissals. Virtually a new sanitary section was created in the City Council administration in 1901. Regular house-to-house inspections were begun, over fifty per cent of dwellings having been found to be defective, usually from faulty drainage. As the use of concrete for rat-proofing became more common, the sanitation of dwellings and business premises in the inner-city area advanced considerably.

Use of concrete for road surfaces greatly reduced the dust nuisance for which Sydney in the summer was notorious. The progressive replacement of horse transport by motor vehicles cut down the number of stables and manure accumulations in the city. The fly nuisance was thus much abated. The disappearance of horses from the city played no small part in the great decline in the incidence of infant diarrhoea in Sydney as in other modern cities.6 In 1903, to prevent the development

5M.O.H. Report, 1900, p.1.

6Sir Robert Hutchison, an eminent English medical authority, placed as much weight on the development of the smaller family, the advent of dried milk, and the disappearance of horse transport as on organised infant welfare work, in explaining the spectacular fall of infant mortality in urban areas. See Armstrong, M.J.A., Oct. 1939, p.648. Michael Cannon has drawn attention to the effect of horses on the city: "There were other signs of this deep difference between the texture of the horse era and our own. Practically every house had to have its own stables, trough and hay storage shed, no matter how simple, and their placing helped determine the layout of suburban blocks. The

Continued...
of conditions favourable to the breeding of rats, the Health Department
drew up a code of by-laws covering stables, cow-sheds and cattle-sheds
for adoption by municipalities. Armstrong complained in 1903 that
borough councils showed "a great antipathy to the making of new By-laws"
in health matters. Over twenty years later his successor, Dr J.S.
Purdy, was complaining about the failure of local authorities to enforce
ordinances concerning stables strictly.\(^7\) As a result of the plague
epidemic the Sydney Harbour Trust was created. It was given powers
over all wharf areas and harbour foreshores. It carried out renovation
work in sections of the Rocks area, an old and very dilapidated part
of the City. Another notable improvement in public health at this
time was the employment of trained health inspectors. Inspectors of
nuisances hitherto employed by municipalities were commonly untrained,
their tenure uncertain and their pay low. The new medical officers of
health, Armstrong and Dick, conducted regular courses of lectures in
sanitary law and practice from 1898. The President of the Board of
Health, Ashburton Thompson, requested the Royal Sanitary Institute,
London, the recognised body in England for certification of sanitary
inspectors, to conduct examinations in Sydney. The first examination
was held at the end of 1900.\(^8\) Subsequently, other Australian States
and New Zealand instituted such examinations.

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\(^6\) (Cont.)
effect was universal. 'For every man who keeps a horse in England,
there are, proportionately to the population, ten in Australia',
observed Richard Twopeny. To get the full flavour of the age, therefore,
one must imagine a million or so horses in Australian cities dropping
their manure everywhere — a useful fertiliser for the garden, but
tolerable as a health hazard only as long as population density remained
low". Cannon, op.cit., p.53.

\(^7\) M.O.H. Report, 1926, p.91.

\(^8\) M.O.H. Report, 1900, p.9.
The combined effect of the extension of the sewerage system and pressure from the central health authorities quickly reduced the number of cesspits after 1900. In 1913 J.S. Purdy reported that in all districts not yet sewered the double-pan sanitary service was in operation. The danger of the cesspit is illustrated by the following figures showing the typhoid case incidence per type of disposal service: in 1900 the incidence of typhoid in sewered houses was 1 in 114, in houses served by pail closets, 1 in 72, and in those using cesspits, 1 in 31. Progress in garbage disposal methods came more slowly. Purdy complained in 1913 it was "very exceptional...to find any local authority which shews any keenness to tackle this problem...." In 1920 he was still complaining that dumping was so common.

The fact that the garbage of Redfern is deposited on a racecourse near the South Sydney Hospital, that of Paddington near the Hampton Oval, and that of Woollahra on Bellevue Hill, 'the Dress Circle of Sydney',...speaks for itself in this twentieth year of the twentieth century.

Yet, at least, five municipalities now used incinerators to dispose of garbage.

Compared with the period before the construction of a reliable water supply and sewerage system and the creation of a well-armed central health authority, the early years of this century saw a great improvement in the sanitary condition of Sydney. These major sanitary advances largely account for the notable decline in the general death-rate from intestinal diseases. But it will be remembered that early in

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9 M.O.H. Report, 1900, p.4. In 1901, the figures were respectively 1 in 136, 1 in 80, and 1 in 26. M.O.H. Report, 1901, p.8.

10 D-G Report, 1913, p.87.

this chapter I drew attention to the fact that the decline in deaths at all ages from diarrhoeal disease lagged behind the decline in typhoid deaths. Improvement in the sanitary environment significantly influenced the rates of both diseases. However, other factors mediated the impact on the diarrhoeal death-rate because a very large proportion of the total deaths were those of infants. I suggested that the infant welfare campaign with its emphasis on better nutrition and domestic hygiene importantly affected the diarrhoeal death-rate. Nutrition and hygiene in the home were the mediating factors so far as infants were concerned. J.H.L. Cumpston in the 1920s had suggested very much the same thing. More modern work strongly supports this view of the aetiology of infant diarrhoeal disease. One recent commentator said of solutions to the great problem of diarrhoeal disease in contemporary, economically developing countries: "Most public health workers currently do not question the propriety or desirability of environmental controls, but rather the priority that should be given to them relative to nutritional and medical care needs ...." More recently, the authors of a study of infant diarrhoeal disease in some communities of the Third World concluded about this point:

The traditional acceptance of environmental sanitation as a fundamental feature of long-term community control of diarrheal disease is fully justified. Because of the factors involved in the origin of the disease in early childhood, sanitary measures have less direct effect in control of weaning diarrhea than of diarrheas at older ages. The fact is inescapable, however, that, for satisfactory control of the diarrheas of early childhood, the sources of infection of the disease must be eliminated; and these are in the diarrheas of older members of the population. Control in this group is

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12 See above, p.75.

primarily through environmental sanitation.\textsuperscript{14}

I suggest, then, that improvement in the sanitary environment of Sydney in the late nineteenth and early twentieth centuries was a significant, but mediated, cause of the decline in infant deaths from diarrhoeal disease.

\textsuperscript{14}Scrimshaw \textit{et al.}, op.\textit{cit.}, pp. 255-256.
Chapter 5

THE INFANT WELFARE MOVEMENT IN SYDNEY

A. Infant Welfare in the Nineteenth Century:

Infant welfare work in England and France for most of the nineteenth century was primarily concerned with providing shelter for the child and protecting him from outright abuse. These humanitarian efforts were directed, moreover, towards a special category of infant, the deprived or disadvantaged child.¹ Broadly speaking, it was only near the end of the century that concern with the health of infants in general emerged. Efforts were focussed on reducing what was now seen as an intolerably high level of infant mortality. In England domiciliary health visiting was carried out by voluntary workers as early as the 1860s. But the work was confined to Manchester and Salford and spread only slowly to other towns. Towards the end of the century local authorities began to appoint female sanitary inspectors. They were not always qualified to instruct mothers on infant care.²

¹ I discuss developments in England and France because, as mentioned before, they directly inspired the first organised work in Sydney, which was also the first such work in Australasia. The movement in Sydney was part of an international movement in a second sense. The local movement shared a powerful motivating force with movements in other Western countries, concern about population growth. Clearly, humanitarianism continued to play a part, but fears about population decline and its effect on national welfare gave new importance to infant life. France experienced a slowing of population growth earlier than other North-West European nations (except for Ireland). By 1870 her population growth rate was almost stationary. D. Llewellyn-Jones, op. cit., p.193. Consequently France pioneered infant welfare work, for the steady decline in the birth-rate "could only spell national and racial extinction in the end". Abt-Garrison, History of Pediatrics, Philadelphia, 1923, p.156. See also W.A. Friedlander, Individualism and Social Welfare. An Analysis of the System of Social Security and Social Welfare in France, East Lansing, Michigan, 1962, pp. 81-83.

France there were some limited attempts round the middle of the century to reduce the infant death-rate by specific attention to infant care. The mayor of Villiers-le-Duc in the Côte d'Or became interested in the hygienic problems of infant care. The infant mortality rate of his area, which had stood at 200 to 300 per 1,000 births during 1804-54, fell to a steady 150 per 1,000 during 1854-63. In the 1880s the mayor's son himself became mayor and he took up his father's infant welfare work. The mortality rate, which had returned to the old level of 300 per 1,000 because the father's two immediate successors as mayor had taken no interest in infant care, fell to around 150 per 1,000 after the son's occupation of the mayoral office. However, the predominant concern remained the traditional one of protecting abandoned, illegitimate and other deprived infants. In 1874 the loi Roussel was passed. The aim of the law was to protect infants sent from Paris to the provinces to be wet-nursed. It required all places where infants under two years of age were being given foster care to undergo official inspection. It also provided for inspection of all creches catering for children of working mothers. The mortality of the thousands of infants sent from the metropolis to the country had stood at a terrible seventy-five per cent. The author of the law, Théophile Roussel, popularly known as the "advocate of abandoned children", was also responsible for a law of 1889 which gave protection to maltreated children. By the 1890s France was pioneering the distribution of sterilised milk for infant feeding and was establishing the first infant clinics. The emphasis was shifting to a more direct

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3 Abt-Garrison, op.cit., p.156.

assault upon the problem of infant mortality.\(^5\)

In England from the 1870s legislation protecting children from neglect at home and from exploitation by those making a profit from an infant's illegitimate birth was enacted. The placing of illegitimate infants with foster mothers who received a lump sum of money or weekly payment was known as "baby-farming". The death-rate of illegitimate babies was enormously high. Something like sixty per cent died during their first year of life. The single mother's despair coupled with the fact she was often unable to get material support fed the growth of baby-farming, the practitioners of which commonly neglected their charges with the intent of inducing death.\(^6\) The case of Margaret Waters and Sarah Ellis, two sisters, who regularly advertised for

\(^5\) The United States, like Australia, was influenced in the development of health services related to the reduction of infant mortality by earlier French examples. E.R. Schlesinger, "The Impact of Federal Legislation on Maternal and Child Health Services in the United States", M.M.F.Q., vol.52, 1974, p.3. But until the last years of the century infant welfare work focussed mainly on the care of children in foundling institutions and on the prevention of abuse. In 1875 public opinion was aroused by the Mary Ellen case. A mission worker in the slums of New York found an adopted child being badly mistreated. Unable to achieve relief of the situation herself, she requested the Society for the Prevention of Cruelty to Animals to intervene. The Society decided the child could be classified as an animal and so accepted the case as within its area of responsibility. P. Van Ingen, "The History of Child Welfare Work in the United States", in Ravenel, ed., op.cit., p.291. As a result of the Mary Ellen case the Society for the Prevention of Cruelty to Children was established. Returning from a visit to the United States in 1881, Thomas Agnew, a Liverpool merchant and banker, set out to see that a similar body was established in England. Through the help of the Society for the Prevention of Cruelty to Animals a society for preventing cruelty to children was founded in Liverpool in 1883. By 1889 thirty-one towns had organisations. Very much due to the work of the secretary of the London society, Benjamin Waugh, the organisations in some of the larger regional centres joined London to form a national society. Soon after, the first legislation aimed at preventing cruelty to children was passed. J.S. Heywood, Children in Care. The development of the service for the deprived child, London, 1966, p.101.

\(^6\) It was poor law policy to refuse out-relief to mothers of illegitimate children. Heywood, op.cit., p.94.
children to adopt for the payment of £4-5, received much publicity. They were committed for trial in July 1870 on charges of wilful murder, manslaughter, conspiracy, and obtaining money on false pretences. A police sergeant, who had visited the sisters' house, described the condition of infants in the sisters' care:

...I could see something that looked like a shape of a head under some black clothes... on moving them, there lay five infants.... They were all quiet and appeared to be asleep from some cause. (A half-empty bottle of laudanum was found in the house.) They all had some clothing on...saturated with wet, and smelling very offensively.... Two of the infants appeared to me to be dying.... I went into the backyard and there found five more.... I said to Waters, 'Those children look better. How do you account for that?' and she said, 'We have so much a week for these'.

Margaret Waters was executed for murder and Sarah Ellis received a sentence of eighteen months.

Baby-farming had been discussed by Dr J.B. Curgenven in papers he presented to the National Association for the Promotion of Social Science in 1867 and 1869, and in a paper to the Harveian Society in 1866. A committee of the Society made recommendations on the matter to the Government in 1867. No action was taken because of preoccupation with the franchise issue. In 1868 Dr Ernest Hart drew further attention to the matter by publishing some articles in the British Medical Journal. In the House of Lords Lord Shaftesbury sought action from the Government. In 1870 Hart and Curgenven founded the Infant Life Protection Society. The Society promoted a bill in 1871. The Government would not support the measure, but it did accept the formation of a Select Committee of the Commons to investigate the subject. The Committee's report became the basis for subsequent legislation. The report revealed that baby-

7 Quoted in Heywood, pp. 95-96.
farming was widespread:

...there are in all parts of London a large number of private houses...where women are confined...if they [the infants] are to be 'adopted' as is usually the case, the owner of the establishment receives... sometimes as little as £5, sometimes as much as £50 or £100, according to the means of the party.... The infant is then removed...to the worst class of baby farming houses, under an arrangement with the lying-in establishment, by which the owners of the baby-farming houses are remunerated, either by a small round sum... totally inadequate to the permanent maintenance of the child or by a small weekly payment.... In the former case, there is obviously every inducement to get rid of the child, and, even in the latter case, unless the mother should come to look after it (which she seldom does), improper and insufficient food, opiates, drugs, crowded rooms, bad air, want of cleanliness, and wilful neglect, are sure to be followed in a few months by diarrhoea, convulsions and wasting away.9

Advertisements in the newspapers were used to inform applicants how to contact "foster" parents.10 The Select Committee continued:

The children born in the lying-in establishment are usually illegitimate, and so are the children taken from elsewhere to the worst class of baby-farming houses...their births are not registered, nor are their deaths; some are buried as still-born children, some are secretly disposed of, many are dropped about the streets.11

The Committee proposed that registration of all births and deaths be made compulsory, that registration of all private houses used as lying-in

8Legal adoption did not come into existence until the Adoption Act of 1926.

9Quoted in Heywood, op.cit., p.96.

10The more respectable press being unwilling to carry such advertisements once the real situation was revealed, private circulars were often used.

11Quoted, ibid, p.97. Baby-farmers could do well financially. A police witness before the Select Committee told how he had found bonds and securities worth £800 hidden in one London establishment. Ibid, p.97.
establishments be required, and that registration of all persons taking two or more infants under one year for reward be introduced.\textsuperscript{12} Legislation for the compulsory registration of births and deaths was enacted in 1874.\textsuperscript{13}

The recommendation made by the Select Committee in the matter of paid fostering of infants was embodied in the Infant Life Protection Act, 1872. Under the Act all persons receiving payment for the care of two or more infants for more than twenty-four hours were required to register their houses with the local authority. The authority could refuse registration where the house was deemed unsuitable or the person unfit. A registered person was required to inform the coroner of any infant death, and the latter was to hold an inquest unless presented with a death certificate from a doctor who had examined the child.\textsuperscript{14} Evasions of the 1872 Act were possible. The London County Council, which took over its administration in London from the Metropolitan Board of Works in 1889, made a number of attempts to have amendments introduced. Success came with the publicity surrounding the trial and execution for murder in 1896 of Mrs Dwyer, a foster mother, who disposed of her charges by strangulation and dumping their bodies in the Thames.\textsuperscript{15} A new Infant Life Protection Act was passed in 1897. It gave the local authority power to remove a child from premises where the authority was not allowed to enter to carry out inspection. It raised the age limit of those protected to five years, and, in defining improper care,

\textsuperscript{12}The Registration of Births and Deaths Act, 1836 required registration, but did not provide machinery for enforcement.

\textsuperscript{13}Registration of lying-in homes was not made compulsory until the Midwives and Maternity Homes Act, 1926. McCleary, \textit{op.cit.}, p.93.

\textsuperscript{14}McCleary, pp. 93-94.

\textsuperscript{15}Ibid, p.94.
it specifically mentioned danger to the health of the child. In 1908
the Children Act consolidated the many statutes relating to protection
of children, the first part extending protection to situations where
only one child was in paid care and the second part extending the law
on cruelty to children to punish negligence as well as wilful cruelty.\(^{16}\)

The development of public concern for the welfare of infants
followed the same path in New South Wales from the 1870s as it did in
England. The emphasis rested on protection of illegitimate infants
from exploitation and on the provision of shelter for parentless
infants. Only round the turn of the century did concern widen to
comprehend the problem of general infant mortality, although individuals,
especially doctors, were drawing attention to this matter well before
then. An early instance of awareness of this social problem, which
quantitatively was much more significant than the problem of foundlings
and illegitimate infants, was a comment by Professor M.B. Pell, Actuary
to the Mutual Life Association of Australasia and chairman of the
Sewage and Health Board of 1875-77. Pell made the observation in 1878
during a discussion of mortality rates in New South Wales:

In fifteen years there are about 73,400 children born in
the city and suburbs [of Sydney], and of these 7,164 are
sacrificed before attaining the age of five years to
evils incidental to a residence in our metropolis....
Surely we make a great fuss about small things, and let
great things pass almost without a thought. Some poor
girl driven to desperation by the misery of her position
...leaves her baby, that never ought to have been born,
to perish by exposure...the vigilant policeman tracks
her down; the indignant magistrate commits her for trial;
the impartial jury find her guilty; and the just Judge
sentences her to some punishment which must be light
indeed compared with the misery which she has already
undergone.\(^{17}\)


\(^{17}\) The Australian Practitioner, April 1878, pp. 150-151.
This was an isolated case of awareness of the general problem of infant mortality in Sydney. The care of the illegitimate and abandoned infant remained the focus of infant welfare efforts for some time to come.

In the 1870s there was growing public concern about abandoned infants in Sydney. The concern led to the establishment in 1874 of the Sydney Foundling Hospital. Later known as the Infants' Home, Ashfield, the institution's objects were stated to be the preservation of infant life, prevention of infanticide and the enabling of "unfortunate mothers" to retrieve their reputations. The upper-class ladies running the institution saw the hospital as saving babies from the "hideous maltreatment" of baby-farmers, and they claimed that infanticide had almost disappeared from Sydney since the opening of the home.

Most women applying for places for their children were domestic servants. They were charged five shillings per week for the infant's maintenance. This was a substantial proportion of a wage of nine to twelve shillings per week. But the ladies of the executive believed it had the worthwhile effect of removing from the women the temptation to sin further by forcing them to keep respectable employment. Many of the infants admitted were in very poor health and had little chance of surviving the outbreaks of diarrhoea, diphtheria, whooping cough and other infections which regularly swept through the institution despite the strenuous efforts of the staff.

18 *Infants' Home, late Sydney Foundling Hospital*, Sydney, 1877.

19 In 1876-77 the Patroness was the Hon. Lady Robinson, the President, Lady Deas-Thomson, Treasurer, Mrs Windeyer, and the Secretary, Mrs Bensusan.

20 *Second Annual Report, 1876*, p.8.

The Benevolent Society, the colony's department of social
security in an age when private charity supplemented by some public
funds cared for the destitute and sick poor, had long been involved
in providing shelter for abandoned infants and unmarried mothers. The
Society's Asylum housed a large lying-in establishment, which catered
mainly for single parturients. Until the 1880s it was the only public
maternity accommodation in Sydney. As well as this traditional
sheltering of the deprived infant, efforts were made to introduce legal
protection of the infant against abuse and ill-treatment. The Select
Committee of the Commons in the 1870s had recommended compulsory
registration of all births and deaths, of all persons fostering infants
for gain, and of private lying-in homes. In New South Wales law reform
in the interest of infant welfare pursued the same threefold path.

The first attempt at reform was concerned with registration
of births and deaths. Defects in the existing system permitted much
abuse. Officers of the Benevolent Society noted that abandoned infants
in Sydney were increasing in number. And many were being found dead.
Reporting to the Society in 1889, Edward Maxted criticised the
incompetence of many midwives and emphasised the dangers to which
illegitimate babies were exposed. In October of the same year, the
press gave much publicity to the case of Mrs Blatt who was charged with
the murder of an infant left in her paid care. 22 A few years later the

21 (Cont.)
a baby-farmer only to succumb to infection in the Home. The description
of the child's behaviour also implies the state later termed maternal
deprivation, which was part and parcel of life in the nineteenth century
foundling institution: "...it was very sad to see the little pitiful
eager face look up with expectant eyes every time the nursery door
opened, and the hopeless look of disappointment when he did not see
the person he wanted. It was not to be wondered at that this child
should be the first to succumb to diphtheria...."

22 B. Dickey, Charity in New South Wales. 1850-1914: A Study in Public,
Continued...
public learned of an even worse case of abuse arising from uncontrolled fostering of infants. In November 1892 the press reported that five bodies of babies had been found buried in a backyard in Macdonaldtown, an inner suburb. In the course of investigations fifteen bodies were exhumed from various locations. A Mr and Mrs Makin were eventually convicted of murder, the husband being hanged and the wife receiving a commuted life sentence.²³

Maxted continued to inform the public of the facts of baby-farming in Sydney. A report he presented to the Benevolent Society in 1890 was published in the press. He pointed out how commonly the trade was run in association with private lying-in homes, where single mothers were often accouched. In this respect the situation was similar to that in London. Early in 1891 the Herald called for legislation to control fostering arrangements.²⁴ Five years previously the Hon. Dr J.M. Creed had persuaded the Legislative Council to establish a Select Committee on registration of births and deaths, because it seemed clear that the established system allowed crimes against infants to be

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²² (Cont.)

p.268. In drawing attention to the problem of infant abuse, the Benevolent Society in New South Wales was playing the same role of rousing the public conscience as similar voluntary organisations like the Society for the Prevention of Cruelty to Children in England in the later nineteenth century. See Heywood, op.cit., p.104.

²³ Dickey, op.cit., p.274. The feelings of guilt, which among other motives could cause unmarried mothers to rid themselves of their babies, are reflected in the following, which was part of a note pinned to the wrappings covering the body of a new-born infant found in Belmore Gardens in 1874: "To avoid the shame that hangs over every woman who stoops to folly, this night my intentions are to go to North Shore, and from there to dive into eternity. When, by my... dear relations I am missed, everyone will be surprised to know who it is... my seducer I leave to God to punish". Quoted in Dickey, p.299.

²⁴ Ibid, pp. 269-70.
concealed. The Committee was critical of the lack of provision for stillbirth registration. Witnesses suggested illegitimate children were often buried as stillborn, when this was not the case. Many private lying-in establishments simply did not report births and deaths. A police sergeant, James Beatty, said he investigated the death of an infant at an establishment on the Lane Cove River run by a midwife, Mrs Baker. At the inquest the death of a second infant was revealed. Although two months old, the child had been buried as stillborn.

Early in 1888 Creed introduced a bill based on the Select Committee's recommendations. It provided for registration of stillbirths

25 N.S.W.P.D., vol.20, 1885-86, 10/6/86, p.2544. Creed and Dr C.K. Mackellar were members of the Committee. In the colony the State had taken over responsibility for recording vital statistics by the Registration Act, 1855. Until then a system of parish registries had obtained. Amending legislation in 1839 had substituted the Registrar of the Bishop of Australia for the Registrar of the Archdeacon's Court as the source to whom annual returns were made. The 1855 Act followed the 1836 British Act and required that a birth within the colony be registered by a parent within sixty days, or within six months on a declaration by a parent or someone present at the birth. The onus of reporting a death lay with the occupant of the place where it occurred. Registration had to be carried out within thirty days of the event. A certificate was to be given to the undertaker or clergyman at the burial, but it was allowed that interment could take place before registration. Where this happened, whoever was officiating at the burial was to notify the district registrar. No provision existed for registration of stillbirths and no requirement concerning medical certification of the cause of death was laid down. There were clearly opportunities for abuse.

26 Cemetery authorities generally required a certificate from a doctor or midwife. But these were often worthless as evidence because they were unwitnessed, were returned by midwives who were illiterate, and generally could be easily forged.

27 Sel. Com. on Registration of Births, Deaths and Marriages Report, 1886, pp. 3-4 and pp. 7 and 11.

28 Ibid, pp. 32-33. The case was dismissed when the undertaker could not identify the person who provided the certificate. Two witnesses from the Registrar General's office complained to the Select Committee about undertakers who delayed returning notices of burial. Some had had to be prosecuted. Ibid, p.14.
and a number of other safeguards against abuse. However, it was ruled informal.\footnote{29} There the attempt to eradicate abuses against infant life by reform of the Registration Act stopped.\footnote{30}

In 1891 against a background of publicity about baby-farming in Sydney a direct attempt was made to control paid fostering of infants. J.C. Neild introduced to Parliament the Infants' Protection bill. Creed was responsible for the measure in the Legislative Council. Neild's bill\footnote{31} outlawed the payment of lump sums, the practice being known to encourage deliberate neglect of infants by baby-farmers. It made illegal various other practices which promoted the unfortunate trade. The Government decided to introduce its own bill. The two bills were referred to a Select Committee. The Committee heard evidence of various


\footnote{30}The question of registration of stillbirths as a protective measure was raised a number of times subsequently. The Infant Protection Act, 1892 required certification of stillbirths occurring in lying-in homes. The Royal Commission on the Birth-Rate recommended in 1904 that registration of all stillbirths should be required. Under the Notification of Births Act, 1915, reporting of stillbirths was necessary. Stillbirths were also to be notified under the Nurses Registration Act, 1924. But since figures were known to be incomplete, they were never published. The Registration of Births, Deaths and Marriages (Amendment) Act, 1934, finally introduced reforms which the Royal Commission on the Birth-Rate and, before that, the Select Committee of 1886 had advised were needed to protect infant life. But the 1934 amendments were introduced with the aim of establishing greater administrative efficiency in the collection of vital statistics. It was, as mentioned in the debate, "a machinery measure". The protection of infant life from the type of dangers against which the measure had originally been aimed had long been achieved.

\footnote{31}Neild had the support of Protestant groups for his child protection work. In 1892 a public meeting devoted to the "Promotion of Public Morality" commended his efforts. The meeting was "a festival of reformist protestantism" in the tradition that reached back in Sydney to the founding of the Benevolent Society at the beginning of the century. Dickey, \textit{op.cit.}, p.273 and p.300. Later in 1892 Neild introduced a Vice Suppression bill which sought to raise the age of consent. In 1894 he tried unsuccessfully to have the Children's Protection Act amended to prohibit street trading by children. In the 1890s he was a leading advocate of old-age pensions. T.H. Kewley, \textit{Social Security in Australia}, Sydney, 1965, p.5.
condemnable practices in Sydney. G.E. Ardill, Director of the Society for the Prevention of Cruelty to Children, said that his Society had discovered a woman in Glebe who was keeping eight babies in boxes in a cellar, the infants being in very bad condition. To assess the extent of baby-farming in the city, the Society had advertised for foster parents. It received eighty replies, with demands for lump sum payments ranging from £3 to £30. Many of the respondents were believed to be baby-farmers. The Children's Protection Act of 1892, which resulted from the Committee's work, required notification of deaths of fostered infants registered under the Act and required keepers of private lying-in homes to forward regularly records of births in their establishments. Lump sum payments for foster care were made illegal.

In 1902 the Hon. Dr C.K. Mackellar introduced a further Infant Protection bill. The Act of 1892 had dealt with one danger to the life of the illegitimate infant, the unscrupulous baby-farmer, Mackellar argued. The 1902 measure sought to reduce the scandalously high mortality rate of illegitimate babies by other means. In Sydney the rate for legitimate babies was 89 per 1,000 births, that for illegitimate infants was 287 per 1,000 births. The bill made the father of an illegitimate child responsible for the costs of accouchement and the puerperium. It required all places receiving infants to be licensed and regularly inspected. Mackellar was very critical of the high death-rates of leading foundling institutions in Sydney and saw no reason why they should be exempt from official surveillance. Early in 1903 the


33 N.S.W.P.D., vol.9, 4/12/02, p.5081 ff.

34 Mackellar's concern with the health of infants in institutions marks the transition from the old concentration on abuse of deprived infants

Continued...
Medical Gazette came out strongly in support of Mackellar's bill. The Gazette said there were two reasons for the unacceptably high death-rates in institutions: first, the absence of the mother with consequent marasmus or failure to thrive; second, the fact that gastro-enteritis or diarrhoeal disease, leading to marasmus, was highly infectious. It said, "We submit that... gastro-enteritis should be regarded in the same light as typhoid fever...."

Mackellar's attack on the mortality records of institutions elicited a strong defence by a fellow Legislative Councillor, Sir Arthur Renwick. Renwick, who had long been connected with the Benevolent Asylum, pointed out that many infants admitted to the Asylum were already in poor condition, sometimes moribund on admission, and the Asylum in effect acted as a kind of hospital for the reception of sick infants from other institutions. Under the revised by-laws of 1896, the Benevolent Society had as one of its objects the provision of a receiving hospital for sick infants. In the early 1900s the Society ran a hospital for infants in conjunction with its asylum for women and children at Thomas Street, City. In 1911 the Renwick Hospital for Infants, named for Sir Arthur, was opened. It had 224 in-patients and 154 out-patients during the first year, infectious disease cases, especially acute gastro-enteritis cases, being predominant. During the

34 (Cont.)
to concern with the mortality and health of infants in general. It was the beginning of modern infant welfare work. Other Sydney doctors were also critical of the use of institutions, especially where hand-feeding was followed, to rear foundlings. See W.F. Litchfield, A.M.G., Jan. 1899, pp. 23-26 and July 1901, p.304.

35 Edit., A.M.G., March 1903, pp. 116-117.

36 N.S.W.P.D., vol.9, 11/12/02, pp. 5348-5350.

first couple of years mortality of in-patients averaged about twenty-six per cent. The Society took some trouble to point out that the public had to learn that the institution was a hospital for sick infants, not an infants' home. The hospital's specially trained infants' nurses did domiciliary work. The new hospital was seen by the Society as the culmination of its efforts "to master the difficulties of infant nurture" and was recognition of the emergence of infant care as a scientific specialisation.

Despite the Benevolent Society's brave words about infant care being a scientific matter, the mortality of infants was still high. The two problems, which critics of institutional care noted, infections and the need for the maternal presence, continued to trouble institutions caring for sick infants. As far as possible, the Renwick Hospital


39 The Charities' Gazette and General Intelligencer, 4/7/11. That infant care was now being seen as work requiring special training is also illustrated by the establishment of the Sydney Norland Institute. The training centre was derived from an English example and it aimed to provide a growing number of nursery nurses who would work in private homes. The project was supported by leading doctors interested in infant welfare like Mackellar and Charles Clubbe. A.M.G., May 1908, p.266. Clubbe commented, "The wave of consideration for the child is already apparent in Australia, as it is evident in other countries". The Institute saw itself offering employment for educated women and furthering national welfare by reducing the maternal ignorance widely held responsible for the high infant death-rate: "...we cannot long hold an empty continent against the swelling hordes of coloured people who are increasing, and hungering, and learning, to the north of us". The Sydney Norland Institute and its Loan Training Fund, Sydney, 1909. With vice-regal patronage and an apparently ready market for the skills of its graduates, the Institute quickly progressed. By its second year of operation it was training forty-eight young women in a one-year course, which included work in a hospital, in a kindergarten and in the Institute's own nurseries. Training in infant nursing, as provided by the Norland Institute, would probably have appealed to the middle-class girl for much the same reasons as Spearrett suggests kindergarten training did: "The maternal instinct that she was told must be in every 'normal' girl was not denied. By undertaking a kindergarten course she was doing both a service to herself, by training for marriage or training for life, and a service to the community". Spearrett in Edgar, op.cit., p.586.
admitted mothers with babies and took elaborate precautions against the
spread of infections. In 1914 something of a debate took place between
two Sydney doctors over the issue of hospitalising sick infants. Dr
Selwyn Harrison of the Renwick Hospital maintained that hospitals for sick
infants were absolutely necessary because they could provide care often
unobtainable in the home environment: "The care of every sick child in
its home is perhaps the ideal to strive for, but existing conditions
among a great number of the people that make use of a public hospital
are very bad indeed". In certain situations, "the saline needle and
the hypodermic syringe are far more potent than the fondest devotion of
maternal love". W.F. Litchfield maintained that the weight of
contemporary opinion was against treatment of infants in hospitals.
Such hospitals mainly cared for infants suffering from acute conditions,
chiefly gastro-enteritis, and the success rate was low. He said that the
staff of the Royal Alexandra Hospital for Children, Sydney had decided
that as far as possible cases were to be treated in their own homes,
with nurses making domiciliary calls. Harrison refused to accept
that "the old bogey of transferred infection in infant hospitals"
should any longer "terrify us into a cowardly inactivity when a little
child's life is waiting to be saved".

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40 During discussion of the problem of preventing cross-infection in
children's hospitals at the Medical Congress of 1908, Dr A.J. Wood,
a leading Melbourne paediatrician, said flatly that sick infants should
not be admitted to hospital during an epidemic. Dr T.S. Dixson of
Sydney said that his hospital isolated mothers and infants for two weeks
before they joined other patients. Trans. Aust'sian Med. Congr.,
1908, pp. 34-36.

41 A.M.G., May 1914, p.410.

42 Ibid, p.409.

43 A.M.G., March 1914, p.213.

44 Ibid, p.234.
Mackellar's Infant Protection bill was supported by the Carruthers Government in 1904. The aim of the Infant Protection Act, 1904 was to enable the single mother to keep her baby in the early, critical stage of its life. Mackellar had argued during debate of the measure that the mortality record of the Waitara Home was much worse than that of the Ashfield Infants' Home just because at Waitara mothers were not admitted with their children. His emphasis on the need for maternal care made eminent sense when conditions, which have been discussed previously, made breast-feeding the great preventative of major causes of infant mortality. But he meant more than breast-feeding when he stressed the critical role played by the mother in the early part of the infant's life. He was pointing to the less easily identified contribution to the infant's health and general well-being made by the mother's total presence, the psycho-physical nexus in the mother-child relationship, which modern research has explored under the heading of maternal deprivation.

During debate J.R. Dacey (Alexandria), who was later a Labor Colonial Secretary, went so far as to suggest that the State, not the father, might assume financial responsibility for the care of the unmarried parturient. Conservatives were strongly opposed to the idea. Thomas Jessep (Waverley) believed it would put a premium on immorality.

The notion of maternal deprivation is most commonly associated with the work of John Bowlby, whose report to the World Health Organization in 1951 led to widespread improvement in the care of children being reared in institutions. His indictment of institutional care has been likened in its impact to Elizabeth Fry's exposure of prison conditions in the nineteenth century. In fact, research into the adverse influence of deprivation of maternal care had been going on for fifteen years before Bowlby made his report and, as discussed above, doctors had been conscious of some aspects of the problem from the later nineteenth century. Bowlby's claims about the serious effects on the child of early maternal deprivation were controversial from the outset. Some mistakenly interpreted his claim about the role of mother-love so that they placed "an almost mystical importance on the mother" and saw "love as the only important element in child rearing". A recent review of the question concluded, "The concept of 'maternal deprivation' has..."
was part of a wider approach to child-rearing which he followed in his administration of the State Children's Relief Board. The approach was expressive of certain values, which together amount to a conservative view of society. State action was advocated, but only in defence of these goods. Family life (by which he meant life in large Victorian-age families), guided by regular religious observance, provided the best environment for child-rearing. Deprived children were to be taken out of institutions and placed in the natural milieu of the family. Country life almost self-evidently was morally superior to life in the city for growing children:

Far removed from the glare and glamour of city life with its thousand and one temptations...its unhealthy excitements, its unsettling influences — all tending to a ruinous precocity...we place the lads down in the healthy tranquillity of rural life.48

The Royal Commission on the Birth-Rate made many recommendations aimed at counteracting the effects of the declining reproduction rate in New South Wales. One, which C.K. Mackellar was to do much to see implemented, was the licensing, supervision and inspection of all private lying-in homes. Over 100 such establishments existed in Sydney

47 (Cont.) undoubtedly been useful in focusing attention on the sometimes grave consequences of deficient or disturbed care in early life. However, it is now evident that the experiences included under the term 'maternal deprivation' are too heterogeneous and the effects too varied for it to continue to have any usefulness". Michael Rutter, Maternal Deprivation Reassessed, Penguin, 1972, pp. 120-128. See also H. Bakwin, Journal of Pediatrics, vol.35, Oct. 1949, pp. 512-521.

48 Mackellar, The Child, the Law and the State, Sydney, 1907, p.40. Among the recommendations made by the Royal Commission on the Birth-Rate, of which Mackellar was President, was one urging the Government to promote rural settlement. The Commission saw a variety of advantages flowing from this: the growth of urban areas would be limited, the general physique of the population improved, idleness in youth checked, primary production boosted, employment of women in factories cut back, and some excuses for limiting the size of families removed. R.C. on Birth-Rate Report, vol.1, 1904, p.36.
and, in many, abortions were regularly carried out. When the Government failed to act on the recommendation, Mackellar introduced a bill of his own in 1906. Two Select Committees considered the bill in turn. They heard evidence which confirmed suspicions about the use of private lying-in homes as centres for the practice of abortion. The bill was reintroduced in 1908 and enacted. The Private Hospitals Act, 1908 was intended to ensure that private establishments were run in a surgically clean manner, with a qualified person in charge. But more importantly, it was to put down the practice of abortion. Two key provisions related to this second objective: the first was notification of proclaimed diseases within twenty-four hours, the idea being that septic peritoneal and uterine conditions could be taken as prima facie evidence of interference; the second was notification of all births and deaths occurring in an establishment within twenty-four hours, no interment being allowed before such notification.

By 1908, then, legislation, in the form of the Children's Protection Act and the Private Hospitals Act, protected infant life from obvious dangers. But it was a special category of infant, the illegitimate or otherwise deprived child, who was the object of protection. By the early 1900s, when Mackellar sought a new Infant Protection Act, the mortality rate of illegitimate infants was a prime concern. This concern was also shown in the medical debates about the


1 Birth was so defined that stillbirths and miscarriages were covered. The Hon. J. Hughes, Representative of the Government in the Legislative Council, objected to such a comprehensive definition, saying it would serve to humiliate women having natural miscarriages. Ibid, pp. 518-519. Mackellar maintained it was required, if deliberate abortions were to be detected. Two fellow doctors, the Hon. Dr J.C. Creed and Sir Normand MacLaurin, supported him on this point. Ibid, pp. 519-520.
death-rate in foundling institutions. Behind this specific concern with the level of mortality of illegitimate babies, there was emerging a concern about the mortality of infants in general.

It has been suggested that the marked change in attitude in England towards the health of the child, noticeable round the turn of the century, was the product of a number of forces: the scientific study of society; the growth of democracy in the political and industrial spheres such that enforcement of a deterrent poor law became impossible; the rise of feminism, with women entering public positions traditionally held by men; the falling birth-rate, which made babies a commodity in short supply; the revelations concerning national fitness which emerged from the recruiting process for the Boer War; the increasing effectiveness of medicine, manifested particularly in the fields of bacteriology and epidemiology.\(^2\) I want to look very briefly at the situation in England and then to suggest that some of the same forces operated in New South Wales, fundamentally influencing the rise of organised infant welfare work in Sydney. They help explain the shift of emphasis from abuse of the deprived child to the health of infants in general.

The growth of scientific approaches to the study of poverty and pauperism changed social attitudes to depressed groups. The works of Charles Booth and Seebohm Rowntree, resting as they did on a solid basis of factual analysis, came to enjoy wide influence. Booth's *Life and Labour of the People in London*, published in sections over the last decade or so of the century, described poverty in its various manifestations in London, the world metropolis and heart of the Empire.

Rowntree's study, published in 1901, described the situation of the poor in York. They revealed the widespread nature of contemporary poverty and they showed that a complex of factors like poor wages, the cost of keeping large families, old age, unemployment and the sickness or death of the main income-earner, not faults of character, were responsible. A punitive attitude was hardly tenable. The poor law approach that economic laws and the design of Providence necessitated poverty for many and that attempts to better the condition of the mass of people would only reduce the well-being of others was discarded. Individuals and families could not and should not be totally responsible for their own well-being. The nation was seen to be wealthy enough, if incomes were distributed more equitably, to provide adequately for all. Reformers saw the State as having a duty to provide relief. In a piecemeal fashion social services were introduced, in a movement towards establishment of a minimum standard of living. The foundation of the modern welfare state was put down. In the field of child care, local authorities were empowered under the Education (Provision of Meals) Act, 1906 to feed children attending school. Under the Education (Administrative Provisions) Act, 1907 the medical examination of children at public elementary schools was introduced. In 1907 legislative provision was made for notification of births so that health visitors might advance infant welfare by offering expert advice in the early, critical stage of the baby's life.\(^3\)

While the last two decades of the nineteenth century saw growing pressure for social reform, the "fact was that social reform

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\(^3\)The Notification of Births Act, 1907 was permissive in effect, allowing local authorities to choose whether or not to adopt the measure. Notification became mandatory in 1915. Heywood, *op.cit.*, pp. 105-107 and Slater, *op.cit.*, pp. 166-168.
promised little political profit". Then Britain was plunged into war in South Africa in 1899. The defeats of the early months of the war revealed poor army organisation. Rumours of physical disabilities among working-class recruits circulated. Behind the immediate challenge offered by the Boers to British superiority was the menace of an organised and powerful Imperial Germany. National efficiency came to be seen as the quality which Germany possessed and Britain apparently lacked. The discussion about efficiency ranged over politics, education, commerce and industry. But basic to all these was the physical efficiency of the people. A falling birth-rate and the problem of an unfit population were central. Now social reform assumed a new importance:

The quest for national efficiency, therefore, gave social reform what it had not had before — the status of a respectable political question. Imperialism and the 'condition of the people question' became linked. Only an efficient nation could hold a vigorous expanding empire.  

During 1901 two works, which drew attention to the unfitness of army recruits, were published. Arnold White's *Efficiency and Empire*

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5 Ibid, pp. 60-61. For an extensive discussion of the ideology of national efficiency, see G.R. Searle, *The Quest for National Efficiency*, Oxford, 1971, Chp.3. Lord Milner, speaking to a mainly Conservative audience in 1906, asserted, "the attempt to raise the well-being and efficiency of the more backward of our people...is not philanthropy, it is business". Searle, p.63. Bernard Semmel has shown how in the last decades before World War I social-imperialism in countries like Germany and Italy was "designed to draw all classes together in defence of the nation...and aimed to prove to the least well-to-do class that its interests were inseparable from those of the nation.... The governments of Europe...had erected barriers against socialist internationalism by their programmes of social reform which gave the workers a further stake in national well-being". Semmel, *Imperialism and Social Reform*, London, 1960, pp. 24 and 25. In Britain Unionist social-imperialists shared a good deal in the way of objectives with Fabian socialists, while the Liberal programme of the immediate pre-war years represented a rival type of social-imperialism.
recorded how three out of five volunteers at the Manchester depot in 1899 were rejected as unfit. Rowntree's study of poverty in York showed over twenty-six per cent of those applying at York, Leeds and Sheffield depots in 1897-1900 were rejected as unfit, and another twenty-nine per cent accepted provisionally. Yet it was an article by General J.F. Maurice published in 1902 which really stirred public discussion. Public health and national welfare were now inseparably linked:

As a working-class revolution resulting from poverty and unemployment had appeared to threaten the social structure in the eighties, so national physical deterioration became a clear danger after the Boer War.... Particularly for those who feared Germany...the matter of widespread physical deterioration in the British race became, during the next nineteen months, the most important aspect of national efficiency.6

Soon after Maurice published a second article, a report on manpower by the Inspector-General of Recruiting essentially confirmed the claims about fitness of recruits.7 In September 1903 the Balfour Government appointed an Interdepartmental Committee on physical deterioration. Its terms of reference were soon widened to include investigations of the causes of the deterioration, and it assumed the role normally assigned to a Royal Commission. The Committee's report, published in July 1904, found there was a great deal of unfitness resulting from environmental factors and poor nutrition. One of its more important recommendations was a continuing system of physical examinations of


7Dr F. Truby King, who pioneered infant welfare work in New Zealand and came to enjoy an international reputation in this field, was much impressed by Maurice's argument about national health. King saw the saving of infant life as part of the larger task of building national and imperial health and efficiency. M. King, Truby King. The Man. A Biography, London, 1948, p.155.
On grounds of humanity and the national interest it was clear that the place to begin dealing with the problem of physical deterioration was the health of children. Two viewpoints on the problem emerged from debate among the experts. Those who saw the problem as one of encouraging the talented to reproduce wanted action not to improve the lot of the slum-dwellers but to promote the birth-rate among the gifted. On the other hand the medical profession refused to accept that the race was deteriorating and wanted extension of educational measures concerning hygiene and domestic science among the children of the poor in State schools. In late 1903 and early 1904 the British Medical Journal published material on the question of physical deterioration. The B.M.A. urged the Government to introduce medical inspection and physical training into the schools. One of the leading publicists on the medical side of the debate was Dr Arthur Newsholme, soon to become

8 Broadly stated, its recommendations were that various traditional public health measures by the State be extended, that mothers be taught child care and girls the domestic arts, that physical training be encouraged by the State, and that a system of school medical inspection and a system of feeding needy school children be established. Gilbert, op.cit., pp. 90-91.

9 The more enthusiastic Darwinists saw the solution as "sterilization of failures". Gilbert, p.92. As in Britain, the medical profession in Australia were generally opposed to the eugenic approach. In the period after World War I there was a good deal of public discussion about the need for fitness certificates as a condition of marriage, fear of venereal diseases being an important motive force. Procreation by criminals and mental defectives was also a concern. The Medical Journal of Australia published only two articles in the 1920s concerned with "scientific improvement of the race". In 1933 the Federal Health Council reported to the Commonwealth Health Department on its investigation of controls on defectives. The Council proposed voluntary sterilisation. But it suggested making compulsory sterilisation of defectives, under stringent controls, a condition of their discharge from institutional life. Neither at the Commonwealth nor State level was legislation enacted, and the idea progressively fell into disfavour. Claudia 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, A.N.U., 1974, pp. 156-158.
Chief Medical Officer of the Local Government Board, in which capacity he published a number of influential reports on infant mortality. Newsholme argued that the Darwinists' competition for survival in nature had been replaced in modern society by the practice of cooperation.

By the beginning of 1905 public demand for action on the Interdepartmental Committee's report was so strong that a reluctant Government was forced to respond. All the Balfour Government did was to permit the passing of a parliamentary resolution stating it was desirable for local authorities to ensure all elementary school children were properly fed. The principle was confirmed by the new Liberal Government in the Education (Provision of Meals) Act, 1906. But the significance of the Balfour Government's response was much greater than any practical effect, for "...it provided the symbol of a movement, minute but clear, towards State intrusion into those affairs which the Victorians usually assumed were of individual responsibility". The change was to encompass medical inspection of school children, state support of the aged through non-contributory pensions, and eventually state concern with the health of the adult working-man through compulsory health insurance.

The debate over national efficiency, in its awareness of the falling birth-rate and appreciation of the fact that infant welfare was an integral part of the problem of physical deterioration, conferred on the long-standing observations about infant mortality made by social workers and public health doctors a new, national importance. The problem of infant mortality was part of a larger problem, the health of the people, which now enjoyed considerable political significance. With the appointment of Newsholme to the Local Government Board and

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the passing of the Notification of Births Act, 1907, the central government began to assume a direct role in the campaign to reduce infant mortality. The central government was prompted to take further action after the experience of the First World War. Sanitarians like Newsholme were conscious in the 1890s that improvement of the urban environment by the methods of sanitary engineering had greatly reduced the crude death-rate but had had little impact on the infant mortality rate. In Britain awareness that a healthy and growing population was central to national strength turned the concern of the public health doctor or individual local authority with infant welfare into a national concern.

In New South Wales the event, which played the same role as the debate over national efficiency did in Britain in promoting the concern of public health doctors and voluntary workers with the infant death-rate to an issue of first-rate political importance, was the Royal Commission on the Birth-Rate. It served to publicise the problem of infant mortality widely and made it a respectable, even pressing, public issue. It cleared the way for state involvement, even if in the event the degree of involvement was limited. The man who was instrumental in having the enquiry instituted and who dominated its proceedings was Dr C.K. Mackellar.\footnote{Sandercock has pointed out that concern with efficiency was a strong element in the town planning movement from its beginning. Together with efficiency, Sulman and others interested in slum reform in Sydney in the 1930s valued the expert, tended to depreciate party politics, and believed in eugenics. They thus shared important elements of the ideology of national efficiency as it emerged in Britain in the early 1900s. Sandercock, \textit{op.cit.}, p.93.}

During the fifteen years from 1888 there occurred a decline in the crude birth-rate in Australia as marked as that which was experienced by any Western country, except France, in the modern period.
The average completed size of family in 1891 was 7 children. In 1891-
1911 it was only 5, and for families started in 1911 it was somewhat
below 4. Not only was the actual decline substantial, but it involved
a considerable change in community expectations about family size. It
thus had more impact than subsequent large declines such as that of
1928-33. Moreover, the declining fertility of the 1890s coincided with
a major economic depression and a halt to immigration. National
political unification had only just been achieved. The sense of
national identity was not yet firm. Japan was emerging as a major
power and the Pacific area looked politically unstable. For conservatives
like Mackellar and others on the Royal Commission the changing pattern
of reproduction and the declining population growth rate seemed to
threaten the social status quo as well. The commissioners were
economically secure or well-to-do. They failed to appreciate the
conditions which caused many to limit the size of their families. 12

The medical profession shared the fears about population growth
and its implications. As early as 1898 the Medical Gazette drew
attention to the marked decline in the birth-rate over the previous
decade. 13 The Gazette acknowledged that many could not afford to marry
during a period of economic depression, but it stressed the role of
contraception and induced abortion in explaining the falling birth-rate.
In an editorial of January 1901 the Gazette claimed the political
implications were great:

...what with Russia, Germany, and France becoming Pacific
powers, and the yellow peril looming up again as a possibility

12 Hicks, op. cit., pp. 268-269.

13 A.M.G., Nov. 1898, pp. 502-503. It noted the decline in Sydney from
41 in 1888 to 29 in 1897 was substantially greater than the decline in
the country rate.
of the future, a population sufficiently large to discount any thought of invasion is a vital necessity. There cannot be the slightest doubt but that the decline in the birth-rate is due mostly to the artificial preventions of conception.

Since the practice of contraception could not be legislated out of existence, other ways of increasing population had to be pursued, the Gazette decided. The most obvious way was to reduce the infant death-rate. This could be done by education of parents in infant care. Senior school girls could easily be instructed while at school.14

From this viewpoint the Gazette, like the Royal Commission on the Birth-Rate, was as much concerned with ways of reducing infant mortality as it was with the decline in the birth-rate.

The Government Statistician in New South Wales, T.A. (later Sir Timothy) Coghlan, played a significant role in publicising the decline in fertility. He briefly mentioned the effect of contraception in his 1891 Census Report and more fully in his Wealth and Progress of New South Wales, 1894. He mentioned "artificial and voluntary checks to population" again in Wealth and Progress, 1895-96 and 1898-98. Coghlan was well known as a publicist of vital statistics,15 so the public of New South Wales were better informed about the population issue than any other colonial audience. In 1900 he published a study of childbirth in New South Wales in which he concluded that contraception was responsible

14A.M.G., Jan. 1901, pp. 43-44.

15Hicks, op.cit., pp. 77-78. He had drawn attention to the high infant death-rate in Sydney in Wealth and Progress, 1886-87. He commented then, "the rate at which children of tender years drop into the grave forms a pathetic commentary on our civilization". Wealth and Progress, 1886-87, p.172. In 1887 he wrote, "For many years past the rate at which children of tender years have been stricken down in the suburbs has formed a pathetic commentary on the absence of sanitary precautions". Vital Statistics of the City and Suburbs of Sydney, 1887, p.11.
for the decline in the birth-rate. In a study specifically concerned with the fall of the birth-rate published a little later he found that only one explanation of the decline could be given, and this was "the art of applying artificial checks to conception". The lay press also played a part in bringing about the creation of the Royal Commission. Much publicity was given to President Theodore Roosevelt's statements in 1903 on changes in American population growth. A review of Coghlan's *Decline in the Birth-Rate* initiated a large volume of press material — articles, editorials and letters — during June-August 1903. By July the press had made the question a serious political issue. Creation of an enquiry enabled the See Government to deal with the question in a manner involving few political risks. Although the way for an enquiry was prepared by Coghlan and public discussion of the birth-rate problem, the specific proposition came from C.K. Mackellar, who was subsequently appointed President of the Royal Commission. The Commission's report was largely the work of Mackellar and his associate, Dr R.H. Todd. The majority of Mackellar's fellow commissioners were his colleagues in the various areas of his interests. They shared a conservative outlook. They had common backgrounds in business or medicine, except for Coghlan, Fosbery (Inspector-General of Police), and W.A. Holman, barrister and Labor member of the Legislative Assembly.


18 Hicks, op.cit., pp. 96-100.

19 Ibid, pp. 105-109. Holman attended just a few meetings of the Commission and he was the only commissioner not to sign the report.
The Commission's report said the factors primarily responsible for the decline were not natural ones. They were the result of intentional acts. It was very critical of the widespread practice of contraception and abortion. It viewed these practices as evidence of moral decline and as threats to the social, economic and political well-being of the nation:

The mental condition of any population, moreover, in which the avoidance of parentage is condoned...we regard as one which tells its own tale of social and moral deterioration. Such practices...we agree with the reverend witnesses...violate the sanctity of marriage and tend to convert the marriage contract into a sexual compact.20

The Commission allowed only a small influence to demographic factors, and it rejected the notion that economic conditions caused many to resort to limiting families by the practice of contraception. Concerned with the implications of contracting population growth for Australia's role in the world, it warned:

The patriotic ardour inspired by this hopeful anticipation [of Australia as a populous and powerful nation] is, however, destined to be cooled in the contemplation of the fact that, while Russia and Japan, prospective rivals of Australia for supremacy in the Western Pacific, are already seeking outlets beyond their own borders for the energies of their ever-growing people, it will be forty-six and a half years before Australia, with her three and three-quarter million of inhabitants...will have doubled her population...168 [sic] years before her numbers will have reached the present population of Japan.21

The Commission devoted a substantial part of its report to the problem of infant mortality. It offered a series of recommendations

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20. R.C. on Birth-Rate Report, p.28. The Medical Gazette called the report "a masterpiece of exhaustive examination and investigation". The use of contraception, according to the Gazette, degraded "the married state from one of honour to that of 'monogynous prostitution'". A.M.G., March 1904, p.120.

aimed at reducing the level of mortality. Many of these were subsequently implemented. It placed special weight on the proper feeding and care of babies, urging education of mothers in this respect. This became the main thrust of organised infant welfare work in Sydney. While the Commission's condemnation of contraception had virtually no effect on popular behaviour, many of its suggestions concerning infant mortality were taken up. But perhaps even more important was its role in focussing attention on and making a serious public issue of the infant mortality problem. Via the question of population growth it linked this problem with the question of national strength and welfare. While the concept of national efficiency was not used, the Commission was clearly concerned with the question of national power which was the final concern of those engaged in the debate on physical deterioration in Britain.

Concern about the birth-rate, population growth and infant welfare continued to surface from time to time in the medical and lay press. In 1907 the Medical Gazette, with an eye on the barometer of the birth-rate, expressed the hope that warnings about the unhappy consequences of contraception given over the previous few years were

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22 A more direct connection between the debate and Australian developments can be seen in the field of education. The development of state-wide systems of post-primary education, which took place in 1905-15, was much influenced by two administrators of education, Frank Tate of Victoria and Peter Board of New South Wales. They knew that an efficient secondary education system was needed "to build a technically proficient elite capable of taking the lead in developing Australia as a staunch bastion of the British Empire in the South Pacific". Their concern, like that of British educationists, was a response to "the threat to the continued hegemony of the British Empire over world trade and commerce...contained in the growing power of Germany". Tate regarded "school power" as the key to victory in the international conflict over trade. Board believed that the new secondary schools were "the training grounds for national defence and the nurseries of the nation's morality". Bob Bessant, "The Emergence of State Secondary Education", in J. Cleverley and J. Lawry, eds, Australian Education in the Twentieth Century, Longman Australia, 1972, pp. 124-125.
being taken seriously.\textsuperscript{23} A little earlier it had said, "We want to prevent the waste of infant life, and so conserve a great national asset".\textsuperscript{24} In 1908 the Gazette noted that since it was difficult to influence the birth-rate, "public health authorities and philanthropists" were now turning to ways of reducing infant mortality.\textsuperscript{25} In 1913 it reported the Bishop of the Riverina as saying to an Anglican conference in Brisbane that the "dark blot of race suicide" had "infected Christian nations like the plague".\textsuperscript{26} Yet "the East, by her self-denial, alertness, adaptation and numbers, was growing stronger...and was becoming conscious of her strength".\textsuperscript{27} The losses of young men in World War I reinforced the established anxiety about population growth. The Telegraph, discussing infant welfare in 1918, deplored the deaths of so many potential fathers in an underpopulated Australia.\textsuperscript{28} The Sydney Mail said at the same time that if Australia was to become a great nation, it had to increase its population. Moreover, a larger population was needed to secure the future of a "White Australia".\textsuperscript{29}

By the turn of the century existing concern about infant welfare was powerfully reinforced by new concern about population growth and its implications for national power. The Royal Commission on the

\textsuperscript{23}A.M.G., Nov. 1907, p.587.

\textsuperscript{24}A.M.G., Oct. 1907, p.519.

\textsuperscript{25}A.M.G., Dec. 1908, p.675.

\textsuperscript{26}A.M.G., Oct. 1913, p.354.

\textsuperscript{27}Idem.

\textsuperscript{28}Daily Telegraph, 1/10/18.

\textsuperscript{29}Sydney Mail, 2/10/18.
Birth-Rate, in the work of which Dr C.K. Mackellar assumed a very substantial role, focussed attention on the issue. Mackellar and fellow conservatives involved in the enquiry were also concerned about the implications of changes in reproductive behaviour for the existing social order. The debate over national efficiency in Britain in the same way served to make the health of the child an important national objective. The infant welfare movement in Sydney shared with sister movements in Britain and France not only methods and approaches, but also the powerful motivating force of deep concern about population growth and national strength. At the same time as the Royal Commission on the Birth-Rate was carrying out its investigation, Dr W.G. Armstrong began the first systematic attempt to reduce infant mortality in Sydney. His approach was based on the work of English medical officers of health and on that of French infant clinics. Each in their own way, Mackellar and Armstrong pioneered organised infant welfare work in Sydney.

B. The Infant Welfare Movement in Sydney:

Armstrong was impressed by Newsholme's idea that the home was the most common site of infection in diarrhoeal disease. He therefore concentrated on the provision of advice to the mother in the home rather than the establishment of milk depots for the issue of sterilised milk to infants. The primary aim of infant welfare work was then to teach mothercraft, and the core of the instruction was the encouragement of breast-feeding. Where this was just not possible, advice was provided on the hygienic preparation of modified cows' milk. I have argued previously that the effectiveness of Armstrong's approach lay

in the dual attack on diarrhoeal and associated mortality: the promotion of adequate nutrition and the promotion of measures to reduce the risks of infection. Moreover, for at least the first ten to fifteen years the campaign was aimed exclusively at the working-class areas of Sydney where conditions were such that the child was more likely to become ill and where the mother was less likely to consult a doctor either for treatment of the child or advice on how to rear it. Armstrong described the procedure followed in the early days of the campaign:

A daily list of all births...is obtained...within a few days after registration, the home of each child born in a poor neighborhood is visited by a woman inspector of the municipal council, who interviews the mother, talks to her confidentially on the management of the child...and earnestly inculcates cleanliness, leaving, also, at each house a copy of a brief ...leaflet setting forth the dangers of infantile diarrhoea, and giving instructions on the feeding of infants. The principal points impressed on the mother...are the great superiority of breast-nursing...should breast-feeding be impossible, the use of properly modified fresh cows' milk is advocated, and warnings against the long tube bottle and the use of starchy or patent foods tendered. The conditions as to cleanliness...of the dwelling are noted...and reported ...at headquarters, where any action which may appear to be indicated by the information in the report is taken by the Medical Officer of Health.31

After 1900 Armstrong was city health officer as well as metropolitan medical officer of health. From May 1904, with the City Council's approval, he employed a lady health visitor to make domiciliary visits to mothers of new-born babies in the City area. Impressed by evidence of greater breast-feeding resulting from

31 Trans. Aust'sian Med. Congr., 1905, pp. 393-394. At the seventh Australasian Medical Congress in Adelaide in 1905 Armstrong presented an account of what had been done to reduce infant mortality in Sydney. He also delivered a public address at the Adelaide Town Hall, a large section of which discussed infant welfare. He strongly urged that campaigns to reduce infant mortality be started in other Australian cities. M.J.A., Oct. 1939, p.643. Dr Thomas Borthwick, Medical Officer of Health for the City of Adelaide, was influenced by Armstrong's example. Borthwick initiated a campaign along the lines of Armstrong's in 1907. Ibid, p.647 and C.C. Jungfer, A Further Report on Work of Adelaide Hills Children's Health Survey, Canberra, 1948, p.49.
Armstrong's work, the Department of Health authorised extension of his campaign in 1909. Two more health visitors were appointed to work in the working-class inner suburbs adjacent to the City. The visiting service was soon reaching a notable proportion of the total of new-born infants in Sydney. Further, it was reaching those most vulnerable to illness and death from diarrhoeal and associated maladies.32

In a pattern that was to be characteristic of the infant welfare movement in Sydney, Armstrong's work soon became associated with voluntary work of the same sort, done by the Alice Rawson School for Mothers. The movement combined official and voluntary effort for much of my period, although the State took firmer control of infant welfare work in the late 1920s. With the support of the National Council of Women, the Rawson School had been established in 1908. Named for the daughter of the Governor of New South Wales, it was a voluntary body, but it did receive a small government subsidy. Rooms were opened in the inner city areas of Darlinghurst, Newtown and Alexandria. A visiting staff did domiciliary work and often assisted Armstrong's staff.33 The National Council's support for an organisation like the Rawson School was characteristic. The Rawson organisation's charitable work for infants of the poorer classes was typical of the central concern of women's organisations in New South Wales in the early 1900s. As one historian of the women's movement has put it, "...the current concept of ideal behaviour most women reverenced was closely associated with the

32 The Lone Hand, discussing the excessive infant death-rate, observed that the bulk of infant deaths came from urban, working-class households. 1/9/09, p.523.

33 Armstrong, M.J.A., Oct. 1939, p.644. In the third year of its existence the Rawson organisation saw over 750 babies at its rooms and provided more than 2,000 home visits.
ideal of a feminine influence localised within the home...".  

Following an American example, the National Council came into being in the 1890s. The Council saw itself as the voice of the many organisations it represented, some of which were very conservative. Consequently it was always careful and restrained about the issues in which it became involved. Yet it had its strengths, providing support, for example, for legislation dealing with reforms in the area of traditional women's interests like the family, child welfare and protection of girls. The involvement of middle and upper-class Sydney women in philanthropic and charitable social work in traditional areas continued strongly in the early twentieth century. In the area of child welfare two new organisations became active around the turn of the century. In 1905 the Day Nursery Association opened the first of what was hoped would be a series of creches where working mothers could leave

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34 J.E. Cobb, The Women's Movement in New South Wales, 1880-1914, M.A. thesis, New England, 1966, p.375. This ideal was expressed in the lives and attitudes of women independently active in public affairs. The Daily Telegraph said of Mrs Kate Dwyer, first President of the Women's Central Organising Committee of the Labor Party in 1904 and member of the Royal Commission on Female and Juvenile Labour of 1911, "That it is quite possible for a woman to attend properly to her home, and at the same time play a prominent part in matters of State is clearly proved in Mrs Dwyer's case. With the help of a daughter she performs the whole of her domestic duties.... Were her husband not so sympathetic, she declares she would not be able to do it all". D.T., 3/3/15.

35 At least since the 1870s charitable bodies in New South Wales had provided the main portal by which women of the middle and upper classes entered public life. Since New South Wales lacked the poor law organisation of England, charitable organisations were both needed and significant. They attracted membership and contributions from the wealthy and socially prominent. They often enjoyed vice-regal patronage. They thus enjoyed a good deal of social prestige. Many were in receipt of some government financial support. But this support was limited. The State was relieved in this way of many social welfare responsibilities. These factors can be seen operating in the organisation of the infant welfare movement well into this century.


their children. In 1900 the Kindergarten Union opened a training centre and a number of new kindergartens.  

In 1914, after consultation with Armstrong, the Labor Minister for Public Health, the Hon. Fred. Flowers, decided to expand infant welfare work under State Government supervision and with direct Government finance. Flowers convened a meeting of bodies involved in infant welfare work. After the conference and further discussion with Dr Charles (later Sir Charles) Clubbe, a leading Sydney paediatrician, he announced that baby clinics would be established in various localities. The Baby Clinics, Pre-Maternity and Home Nursing Board was set up, with Clubbe as chairman, to advise Flowers on the administration of the clinics.

Among the social reforms the Labor Government was expected to pursue when it assumed office in 1910 was the state provision, free of any charitable overtones, of a number of medical services. The Platform Committee of the Political Labor League had drawn up a programme in 1908, which inter alia proposed the financing of hospitals from municipal funds, establishment of maternity wards in all hospitals and a domiciliary maternity scheme. In 1911 a deputation from the

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38 Cobb, pp. 281-282.

39 Late in 1914 the Rawson School found itself in financial difficulties. In 1915 the Department of Public Health took over the work of the organisation.

40 Neville Mayman, President of the Benevolent Society, was deputy chairman. Other members were Dr R.T. Paton, Director-General of Public Health, Miss A. Friend, Secretary of the Rawson School, and Mrs J. Dickie. At its first meeting the Board decided to suggest the first clinic be opened in Alexandria, an inner, working-class suburb. Minutes of Board, 24/7/14.

Party conference saw the Chief Secretary and urged creation of a Department of Public Health. It also urged that the work of local government medical officers be expanded and the Government provide a range of medical services, including maternity and infant care. It fell to Fred. Flowers to carry out the McGowen Labor Government's attempt to provide a wider range of services. The issue of Government control of public hospitals brought Flowers into strong conflict with the traditionalism of the medical profession, which wanted the voluntary control and charitable orientation of these institutions to continue.

Flowers was not in a strong position to carry through basic health reforms. Labor's parliamentary situation was not secure because of a narrow majority in the Lower House and a hostile, conservative Upper House. Moreover, there were tensions within the parliamentary party. Financial stringency soon imposed the final limit on new initiatives. In late 1912 major expenditure reductions were imposed by the new Treasurer, J.H. Cann. The Government was thus required to accommodate itself to working with established bodies — hospitals, the organised medical profession, and the friendly societies. The strength of the organised medical profession is well revealed by the outcome of Flowers' attempt to relieve pressure on outpatient departments of public hospitals,

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42 Flowers was Vice-President of the Executive Council and Representative of the Government in the Legislative Council. During much of 1911 and until early 1912 he was Acting Chief Secretary. Early in 1914 he was appointed first Minister for Public Health, presiding over the reorganised Department. He relinquished the position when he became President of the Legislative Council in 1915.

43 Flowers was never required to present a detailed plan of hospital control, as he wanted it, so it is difficult to know the extent of Government control Labor intended. There was a widespread rejection of the charitable concept of the hospital among Labor people. Certainly many supporters and opponents alike believed Labor's aim to be nationalisation. Dickey, op.cit., p.547.

44 Ibid, p.546.
heavily used by the poorer residents of inner areas. Flowers proposed that the Government make use of friendly society dispensaries to provide treatment for that group of the population not covered by friendly society membership. The B.M.A. would not cooperate. After meeting the friendly societies the Government revealed that a majority of the societies was ready to participate in its scheme. But the scheme never came into operation.45

During 1912 the Government established two Royal Commissions concerned with community health. One made an enquiry into the question of food supplies and prices.46 The other enquired into the provision of working-class housing in Europe and its implications for New South Wales.47 Action took place in other areas as well. Finance was provided for establishment of four clinics in Sydney run by the New South Wales National Association for the Prevention and Cure of Consumption. The Government subsidised the Association's hospitals at Thirlmere and Wentworth Falls. In 1912 it created a Tuberculosis Advisory Board and in 1915 made the condition notifiable. Conditions at Government Asylums for the destitute and infirm were improved. Two new convalescent homes were opened, thus easing pressure on public hospital beds. The capacity of the Coast Hospital, a Government institution, was increased, and the supply of beds in Sydney was thereby considerably augmented. The Bush Nursing Association received a subsidy, enabling it to extend the ambit of its work and increase the number of nurses working in country areas. The Health Department attained

46I discussed Royal Commissioner Bavin's sectional report on the metropolitan milk supply in Chapter 3.
47It was carried out by Professor R.F. Irvine of Sydney University.
ministerial status and expanded the range of its responsibilities. A school medical service was created in 1912. Free examinations and some minor treatments were provided. In September 1912 the Government announced it intended to provide a maternity scheme so that all women would get skilled care during the puerperium. Flowers was keen to see most births take place in the safety of a hospital environment. In the event the scheme amounted to not much more than that the Government provided grants for the building of maternity facilities at country hospitals. So far as Sydney was concerned, existing public facilities, essentially the two great maternity hospitals, the Royal and Crown Street, were considered as meeting metropolitan needs. The scheme certainly did not ensure all women received competent care during childbirth. In 1913 the Government opened the Lady Edeline Hospital for Babies. This infants' hospital was to care especially for gastro-enteritis cases. It was part of Flowers' plan to reduce infant mortality. "Greycliffe", Vaucluse, where the hospital was located, had been resumed by the Government as part of a scheme to acquire private land on the harbour foreshores. Patients were referred from the baby clinics, and they continued to receive treatment at a departmental clinic after discharge.

Flowers authorised the production and distribution of a number of booklets offering simple information on infant care. But the main

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48 Infants were not usually admitted to public hospitals, including children's hospitals, at this time because of problems of care and dangers of cross-infection discussed previously.


50 That Flowers and the Labor Government shared the prevailing concern with population growth is shown again in the sentiments expressed in Flowers' preface to one of these publications. The Minister said, "The baby is the best immigrant. Many babies are lost to the State, Continued...
thrust of Flowers' effort to reduce infant mortality was the establishment of baby clinics. His advisory Board had earlier proposed that delay in reaching the mother of the new-born child be cut by the introduction of an Early Notification of Births Act like the English one. In early 1915 the Notification of Births Act began to operate, essentially requiring notification within thirty-six hours in proclaimed areas. After the first clinic was opened in Alexandria, others were soon opened in inner areas — Newtown, Woolloomooloo, Balmain, Glebe and North Sydney. The coming of the War meant restriction of funds. The advisory Board resigned in protest at what they saw as a failure to give them sufficient control over finances. A new Board, with the new Minister for Public Health, the Hon. George Black, as President, began to function in July 1915. Despite shortages of funds, new clinics and homes made sad, through want of knowledge on the part of mothers.... The State wants every baby born to live and thrive, and grow up under enlightened conditions". Baby's First Twelve Months, Sydney, 1914.

1 Minutes of Board, 7/8/14. During debate of the measure a few members indicated that they saw it as an unwarranted burden on the people. N.S.W.P.D., vol.57, 10/2/15, Col. J.W.M. Onslow (Bondi), p.2388, F.A. Badgery (Wollondilly), p.2390, the Hon. T. Waddell (Lyndhurst), p.2387; others welcomed it as another aid to the saving of infant life. The concern about population and "White Australia" are clearly in evidence in the following: W.R.C. Bagnall (St George), p.2386, "I hope the Minister will meet with every success in his attempt to save a great number of lives...when war is causing the wholesale destruction of so many valuable lives.... We can have no better population than our own native-born, and this is the best effort that I know of to preserve the coming race to the state". J.J. Morrish (King), p.2387, "Those of us who have followed the history of nations and the development of civilisation know that the coloured races are generally more prolific than the white races". Bagnall had pointed out that the Opposition seemed not to understand the purpose of the bill, which was to help the campaign to end ignorance of proper infant care. He made the important point that those who were in need of advice and were well-to-do could get the services of experts, but the poor needed the help of the State. Ibid, p.2386.


3 Flowers acted as chairman.
were opened. From 9 when the Board came into existence the number grew to 28 at the end of 1918. In general the Board's advice seems to have been respected by the Minister, but then the Board was careful to cooperate closely with influential groups like the medical profession and to keep the clinic services down to an acceptable level.4

From the outset the B.M.A. made sure that clinics did not trespass on the preserves of private practice. As each clinic was established, an honorary medical officer and two nurses were appointed as staff.5 An extraordinary general meeting of the New South Wales Branch of the B.M.A. resolved in January 1916 that it would be opposed to the work of the clinics unless the Government guaranteed the "clinics will not be used by persons able to pay private fees".6 Dr E. Ludowici, a member of the Clinics Board, told the meeting that clinic nurses had been instructed not to attend infants whose parents were able to afford private medical care. He assured members of the B.M.A. that the new Minister, unlike Flowers, was not "an aggressive type".7 The meeting asked the Council of the Association to arrange a conference with the honorary medical officers of the clinics and the medical members of the Clinics Board. The conference of the Council, the medical members of the Board and the clinic medical officers accepted the following propositions, which had been worked out at a preliminary meeting between

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4 For example, it rejected the suggestion that sick babies be supplied by clinics with fresh milk at wholesale prices, because it believed the scheme could not be kept within financially acceptable bounds. Minutes of Board, 18/10/15.

5 Dr Margaret Harper, who played such a large role in the work of the clinics subsequently, was appointed medical officer to the first clinic.


7 Ibid, p.84.
the Council and the medical members of the Board:

(1) that the clinics would deal only with infants under one year of age

(2) that the hospital class of patients, that is, those unable to afford private medical fees, only would be dealt with

(3) that the treatment of sick babies would not be a function of the clinics

(4) that their main function would be to advise mothers in poor areas on infant care

(5) that clinic nurses would be under medical supervision.  

The full Board accepted the views of the conference. Although the organised medical profession gradually accepted that private practice was not in danger from the clinics — the basic point, established at the outset, that the clinics would not provide treatment, was never seriously challenged — complaints about clinics straying into the preserves of private medicine occurred intermittently. But clinics did come to be used by women of all classes. The original notion that they were for the use of those unable to afford private care was abandoned. Indeed, by the late 1920s those running the clinics advertised

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9Minutes of Board, 10/7/16.

10Medical opposition was manifested in other Australian States. Tasmania was exceptional in providing minor treatment for children of the very poor. The employment of honorary medical officers was not permitted by the B.M.A. in Victoria, the clinics having to share the services of one, full-time doctor. In South Australia a medical board was appointed to adjudicate disputes between clinics and doctors. Even in 1933 it was argued that "spoon-feeding the general public by the use of baby clinics free to all is totally unnecessary". Thame, op.cit., pp. 211-212.
them as being intended for the use of mothers of all social levels.  

In 1919 the Clinics Board was disbanded, and a new body, the Baby Clinics Committee, which functioned under the auspices of the Royal Society for the Welfare of Mothers and Babies, was established. The Royal Society was organised with Government encouragement in 1919. The Clinics Committee reaffirmed that the honorary medical officers should not provide treatment. Their work was to be limited to giving advice on feeding and related matters. Clinic nurses were instructed not to dispense drugs, except with the medical officer's consent. 

In 1923 the B.M.A. again sought to clarify the matter of the duties of clinic nurses. The next year the Committee accepted the B.M.A.'s point that clinics should always be under medical control. Sometimes nurses ignored the policy which required them to discourage mothers whose children were under private care from using clinics. In 1930 at the annual meeting of local medical associations affiliated with the B.M.A., Dr H.H. Lee moved that the meeting register its protest at clinic nurses "canvassing patronage" and giving medical advice. In discussion between representatives of the profession and the health authorities it was agreed that the State was rightfully involved in the care of healthy infants, but that it should not become involved in treating those who were ill. Dr E.S. Morris, Director of Maternal

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13 Minutes, 8/3/23.

14 Minutes, 16/5/24.

and Baby Welfare, assured the profession he would investigate any cases of trespass by the clinics.\textsuperscript{16}

The War of 1914-18 and the losses of men at the front were a powerful stimulus to discussion about the need for greater effort in the saving of infants from preventable deaths. In England the Maternity and Child Welfare Act of 1918 strengthened the position of local authorities in that it removed any doubt about the legality of any expenditure by them on maternal and infant welfare services. The clear need for central supervision of local work led to the creation of a maternity and child welfare section within the new Ministry of Health. Dame Janet Campbell, for many years a medical officer of the Board of Education, took charge of the new section.\textsuperscript{17} The war years also saw a successful attempt to coordinate the work of the various organisations concerned with infant welfare, the multiplicity of which was a direct legacy of the strong voluntary tradition in this area of social work. In 1917 nine bodies united to form the National League for Health, Maternity and Child Welfare. In turn it joined in 1928 with other bodies to form the National Council for Maternity and Child Welfare.\textsuperscript{18}

The same desire for coordination was expressed by the infant welfare movement in Australia. At the start of 1917 a meeting of representatives of infant welfare organisations decided to call a conference to seek unification of efforts. The conference, held in May, attracted a mixture of medical and lay workers, many of whose names have already been mentioned in connection with the Clinics Board,


\textsuperscript{17}In 1918 the Midwives Act authorised local authorities to fund the training of midwives. Frazer, \textit{op.cit.}, pp. 412-414.

\textsuperscript{18}McCleary, \textit{op.cit.}, pp. 213-214.
charitable bodies or infant protection legislation. While the aim of coordinating the work of different bodies was clearly stated, more implicit, but no less important, was the aim of preserving a significant role for the traditional voluntary body. As one of the speakers at the conference, Dr Mary Booth, said, because the Government had committed itself to do a great deal in infant welfare, voluntary effort had tended to decline. Despite some Labor objections to the charity overtones of this attitude, the proponents of a mixed, voluntary and state approach to the organisation of infant welfare work in Sydney were able to maintain an important place for voluntary effort for quite some time.

On the motion of Dr W.F. Litchfield the conference decided to form itself into an Infant and Child Welfare Association. In the same year Sir Charles Mackellar published an appeal to J.D. Fitzgerald, Minister for Public Health, to take further action to reduce the infant mortality rate. Mackellar canvassed a wide variety of measures, many of which were originally proposed by the Royal Commission on the Birth-Rate and Infant Mortality. He ended his appeal by saying,

...the mortality of...children...is by no means so unfavourable as that of many of the countries of the Old World.... But that circumstance should not engender in our people an attitude of self satisfaction or cause us to slacken our efforts, for it must be remembered that we have a healthy climate, a well paid and vigorous young people....

...during the decade 1904 to 1914 the Commonwealth lost, or should I say sacrificed, 89,663 babies before they had completed their first year.... There can be no efficient substitute firstly for the mother's milk, and secondly for the mother's love, the gradual and ever increasing development of the maternal instinct through the exercise of the maternal duty.

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19 Conference-Report of Proceds., Sydney, 1917. President was Dr Charles Clubbe. Patrons were the wife of the Governor, Lady Helen Munro Ferguson, Sir Charles Mackellar, Sir P. Sydney Jones, Mrs Andrew Garran and Miss Rose Scott.

20 Fitzgerald was a leading figure in the town planning movement. Sandercock, op.cit., pp. 16-19 and 24-25.
There is no doubt in my mind that eighty or ninety per cent of the infants who survive the first two or three weeks of life, and die of gastro-enteritis during the first twelve months, are born healthy and strong.\textsuperscript{21}

The Holman Nationalist Government\textsuperscript{22} sent Neville Mayman, President of the Benevolent Society and deputy chairman of the original Clinics Board, as a Commissioner to New Zealand early in 1918 to investigate the work of the Plunket Society, Dr Truby King's highly successful infant welfare organisation.\textsuperscript{23} Mayman reported favourably on the Plunket Society and other measures taken in New Zealand to promote infant and maternal welfare. He reminded the Government he had in 1917 submitted a plan for a "Royal Society for the Care of Mothers and Babies" to be based in Sydney. It was to coordinate the efforts of existing bodies, seek funds from the public in addition to a Government subsidy, and might be expected, Mayman suggested, to produce the same good results as the Plunket Society. Mayman pointed to the urgent need for action:

Having regard to the wastage in population caused by the war, an imperative obligation is laid upon New South Wales,

\textsuperscript{21}Mackellar, The Mother, the Baby and the State, Sydney, 1917, p.15.

\textsuperscript{22}In September 1916 the New South Wales branch of the Labor party expelled Prime Minister Hughes and Premier W.A. Holman from the party over the conscription issue. Early in 1917 Holman's Nationalist coalition was returned to Government in New South Wales.

\textsuperscript{23}Public Health. Report of Commissioner Mayman, 1918. In 1919 Fitzgerald told Parliament that the Government, concerned at the losses in the War, had decided to take further action to reduce the infant death-rate. While in New Zealand in 1914 Premier Holman had seen King's work and had become interested in the problem of infant mortality. He instructed Fitzgerald as Minister for Public Health to organise a similar body in New South Wales. Fitzgerald told members, "We have to replenish wastage, because it means the creation of wealth. Moreover, the attention which the child will get in the clinics...means that it will grow up strong and healthy, and will get a chance of becoming a useful citizen, and not a wastrel, eating up rather than creating wealth". \textit{N.S.W.P.D.}, vol.78, 16/12/19, p.3684.
and indeed all the Australian States, to initiate without delay a strenuous and continuous effort to save the life of every infant born, and to encourage the birth rate by practical means.24

Mayman's concern with vital national considerations was shared by some other Sydney citizens. At the close of 1918 the Sunday Times reported that many patriotic people were going to attend a conference on maternal and infant welfare.25 Convened by Fitzgerald, the conference decided to establish a Society. The Hon. S.R. Innes-Noad M.L.C. now emerged as the Government's man to organise the Welfare Society. Mayman was reported to have retired because of health reasons.26

Innes-Noad was a successful businessman and a prominent Nationalist, who had been appointed to the Legislative Council by the Holman Government in 1917. In 1904 he had contested the seat of Wollondilly and was narrowly defeated. He received Liberal selection for the seat of St George in 1917, but stood down in favour of a Nationalist candidate. Active in various areas of social welfare work, he was for a decade one of the leading lay figures in infant welfare in New South Wales. His particular commitment to this work seems to have grown out of a reaction to the devastation caused by the War, which he saw at first hand on a visit to the European war zone. Returning to Sydney, he was eager to help promote the growth of an healthy Australian population.27 Early in November a large public meeting, with the Lord Mayor, the Hon. J. Joynton-Smith, in the chair, resolved to establish a Society. It elected an executive committee. The Governor and his


26 Sunday Times, 6/10/18.

27 Australasian Pharmaceutical Notes and News, 1/9/19.
wife were to be Patrons, and Innes-Noad was elected President.  

In January 1919 the Council of the Society met to approve a draft constitution. Innes-Noad was confirmed as President. Dr Litchfield, representing the B.M.A., objected to the degree of Government control of the Society. Innes-Noad pointed out that the Society had been initiated by the Minister because the Government wanted a more efficient allocation of funds. The problem was resolved when at the next meeting of Council Innes-Noad said the Minister was willing to waive his right of appointing the President. The voluntary principle was reinforced. Government control was further weakened when the Society took over direct responsibility for administration of the baby clinics. According to Innes-Noad the Society wanted to enhance the voluntary approach and avoid the "mechanical official control" represented by the Health Department. But the Clinics Board was very reluctant to be absorbed into the Royal Society. In the event the Board was constituted a committee of management under the Society.  

28 Vice-presidents were Premier Holman, Fitzgerald, Fred. Flowers, Mackellar, the Hon. Sir James Burns, and Drs C. Clubbe and T.S. Dixson. The executive council of the new Society was to include representatives of the Government, the B.M.A., the Australasian Trained Nurses'Association, maternity and children's hospitals and other bodies involved in infant welfare. Report of meeting in Minute Book-R.S.W.M.B., 1918-23 and M.J.A., Nov. 1918, p.436. 

29 Minutes of Gen. Council Meeting, 15/1/19.  


32 Minutes of Board, 7/4/19.  

33 The new committee consisted of Innes-Noad, Mrs J. Dickie, A.W. Green (State Children's Relief Board), E.B. Harkness (Chief Secretary's Department), and Drs W.G. Armstrong, C. Clubbe, W.F. Litchfield and E. Ludowici. Dr Margaret Harper was invited to join the committee. Minutes, 9/10/19.
The Labor Opposition was somewhat wary of the new Society. In November 1919 the Holman Government introduced a bill to incorporate the Society. It also intended to endow the Society with an annual grant of £2,000. In the face of Labor disapproval, this provision was deleted. Labor spokesmen made it clear they certainly supported aid for mothers, but not if it were given as charity. The State should assume full responsibility in this area. John Storey, Leader of the Opposition, said Labor did not want a Benevolent Society sort of inquisition of people seeking help. The work could easily be done by a Government agency. The Hon. J.D. Fitzgerald assured Parliament that the Society's services were available to all, irrespective of class. Innes-Noad told the Upper House that in the beginning the other voluntary bodies involved in infant welfare work had feared creation of the Society meant Government usurpation of the field, but their fears had disappeared. The Hon. Dr B. Nash expressed fundamental sentiments shared by both sides of the political arena when he said,

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34 See Carmichael's objections, N.S.W.P.D., vol.78, 5/12/19, p.3597. Labor was prepared to see it receive £2,000 as an initial grant, but wanted annual parliamentary review of subsequent grants. Rather piqued, the Society commented in its annual report for 1919-20, "Politicians of all shades seem agreed that the problems which we are endeavouring to grapple with are of the greatest national importance. The raising of a virile, native-born population is freely acknowledged on paper; but, when it comes to definite action, we find ourselves blocked at every turn. Indeed, the proposal to endow us with a small income...was met by such strenuous opposition on the part of certain politicians, the Government was obliged to withdraw it...." Report, 1919-20, p.12.


36 Ibid, p.3157.

37 Ibid, 5/12/19, p.3599.

38 Ibid, 16/12/19, p.3690.

the babies born in Australia are the best immigrants....
Of all the people who come to this country...to make it
what it ought to be there are none better than the children
born in the country who will be reared according to ideas
which will give them healthy minds and healthy bodies....

Whatever the conflict over the role of the voluntary principle in the
field of infant welfare, the basic idea of saving infant lives to promote
a vigorous and expanding native population was common to both sides.

In its health policy Labor proposed in 1919 to establish a
Ministry of Motherhood to carry out various tasks related to infant and
maternal welfare. The press pointed out that the Government was already
doing all of what John Storey was proposing Labor would do when in
office. In office in 1920 Labor made J.J.G. McGirr Minister for
Public Health and for Motherhood. Very little was done to justify the
addition to McGirr's ministerial title. The Labor Government opened
two small hospitals in Sydney devoted to maternity cases and catering
for those unable to afford private care. But work on them had been
started by its non-Labor predecessor. They were hardly great new
departures. McGirr made some attempt to bring the Royal Society more
definitely under official control. He intended to make it a section
of the Health Department. The Society's Council replied that it
recognised it must follow Government policy, but within this limit it
ought to be free to execute its own plans. No real change in the

40 Idem.
41 D.T., 26/8/19.
42 Sunday Times, 5/10/19.
44 Idem.
Society's functioning took place at this time. However, in 1926 control of the baby clinics was transferred from the Society's committee to the Department of Health. A number of factors contributed to this change. In 1924 the Director-General of Public Health had stressed the desirability of infant and maternal welfare being brought under direct medical supervision within his Department. The Federal Royal Commission on Health had much publicised the question of maternal welfare. In October 1925 J.H. Cann, Labor Minister for Public Health, announced the Government had accepted Dr Dick's recommendation that a medical officer of the Department of Health be placed in charge of infant and maternal welfare work. In April 1926, Dr E.S. Morris, a senior medical officer of the Department and winner of a national competition for the best study of the causes of maternal mortality in Australia, was appointed Director of Maternal and Baby Welfare.

During the previous few years there had been increasing public discussion which was critical of the Society's achievements. Its performance was often unfavourably compared with that of Truby King's Plunket Society in New Zealand. King's relations with the New South Wales Society had been rather turbulent from the outset. Although the baby clinics had grown directly out of Armstrong's visiting service and owed nothing to King, the foundation of the Royal Society, the second wave of the infant welfare movement in Sydney, had been much influenced by the example of his Plunket Society. King's Society had begun to operate in New Zealand in 1907, four years after Armstrong's first

45 D-G Report, 1926, p.3.
47 D.T., 31/10/25.
In December 1919 Dr King visited Sydney and was received as a guest of the Royal Society. He delivered lectures and talked with senior officers of the Society. Among the main suggestions he made was standardisation of the training of clinic nurses, a factor which undoubtedly contributed much to the effectiveness of the infant welfare work done by the clinics. King invited the Society to send a doctor and two nurses for training in New Zealand, with the aim that they should set up training facilities in Sydney on their return. After some conflict within Council over this — some medical members pointed out that King's ideas on infant feeding were not accepted by the profession in Australia, that he offered nothing that was not already known here, and that conditions in Sydney were different — it was decided that Dr Margaret Harper would go to New Zealand and report on King's system.

New Zealand had a remarkably low level of infant mortality in the early twentieth century and was in this respect the envy of many other Western nations. Truby King and his Society enjoyed a justifiably high reputation overseas for the effectiveness of their work in reducing infant mortality. But it should be noted that New Zealand had comparatively quite a low level of infant mortality long before King's work began. Further, the infant death-rate was falling significantly, again, well before he started his welfare work. See Appendix I. Armstrong summed up the differences between New Zealand and Australia as follows: "In New Zealand the specialized campaign against infant mortality did not begin until 1907; but for thirty-five years before that the infant mortality of New Zealand had been ...the lowest in the world. It had been falling continuously ever since 1871...though the rate of the fall was no doubt quickened by the Truby King special campaign.... It must, however, be remembered that the island climate and social conditions of New Zealand, with its frequent rainfall, more equable temperature and smaller cities, are more favourable to infant life than those of Australia, with its long droughts, hot summers and overgrown cities...and the task of reducing infant mortality in Australia was more formidable than it was in New Zealand". Armstrong, M.J.A., Oct. 1939, p.648.

Dr Harper reported to the Society in 1920, recommending creation of a training school along the lines of the one at King's Karitane Hospital. She commented that while "realizing that the problem which confronts us in New South Wales is one much more difficult of solution than that in New Zealand, there are certain of the New Zealand methods which can be applied here as successfully as they are there". With Government aid the Society opened the first Tresillian Mothercraft Training Home at Petersham in 1921. Dr Harper became first medical director. Tresillian offered postgraduate training in mothercraft to nurses and was also a centre where babies with feeding problems and mothers wanting to re-establish breast-feeding could go. Nurses from all over Australia came for training, while mothers and babies from all parts of the State were received at Tresillian. The Government made Tresillian training plus A.T.N.A. certificates in general and obstetric nursing the requirement for appointment as a clinic nurse. A second Home, Tresillian North, was established at Willoughby.

Dr Margaret Hilda Harper graduated in medicine from the University of Sydney in 1906. After working as a resident medical officer at the Queen Victoria Hospital, Melbourne, she returned to Sydney in 1907 to become resident medical officer at the Royal Hospital for Women, Paddington, where she came under the notice of J.C. Windeyer, later foundation Professor of Obstetrics at the University of Sydney. Her interest in the care of the new-born infant began with her work at the Royal. Later she was appointed first honorary medical officer in this field. She became associated with the Royal Alexandra Hospital for Children, Camperdown, where she worked closely with Sir Charles Clubbe and Dr W.F. Litchfield. She was the first woman to become chief resident medical officer, the first to become an honorary physician, and the first to be appointed a consultant. Through Clubbe she became involved in the work of the baby clinics. M.A., May 1964, pp. 695-696. See also L. Cohen, Dr Margaret Harper, Sydney, 1971.

1She also recommended standardisation of pamphlets distributed to parents and efforts to see the metropolitan milk supply was brought to a safe standard. Concerning the latter the Society had already put a scheme to the Government, but the cost was such that the Government rejected it. See Annual Report, 1919-20, p.8.


3Annual Report, 1922-23, p.13. The cause of uniform advice was also helped by the periodic conferences of clinic doctors.
in 1927, and a third, Tresillian Vaucluse, was opened in the premises of the former Lady Edeline Hospital for Babies. The Hospital had been closed in 1935 when the level of mortality from infant diarrhoeal disease had fallen so low the health authorities considered the institution was no longer needed. On the suggestion of Dr E.S. Morris, who was now Director-General of Public Health, the Government gave the premises to the Society. By 1939 the Tresillian Homes had treated almost 6,000 babies and 4,400 mothers and they had trained 950 nurses. By the later 1920s the public maternity hospitals were employing nurses with mothercraft training. Matrons and other staff from country and interstate hospitals were coming for training.

After the first period of cooperation, relations with Truby King began to deteriorate. In 1924 the Royal Society said that while it was inspired by King's work, local conditions required that medical experts supervise the work in Sydney. In 1923 difficulties with the Plunket-trained matron of Tresillian, Miss E. Martin, had arisen over admission of babies and the use of New Zealand emulsion. The matron finally left her position and joined Karitane-Sydney where the Plunket system was strictly followed. The Society had set out to construct its own approach to infant care. The Society and the Health Department, always cooperating closely, dominated the infant welfare movement in New South Wales.

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5 Report, 1928-29, p.5.


7 Exec. Council Minutes, 10/1/23.

8 In 1922 a large consignment of New Zealand emulsion had been sent by King to the Society. The Society had not ordered the food and the President, Innes-Noad, refused to take delivery. Exec. Council Minutes, 8/6/22.
South Wales. In 1923 the Australian Mothercraft Society, which adhered to the Plunket system, was launched in Sydney. The following year it opened a Karitane Training Centre in Sydney. However, the Society always remained small and it never seriously challenged the hegemony of the Royal Society for the Welfare of Mothers and Babies. In Victoria also followers of the Plunket system established themselves. In 1917 the Minister for Health had convened meetings of bodies involved in infant welfare work. A division occurred between the Society for the Health of Women and Children, which cleaved to the Plunket system, and the Baby Health Centres Association, which followed the New South Wales approach. By 1925 the latter body controlled thirty of the fifty-two clinics in Melbourne. The Plunket organisation, arguing it had been unfairly treated in the matter of council sponsorship, concentrated its efforts on its Footscray Mothercraft Training School.

In 1925 the Royal Society came under strong public attack, some of the criticism coming from Dr Truby King, for its alleged failure to reduce the infant death-rate more radically. At a conference on infant and maternal welfare sponsored by the National Council of Women, Dr J.S. Purdy, metropolitan medical officer of health, said

9 Third Annual Report, June 1926.

10 Thame, op.cit., p.214. In South Australia the School for Mothers ran thirty odd part-time centres and a small training centre along Tresillian lines. In Tasmania nurses at the three Hobart clinics were supported from Government funds. Yet the Launceston clinic was controlled by an independent organisation, which received a subsidy. Western Australian nurses trained in mothercraft at the King Edward Maternity Hospital, Perth from 1928. Prior to this they had trained in the eastern States. The matron of the Hospital in the mid 1920s trained at Tresillian, as did the matron of the South Australian Baby Health Centres Association. In Western Australia the Government and local authorities both subsidised the five clinics run by two independent bodies. In Queensland after 1917 clinics were run by the Government. In 1924 a training school was established. Like the New South Wales Government the Queensland Government had sent clinic nurses to Tresillian for training in mothercraft. Ibid, pp. 215-216. R.S.W.M.B. Annual Report, 1923-24, p.8.
results over the previous few years had not been good enough. He saw New Zealand having the advantage of employing an expert like Truby King to lead the infant welfare campaign.\(^{11}\) A resolution calling for direct Health Department control of the baby clinics was passed. King, who was visiting Sydney, suggested the existing organisation of the infant welfare movement be replaced by a commission to include Purdy and Dr R. Dick, the Director-General of Public Health.\(^{12}\) Armstrong had rebutted public statements by King which implied the Health Department had ignored means of reducing the infant death-rate.\(^{13}\) The war of words raged on. The \textit{Telegraph} published an editorial sympathetic to King's views\(^{14}\) and the Minister for Health felt obliged to defend publicly both his Department and the Royal Society. He said successive Governments, whatever their politics, had found Innes-Noad capable and very hard-working. There was nothing New Zealand could teach New South Wales.\(^{15}\)

From New Zealand King sent an open letter to Cann criticising Innes-Noad and his medical adviser, Dr M. Harper, over the matter of infant feeding. The first matron of Tresillian had resigned because the Society had departed too much from the Plunket system, King said. Innes-Noad strongly defended the Society against King’s attack. He said

\(^{11}\) \textit{D.T.}, 20/10/25.

\(^{12}\) Others suggested were Dr Harvey Sutton, principal medical officer of the Education Department, Dr E.S. Morris, and Dr A. Watson Munro. For some time Munro had been waging a public campaign to induce further action to improve the maternal mortality rate.

\(^{13}\) \textit{D.T.}, 22/10/25.

\(^{14}\) \textit{D.T.}, 24/10/25.

\(^{15}\) \textit{D.T.}, 27/10/25.
the much-vaunted New Zealand system was only an adaptation of the teachings of leading paediatricians like Pritchard, and was in any case too rigid. He argued that the Society's governing body included eminent medical men and was to be trusted in such matters as infant care.  

Purdy kept up the local attack by arguing that the baby clinics needed to be supervised by a doctor. He pointed out that Sydney had an infant death-rate of 57 per 1,000 compared with Auckland's 47. New Zealand's success had largely resulted from the leadership of Truby King.  

Other critics continued the attack. In an open letter to Cann, Watson Munro showed that New Zealand had reduced its rate by 55 per cent from the level of 1907, when its campaign began, whereas New South Wales had achieved a reduction of only 46 per cent on its base year rate.  

He praised the work of Armstrong up to 1914, but was critical of what had been done in the subsequent period of lay control. A spokeswoman for the Country Women's Association was reported as saying, "The Royal Society is strongly entrenched. It must be brought to bear on them that they must shew an improvement in results. Modifications in Sir Truby King's formula for infant feeding are losing the State 17 babies per thousand".  

In its reports for 1924-25 and 1925-26 the Royal Society defended itself against the unfavourable comparisons with the New Zealand organisation. It again made the point that physical and social differences played an important part in determining the New Zealand mortality rate. Except for the "drilling of mothers to an

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16 D.T., 7/11/25.

17 D.T., 12/11/25.

18 Labor Daily, 29/1/26.

19 Ibid, 8/2/26.

iron reliance on text book rules", which the Royal Society rejected, it said that there was nothing special about King's approach. In fundamentals it drew on principles long and widely accepted.\textsuperscript{21}

The controversy had served to increase public awareness of the question of infant mortality and the related problem of maternal mortality. The Government responded by creating a Division of Maternal and Baby Welfare within the Health Department, thus placing the clinics under medical control. Women's groups pressed for more clinics and for the provision of antenatal services at clinics. A deputation from various women's organisations urged these proposals on Cann in July 1926.\textsuperscript{22} The Society's conflict with King continued, but by the 1930s seemed to lose some of its edge, as the pattern of the infant welfare movement in Sydney became set. In 1926 the President of the Society expressed a fear that a change of Government might result in official support for the Australian Mothercraft Society.\textsuperscript{23} Dr Morris, the new Director of Maternal Welfare, assured the Council that the Government did not intend to support the rival organisation. In 1929 Council decided to inform the Mothercraft Society it could not permit its affiliation in the face of recently expressed hostility to the Royal Society.\textsuperscript{24} Although in 1930 a deputation from the Society, which was to wait on the Premier, decided to urge recognition of Karitane nurses, the Royal Society kept its distance. Two years later Council refused


\textsuperscript{22} S.M.H., 30/7/26.

\textsuperscript{23} Minutes of Gen. Council Meeting, 17/6/26.

\textsuperscript{24} Minutes of Gen. Council Meeting, 12/2/29.

\textsuperscript{25} Minutes of Gen. Council Meeting, 9/9/30.
to contemplate amalgamation with the Mothercraft Society. On the occasion of Truby King's death in 1938, Dr Margaret Harper said that he "had the mind of a dictator and the fact that the Society developed its work along the lines of its own experience, and from the results of experiments in nutrition all over the world, caused it to fall into disfavour with him". But, she continued, this was no reason for denying the fact he helped the Society much in its early days.

The Society lost control of the baby clinics in 1926. However, it still enjoyed a great deal of influence in the infant welfare movement. It continued to run the Tresillian Homes, which were both centres of treatment and of training. Mothers as well as nurses were trained in mothercraft. Education of mothers had been the hallmark of the movement in Sydney from its beginnings under Armstrong. From the outset pamphlet material had been used, as well as personal contact through domiciliary visits. The success of the infant welfare movement in Sydney had much to do with its capacity to convey simple information on infant care to large numbers of mothers. To avoid confusion, the advice had to be uniform as well as intelligible. The clinics were one means by which to reach a mass audience. The dominance of the Royal Society and the common training it provided for the clinic nurses ensured uniformity of instruction. The publications and other publicity efforts of the Health Department and of the Society extended the influence of the movement, reaching mothers not otherwise to be contacted. But the audience had to be reasonably receptive to and capable of absorbing the advice proffered.

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26 Minutes of Gen. Council Meeting, 18/10/32.

An important social force aiding the development of the organised movement in Sydney in the early twentieth century was compulsory education. As Harvey Sutton, Professor of Preventive Medicine at Sydney University, noted,

The success of the movement was made possible by the introduction of compulsory education, in 1880, which created a population of better educated and more responsive mothers early in the twentieth century — mothers desirous of knowing what best to do for their babies, and used to being taught and to looking to experts for information.  

Rather more fully, Sir Arthur Newsholme made the same point about the movement in England:

This universally more instructed outlook on life was additional to the teaching...of health to the extent... it has...been embodied in actual instruction during school life...for there has been in school-life a constant stimulus of emulation towards tidiness and cleanliness.... The medical inspection of school children, aided by the valuable work of school nurses...would have greatly improved national health, not only of school children, but also of infants and pre-school toddlers.... The girls in school in 1870-80 are the mothers of the infants in the years 1900-8, and their school work and their subsequent reading of newspapers and miscellaneous reading matter must have influenced for good, to an incalculable extent, their babies in the early years of the present century. The earlier part of the dramatic fall of infant mortality since 1900 owes much to this cause, and it must have been still more effective in the years since 1908.

From the early years of the infant welfare movement pamphlet material had been distributed by the lady health visitors and later by

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28 Sutton, Lectures on Preventive Medicine, Sydney, 1944, p.73.

29 Newsholme, Fifty Years in Public Health, pp. 332-333. Martha Wolfenstein has pointed out that the existence of literature on child-rearing indicates a changing culture. In such a culture the elders lose their authority in this area. Parents turn to the expert, to the paediatrician or family doctor, and to the publications of psychologists, doctors and educationists. Mead and Wolfenstein, eds, op.cit., p.145.
the clinics. One of the tasks of the Royal Society was to reach mothers not contacted through the clinics. From the early 1920s it ran a weekly piece on infant care in the Daily Telegraph, and a page per issue in two women's weekly publications, The Australian Woman's Mirror and Women's Home Budget. By 1925-26 the Society could claim to have lodged material or been reported often in all the metropolitan newspapers. Its pamphlets were distributed by mail throughout the State, and the Education Department took 29,000 for distribution to girls' schools. In 1926 Dr Margaret Harper published under the auspices of the Society The Parent's Book, which quickly became popular. Within a short time three editions, totalling 8,500 copies, had been published. By the end of the Second World War it had run through nineteen editions. Soon after it came into being the Society introduced the practice of holding a welfare exhibition at the annual Royal Agricultural Show. It also introduced the idea of an annual Baby Week.

From the later 1920s, a Division of Maternal and Baby Welfare having been created, the Health Department assumed much of the responsibility for publicity and educational measures. In 1926 the Department appointed a publicity officer. New media were now used.

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31 Altogether 70,000 pamphlets were distributed in 1925-26. Report, 1925-26, p.20. The Society exchanged information with overseas organisations working in infant welfare such as the National Baby Week Council, London and the American Child Health Association, New York.


33 Report, 1922-23, p.18.

34 The Hon. Fred. Flowers had appointed a publicity officer in 1914. But subsequently the officer was shifted to the Premier's Department Continued...
Films were shown and radio talks given in addition to the traditional lecture and demonstration. During Sydney's annual Health Week model baby clinics and antenatal clinics were set up. By the early 1930s 100 newspapers throughout the State were supplied with regular articles on mothercraft. The Department published a booklet on antenatal care, Healthy Motherhood, and one on infant welfare, Our Babies, which were distributed gratis.

At the time when the Health Department took over administration of the baby clinics, there were thirty-five clinics in the metropolitan area, and sixty to eighty per cent of babies attended in areas where clinics had been established for some time. The clinics drew clients from a variety of socio-economic levels. The infant welfare movement no longer served, as in the pioneering days of Armstrong, only the inner-city, working-class mother. Morris wrote in 1927,

Mothers in every grade of life are welcome...since every healthy baby is equally one of the State's best assets, and any mother may need mothercraft instruction.... In consequence, the mothers who attend the Baby Health Centres are drawn from every class in the community, and the fact that there is no discrimination whatever in the centres emphasises the essential national characteristic of the work.

34 (Cont.)
so that until 1926 such public relations work as was done was carried out by other Health Department staff. The duties of the officer were stated to be the promotion of "an effective publicity campaign by the regular issue of articles and paragraphs to the daily, suburban and country papers, particularly on the subject of maternal and baby welfare". M.J.A., May 1937, p.757.

35 D-G Reports, 1928, p.33, 1929, p.33 and 1930, p.32.

36 By the end of 1939 about 380,000 copies of Our Babies had been distributed. D-G Report, 1939, p.45.


38 Ibid, p.46.
Further, the advice was free, but not given as charity. General practitioners, secure in the knowledge that sick infants as a matter of policy were not treated at clinics, increasingly cooperated with the baby health centres. The chief aim of the clinics, as it was of the infant welfare movement from the outset, was the encouragement of breast-feeding. The use of patent foods was discouraged, and where complementary or full substitute feeding was necessary, modified fresh milk, where practical, or dried milk, was suggested.

As far as can be judged, the clinics appear to have been quite successful in this aim. In 1929 it was estimated that around seventy-five per cent of all babies under nine months of age attending clinics were fully breast-fed. In some areas the figure was as high as ninety to ninety-five per cent. In 1930 it was found that for eighty-four country and metropolitan clinics, an average of 93 per cent of all infants attending in the first month of life were fully or partially breast-fed; in the second month, the figure fell to 90 per cent; by the close of the ninth month almost 70 per cent were still being breast-fed. The clinics reported considerable success in re-establishing breast-feeding. In some instances babies who had never had the breast were subsequently started on breast-feeding.

Some measure of the clinics' effect on diarrhoeal mortality, the old killer of urban infants, is to be seen in the following mortality

39 D-G Report, 1929, p.32.

The figures were probably something of an under-estimate of what was the case in economically better times, "as it was found upon compiling them, that, in industrial areas, where poverty and unemployment have increased, many mothers who would almost certainly have been able to breast-feed have themselves been so undernourished as to have to resort to artificial feeding for their babies". D-G Report, 1930, p.31.

figures: every baby admitted to the three main hospitals for sick infants, the Royal Alexandra Hospital, the Renwick Hospital, and the Lady Edeline Hospital, during the summer of 1927 suffering from gastro-enteritis was included in a survey to determine how many had attended clinics; more than 70 per cent of a total of 663 had never been to a clinic; another 10 per cent were classified as neglected or weaned against advice; the rest attended clinics only intermittently and the mothers were typically indifferent. Morris, the Director of Maternal Welfare, believed only the gradual spread of knowledge would reduce mortality among this class of infants.  

Further evidence of the effectiveness of the clinics was provided by the case figures from a severe epidemic of gastro-enteritis in the summer of 1929-30. Only 43 of almost 300 babies admitted to the Royal Alexandra Hospital had ever attended a clinic; eighty-five per cent came from the small and diminishing group whose mothers did not use clinics. Dr E.H.M. Stephen, who was in charge of cases admitted to the Alexandra Hospital, said, "There were no wholly breast-fed children admitted...and only one or two were partially breast-fed...."  

By the early 1930s the long-established scourge of summer diarrhoea was rapidly disappearing, as the Director of Maternal Welfare noted in 1933,

...the summer scourge of gastro-enteritis among infants is becoming a thing of the past,...and even when such an epidemic occurs, not only are the breast-fed babies almost entirely exempt, but also those artificially-fed ones whose mothers are guided by the Baby Health Centres.  

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42 D-G Report, 1927, p.46.

43 Quoted in D-G Report, 1929, p.32.

44 D-G Report, 1933, p.35.
As I have argued before, the clinics could claim with much justification to have played a vital role in the virtual eradication from Sydney of diarrhoeal mortality, that so formidable reaper of infant life in nineteenth and early twentieth century Western cities. Indeed, the new Director of Maternal Welfare, Dr E. Sandford Morgan, could write in 1935,

> With the extension of the Centres and the spread of mothercraft knowledge, the scourge of summer diarrhoea has been almost eliminated from the community and the death-rate from this disease has fallen since the beginning of the century from considerably over 100 to well below 10 per 100,000 of the population....

In the same year the Government's Lady Edeline Hospital for Babies, opened in 1913 to treat babies suffering from diarrhoeal and associated conditions, was closed because the health authorities felt the need for such an institution had passed.

As has been pointed out by one recent writer on the history of health policy in Australia, "...infant welfare under a combination of state and voluntary sponsorship was the most far-reaching and successful of the positive health programmes at that time". It was successful for a number of reasons. It offered comparatively simple advice to mothers, who in urban conditions where traditional approaches to child-rearing were disappearing vitally needed expert help. Initially the advice was aimed at those most in need, the inner-city, working-class mothers, who were least likely to obtain it from private medical sources. Later the service was provided for all. At no time did it appear to be a matter of charity. The advice was based on a

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46 Thame, op.cit., p.226.
common corpus of principles and the clinic nurses trained in a single
school. Chances of confusing and conflicting advice being given were
thus minimised. The service was provided from the early 1900s for a
generation of mothers, who were equipped by elementary education to
take advice from experts in what had traditionally been very much an
area of family expertise. Because the advice was simple, the system
was not heavily dependent on the involvement of doctors so that the
suspicion and even hostility of the medical profession in the early
years was not a great hindrance. In any case, by meeting the profession's
demand that the clinics not encroach on the preserves of private
practice in the matter of treatment, the clinics allayed much of the
profession's fear of competition. The service was not costly, and
Governments were able to continue their traditional policy of subsidising
voluntary effort. By the 1920s the State was carrying virtually the
full cost of the clinics. At no time did the clinics become a serious
threat to the established balance between private and public medicine.
There was no basic conflict between the two sides of the political
divide over the infant welfare movement. Certainly, Labor wanted to
minimise the voluntary element and was apparently keener to bring the
whole field of activity under official control. Yet even here, Labor
Governments allowed the Royal Society to continue to play a large role.
More importantly, both sides shared a fundamental belief in the need
for greater population growth in the interests of national prosperity
and national security. The best immigrant, they agreed, was a healthy,
native-born infant. In holding to this belief, the political parties
were reflecting one of the most widely accepted community values of
the time. In its concern with population growth the infant welfare
movement in Sydney shared a fundamental aim of movements in other
Western nations in the early twentieth century. Yet, if anything, the
problem of population growth seemed to be even more urgent in a country
where the number of people was so small compared with its physical extent and which so recently had achieved national unity. The movement emerged as a largely middle-class response to a concern with the mortality of urban infants, which in wider perspective was a concern with the consequences of urban poverty. Its emergence was made the easier in English cities and in Sydney because the solution it offered fitted so well into the preventive, public health tradition of the nineteenth century city.
The mortality from puerperal infection in Sydney, as elsewhere in the Western world, remained considerable for almost the whole of the period from the 1870s to the 1930s. In relation to the total maternal mortality rate it was as significant as diarrhoeal mortality was for the total infant mortality rate. Just as infant mortality began to decline markedly when mortality from diarrhoeal and associated conditions began to fall markedly, so the great turning-point for maternal mortality occurred when the mortality from infection was dramatically reduced. A notable difference in the histories of infant and maternal mortality in Sydney is that while diarrhoeal and associated mortality first fell significantly in the early 1900s, mortality from puerperal infection showed no really pronounced downward movement until the late 1930s. This change in the 1930s was broadly due to two developments: adequate understanding of the modes of transmission of puerperal infection and introduction of chemotherapeutic means of controlling the infections.  

A good deal of the credit for the great reduction in mortality from puerperal sepsis must go to the new drug therapy, which was available from the later 1930s. The great turning-point, then, in maternal mortality depended heavily on the advent of new medical knowledge, whereas the equivalent turning-point in infant mortality occurred when medical understanding of the causes of diarrhoeal and associated conditions  

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was incomplete. The wide dissemination of relatively simple principles
of infant care by the infant welfare movement together with improvement
in the sanitary environment of Sydney go a long way towards accounting
for the great decline in infant mortality early in this century. The
knowledge passed on to mothers by the infant welfare movement was
comparatively simple. The level of medical expertise involved was not
high. Doctors were not required to play leading parts in the visiting
service or the clinics. The key to success lay in persuading mothers
to change their own behaviour. However, in maternity care the knowledge
and skill of the attendant is of the utmost importance. The quality
of attendance available may be considered the primary determinant of
the level of maternal mortality. As the Royal College of Obstetricians
and Gynaecologists put it, in a war-time report on a national maternity
service,

We would register our opinion that the incidence of maternal
mortality and morbidity is primarily a matter of obstetric
personnel — of the individual skill of midwives, general
practitioners and consultants, with the proviso that all
must be supported by first-rate maternity institutions and
equipment.  

The quality of care received by a parturient depends upon
whether she has access to skilled attendance as well as the level of
expertise commanded by those attending her. As medical care was
organised in Sydney during my period, access to skilled attendance
depended upon individual capacity to pay for it, except for the poor,
who qualified for the charity of public hospitals. Quite early, the
question of the skill of the many midwives practising in the city was
rightly raised by the medical profession. The profession demanded, as

they had in Britain, regulation of the untrained midwife. Later, in the period after World War I, critics from within the profession drew attention to the question of the obstetric skill and knowledge of medical practitioners themselves, and attention became focussed on the adequacy of the doctor's education in obstetrics. Yet at no time was the idea of a public midwifery service, such as eventually evolved in the United Kingdom, seriously entertained by the State or the profession. 3 For much of my period there was unequal access to skilled attendance within a system of maternity care monopolised by the private sector. By the later 1930s, when the sulphonamides cut the Gordian knot of maternal mortality by dramatically reducing deaths from sepsis, the system showed little evidence of capacity to lower the maternal death-rate to any really significant extent. 4 It may be that such a therapeutic advance was necessary to reduce mortality so significantly and that the level of scientific knowledge of puerperal infections set an upper limit to progress in this area. Yet some remarkably low levels of maternal mortality were achieved by the public hospitals round the turn of the century. In the period, 1893-1903, the Women's Hospital, Crown Street, had a maternal mortality rate of 3.34 per 1,000 births, and

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3 In 1912 the Labor Government announced it would ensure skilled attendance for all mothers; the scheme, being available to all and financed by public funds, was to be free of any charitable overtones. In the event, while a policy of encouraging provision of maternity wards in new country hospitals was followed, no increase in public maternity accommodation took place in Sydney immediately. In 1919 the Nationalist Government acquired two properties in the western suburbs with the intention of converting them to maternity institutions. They were opened by the Labor Government in 1920. These two small institutions hardly amounted to a universal, public midwifery service for Sydney. Minute-Nationalisation of Health, 29/1/17 in R.S.W.M.B. Minutes, 1918-23; Dickey, Historical Studies, p.553; Thame, op.cit., p.192. In the United Kingdom the Midwives Act of 1918 gave local authorities the right to provide grants for the training of midwives. It also established a system whereby doctors called into midwifery cases could be paid out of public funds. The Midwives Act of 1936 created a universal, salaried midwives service. Frazer, op.cit., pp. 412-418.

4 Thame, op.cit., p.198.
there had been no deaths from puerperal fever. More pertinently, since district work by hospitals is more relevant in a comparison with private domiciliary care, the Women's Hospital reported in 1911 that in seven years of district work there had been only six deaths, including one from sepsis, in 3,281 cases. This was a mortality rate of only 1.8 per 1,000 births. The women served in hospital district work were of the poorest classes, who would otherwise not normally have had access to skilled care. I suggest that the organisation of maternity care in a system which to a large extent made the quality of attendance dependent upon the individual's capacity to pay for it contributed to the failure to achieve a really significant reduction of mortality before the later 1930s. It contributed to the failure to solve the problem of maternal mortality along with the more commonly acknowledged factors like the level of medical knowledge and the adequacy of obstetric education, because it determined how well, or how badly, the prevailing degree of skill was distributed throughout the community.

Between 1893 and 1936 the death-rate from puerperal infection in Sydney, while fluctuating, generally remained in the range of 1 to 3 per 1,000 births. It did not fall below 1 per 1,000 until 1937, after which it fell progressively. There was a downward trend before the later 1930s, but the gradient was rather slight. Maternal mortality rates computed for years before 1893 are not really reliable.


6 Trans. Aust'sian Med. Congr., 1911, vol.1, pp. 391-395. Some remarkable figures were reported by the London Royal Maternity Charity for district work done by "well-educated" midwives, who could call on the assistance of obstetricians, the work being done in the period before antisepsis: Eastern District of the Charity, 1828-50, 4.5 deaths per 1,000 births; Western District, 1842-64, 2.2 per 1,000 births. Munro Kerr et al., pp. 262-263.

7 See Appendix 5 for death-rates from metria and childbirth, 1871-81. Metria was a term used in the vital statistics of the 1870s and 1880s and referred to inflammatory diseases of the puerperium. It is synonymous with puerperal fever.
T.A. Coghlan, who instituted a more careful check on registrations of puerperal deaths in the 1890s, wrote:

It is true that the causes of death have been officially registered for over forty years, but there has been great negligence by medical men in filling up the certificates required by law. Since 1893 the death certificates have been carefully scrutinized, and the statistics compiled with the most patient care, but previous to that year, when deaths occurred in childbirth, there seemed reluctance in many instances to state specifically the fact, and various ill-defined descriptions of the cause of death have been returned...where a defined cause has been given, the important qualification 'puerperal' has been omitted in a large number of cases, especially of septicaemia and peritonitis.8

Just as nineteenth century doctors felt almost helpless in the face of the scourge of epidemic diarrhoea, so puerperal fever evoked much anxiety, especially when it occurred in an epidemic form. In 1876 there had been epidemics of scarlatina and puerperal fever in Sydney. Most of the maternal deaths had been serial, and many of the city's leading doctors ceased to attend midwifery cases after they had had one to two deaths among their patients. The Medical Gazette fully endorsed their actions, saying,

...we have mentioned sufficient to induce, in the event of an epidemic of puerperal fever...most practitioners to follow the example of their Sydney brethren, and resign their practice for a time. With regard to nurses and midwives we think they should be...compelled...to follow the same course.9

The question of how to respond properly to such situations was fully discussed at the 1889 Intercolonial Congress. It was generally agreed that the practice of obstetrics should be temporarily abandoned when

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8 The Decline in the Birth-Rate of New South Wales, p.66.  
two or more cases of puerperal fever occurred among a doctor's patients. But reliance on antisepsis soon led many to question the need to cease obstetrics in the face of infection, so long as all antiseptic precautions were taken. Dr Ralph Worrall, President of the New South Wales Branch of the B.M.A. and rapidly becoming one of the leading figures in diseases of women in Sydney, said in the 1890s that having taken precautions — ablution, complete change of clothing and disinfection of the hands — he continued to attend normal lying-in cases while treating puerperal fever patients.

In the development of aetiological understanding of puerperal fever there were three phases, the period before 1875 when essentially the causes remained a mystery, the period, 1876-1925, when, following the rise of medical bacteriology, the pathogens were progressively identified, and the period after 1925, when much more was learned about the haemolytic streptococci and the anaerobic cocci, the most lethal of the pathogens. In 1843 the American, Oliver Wendell Holmes, drew attention to the role of the accoucheur in transmission of the disease.


11 A.M.G., Dec. 1893, p.408. Dr Richard Arthur, later a Minister for Public Health but at this time still a junior member of the profession, wanted more guidance from his seniors. He agreed with Worrall that if precautions were observed, ordinary midwifery could be carried on at the same time as cases of puerperal fever were treated. Yet he remained reluctant. He made the novel proposal that specialists should do all midwifery work. In this way the danger of carrying contagion from cases of infectious disease, so common in general practice, would be avoided. He added, "The men who have suffered the horrors of the anticipation of a puerperal case through some oversight of their own will not look upon this proposal as entirely ridiculous". A.M.G., Jan. 1894, pp. 24-25.


In those pre-germ theory days Holmes suggested "miasms" were the means by which the disease was transferred to the patient. The transmission of the disease by the accoucheur was further indicated by the work of Ignaz Semmelweis. In 1846 Semmelweis had become assistant physician to the maternity section of the Allgemeines Krankenhaus in Vienna, the largest maternity clinic of its time. He observed that in the section where medical students trained, the mortality rate had for some years been considerably greater than that obtaining in the section where midwives were trained. He believed that the greater rate was related to the fact that students and staff commonly proceeded from post-mortem examinations to work in the maternity clinic, usually without washing their hands. He postulated the existence of "cadaveric particles" which carried the condition to the parturient woman. He persuaded his colleagues to adopt the practice of washing their hands in chlorinated lime, and the mortality in the first section fell from ten to three per cent. His strong commitment to the idea of transmission of the disease from attendant to patient very much helped establish consciousness of the dangers inherent in the work of the accoucheur. But the identity of the infecting agent, its source and just how it was transferred had to be elucidated.

The first step in this long process was made by Coze and Feltz, two Alsatian doctors, who reported in 1869 the presence of microbes en chainettes, streptococcal bacteria, in the lochial exudate of patients with puerperal fever. Pasteur ten years later found the same chains of streptococci in the blood of women with the condition. Over the following fifty years the work of differentiating the cocci proceeded. Schottmüller of Hamburg showed in 1903 streptococci of human

14Colebrook, p.248.
septic infections could be distinguished by discoloration of blood around their colonies. In 1919 Howard Brown of Baltimore showed there were three kinds of streptococci, including the haemolytic. The work of Dochez, Avery and Lancefield at the Rockefeller Institute, New York in 1919 began the process of serological classification of the haemolytic streptococci, and by the mid 1920s the prime importance of \( \beta \) haemolytic streptococci in puerperal fever was well established. In the meantime it was becoming clear that anaerobic cocci played an important role, and a third group of pathogens of various types was recognised. Staphylococci, enterococci, coliform bacilli and others were seen to be responsible for what were often less severe infections. The work of a variety of research workers in the 1920s and the 1930s permitted the construction of an aetiology of the disease: the pathogens might originate in the patient's throat, in her nose or on her skin; they might come from the nose, throat or hands of an attending doctor or nurse, or from some source of infection in the mother's own family; various modes of transfer might operate; the hand of the obstetrician, unsterile medical equipment and other intermediaries could be responsible. The establishment of this deeper understanding meant that a modern preventive programme could be constructed.\(^{15}\)

The methods of prevention suggested by pioneers like Holmes and Semmelweis included temporary abstention from the practice of obstetrics and disinfection of the hands.\(^{16}\) Out of the work of the

\(^{15}\)Ibid, pp. 248-249.

\(^{16}\)Semmelweis also suggested it was dangerous to place women with infections in normal lying-in wards. Munro Kerr et al., op.cit., p.213. Robert Collins, Master of the famous Rotunda Hospital, Dublin, 1826-33, used chloride of lime to disinfect wards in which childbed fever had occurred. Holding to the notion that the responsible agent was a "miasm" in the air, Collins insisted on proper ventilation of wards. Ibid, p.212.
pioneers of germ theory, there developed a policy of "indiscriminate antisepsis". Lister's approach in surgery came to be adopted in obstetrics, a number of different chemical agents being popular in turn as recommended antiseptics. In the course of the 1920s, as greater understanding of the role of haemolytic streptococci emerged, a better informed policy of antisepsis was adopted as part of a wider preventive programme.\(^{17}\) The wearing of masks and adoption of procedures for the identification of carriers reduced the possibilities of infection being transmitted from those attending the mother. The use of rubber gloves reduced the chance of transfer via the hands of the obstetrician. Further, a woman whose home environment presented obvious dangers could be delivered in hospital.\(^{18}\)

Therapeutic possibilities were not large until the 1930s. Early in the nineteenth century, bleeding, purging, blistering and the administration of hot douches were tried. Quinine and salicylic acid were commonly used as anti-pyretics. With the coming of Listerian antisepsis, antiseptic douches were used. The use of the curette was advocated by some medical men and condemned as dangerous by others. Late in the century the results from the use of anti-diphtheria serum inspired the development of anti-streptococcal sera. Overall the results were indifferent because one serum could not safeguard the patient against the variety of streptococcal bacteria. For a time organic arsenical compounds like Salvarsan were tried, their use in the treatment of syphilis having shown they enhanced the bactericidal capacity of the blood. This approach was abandoned when they proved only intermittently successful. In 1935 Professor G. Domagk reported

\(^{17}\)Ibid, pp. 213-214.

\(^{18}\)Colebrook, p.249.
from Germany remarkable success with a red dye, later called Prontosil, against streptococci injected into laboratory mice. Used soon after in England with puerperal fever patients, the new drug was very effective. At Queen Charlotte's Hospital, London the case mortality in the first series of patients with haemolytic streptococcal infections was 4.7 per cent. Over the previous five years it had averaged around 25 per cent. In the meantime, workers at the Pasteur Institute had found that the dye was broken down in the body to the substance, para-aminobenzene-sulphonamide, soon to be known as sulphanilamide. This was the agent which cured the infection. The simpler compound became the drug used in human therapy. The availability of penicillin from 1945 improved the therapeutic outlook still further. The dramatic change wrought by the new sulpha drug is illustrated by the following comments of New South Wales health authorities. As late as 1936 the Director of Maternal and Baby Welfare, Dr E.S. Morgan, wrote,

The maternal death-rate in New South Wales shows very little tendency to fall, in spite of the efforts of public health authorities, the medical and nursing professions, and the various associations of public-spiritied citizens who co-operate with them.19

Yet the next year, the new Director, Dr Grace Cuthbert, reported the State had experienced the lowest level of maternal mortality ever, the happy situation being very largely the result of a decline in deaths from sepsis. Dr Cuthbert believed it was to be explained in terms of early treatment with sulphanilamides, recognition of the modes of haemolytic streptococcal infection, and a decline in the virulence of the bacteria.20


20D-G Report, 1937, p.40. At this time some medical authorities believed the advent of the new therapy had coincided with an attenuation of the

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The medical profession exercised self-regulation in response to the dangers of puerperal fever in the later nineteenth century. But they pressed for state control of unqualified midwives, who were held heavily responsible for the excess of maternal deaths from sepsis and other causes. The profession was quite justified in seeking regulation of the incompetent midwife in the interests of safe obstetrics. Yet self-interest was also involved. The services of the unqualified midwife being cheap, very often she was the only attendant a working-class woman might have during childbirth. From the profession's viewpoint she was too much of a competitor in an area of medicine which was the cornerstone of general practice. No suggestion was made that really answered those critics of State registration who pointed out registration would deprive the poor of nursing assistance. In 1883 the Medical Gazette proposed that legislation prohibiting practice by unqualified midwives be enacted.21 It believed there were too many midwives in the colony who were ignorant of even the elementary facts of how to ascertain the presentation of the child during labour.22

20 (Cont.)

virulence of the streptococcal bacteria. The evidence was conflicting. More recent opinion does not give much weight to this factor. A recent writer concluded, "I do not think there is good evidence for a downward trend in streptococcal virulence before 1937 — and after that date proof of it would be difficult". Quoted in Colebrook, p.250.

21 A.M.G., April 1883, p.150.

22 Incompetent midwives undoubtedly caused much damage and suffering. In 1849 a doctor, commenting on the frequency of prolapsus uteri in New South Wales, gave as one of the reasons the fact that midwives were prone to use main force on the afterbirth if it did not immediately separate. He said, "this is the occasion of all the worst cases, and a female neighbour is to be much preferred to our professed midwives". F.J. Beardmore, "Desultory Observations on the Diseases of New South Wales", The Lancet, vol.2, 1849, p.144. Colonial women must have experienced a great deal of suffering and permanent ill-health from bad midwifery and frequent child-bearing. The case of Georgiana Molloy, who had her first child in 1830 at the settlement at Augusta, Western Australia, is a good example of the difficult conditions faced by women of the pioneering period. She was delivered Continued...
Writing in 1874, a Sydney doctor called for legislation to prevent the unqualified from practising midwifery. He also called for facilities for the training of midwives.23 To illustrate the need for such measures he gave instances of incompetence known to him: a mother of several children, resident in Burwood, died in haemorrhage after a midwife, having pulled violently on the umbilical cord, partly separated the placenta; in another case a midwife stubbornly refused to send for a doctor after a woman had suffered a number of haemorrhages over a period of fifteen hours; the mother and child both died; in a case at Petersham a midwife was summoned after protrusion of what appeared to be a large tumour; she did not know what it was; a proposal to cut it away was not followed, and a doctor was called; he identified the protrusion as a prolapsed, inverted uterus.24 The reports of terrible incompetence on the part of midwives in Sydney and elsewhere in the Australian colonies continued in the 1880s and 1890s. Dr W. McMurray of College Street, Sydney reported in 1886 the following case: the midwife had delivered the second of a pair of twins, who was a breach presentation, with such force she had considerably damaged the uterus, and she allowed the labour to continue for twenty-eight hours with the

22 (Cont.)
in a tent, the weather being so bad that an umbrella was also held over her. The baby died soon after birth. Over the next twelve years she had five girls and a boy. Her final labour was a difficult one. The nearest doctor was drunk and some time elapsed before another could be contacted. Weak from haemorrhage, she contracted a puerperal fever. In a wasted state, she took four months to die. F.M.C. Forster, Progress in Obstetrics and Gynaecology in Australia, Sydney, 1967, pp. 13-14.

23 J. Faithful, N.S.W.M.G., June 1874, p.290. I discuss the development of training in Sydney in Chapter 7.

24 Another doctor, writing at the same time, told of a case, one among many, which showed the dangers of unrestrained incompetence. Having been called to the case, he was puzzled by the presentation, until the midwife handed him the mutilated arm of a premature infant. The arm had been torn from its socket. S. Knaggs, N.S.W.M.G., Oct. 1874, pp. 7-8.
woman exhausted and profusely haemorrhaged before seeking medical aid. In 1890 Dr R. Worrall reported the case of a single woman who was delivered by a midwife and who bled intermittently for almost two weeks after delivery. Worrall found a degenerated placenta still attached to the almost completely inverted uterus. Yet fears of competition from an able and professionally recognised corps of midwives likely to be created by State registration made many of the medical profession wary of legislation. As one historian of obstetrics in Australia has said,

...doctor pre-eminence in obstetrics was continued by the medical profession's failure to provide any systematic training of midwives. There were heated arguments over what form training, if instituted, should assume, because many doctors feared that the fully qualified midwife would not only take over obstetrical practice, but also invade the lucrative field of diseases of women.

In 1895 Dr (later Sir) James Graham introduced a bill for the better training and registration of midwives. It was not debated. Graham introduced the bill in 1896 and again in 1898. On the last occasion the bill was read a third time in the Assembly, but the Legislative Council voted against a second reading. In the Council the eminent Sydney medical figure, Sir Arthur Renwick supported the bill, saying, "Having perhaps the largest experience of any man in this colony in connection with this particular department of medical practice, I

26 A.M.G., Feb. 1890, p.117.
27 Forster, op.cit., p.15. Forster has suggested that the large role of doctors in midwifery in Australia originated in the fact that "there was little attraction for the properly trained midwife to emigrate and she was seldom found amongst the convict women". Ibid, p.14.
know that innumerable women have been injured through the carelessness and ignorance of those who have attended on them". However, another senior medical man, the Hon. Dr H.N. MacLaurin, opposed the measure on the ground that it would create a class of inferior medical practitioners. In doing so he spoke for many of the profession in Sydney.

Graham did much to help improve the practice of midwifery in Sydney. An Edinburgh graduate, he lectured in midwifery at Sydney University from 1896 to 1913. He played an important part in the founding of the Women's Hospital, Crown Street, in 1893. This was to become one of the largest public maternity hospitals in the city in my period. From the outset it trained midwifery nurses to a high level of competence. In 1895 Graham was criticised by the Medical Gazette for remarks supposedly implying that women doing the obstetrics course at the hospital were more competent than some doctors. Graham said this was a misinterpretation: what had in fact happened was that a former University examiner had said that the nurses' results were of a standard he normally expected from medical students.

In November 1895 the B.M.A. held a meeting to discuss Graham's bill, and it was decided to request him to withdraw the


31 In 1896 on the death of Thomas Chambers, who was appointed first lecturer on midwifery and diseases of women in 1883, the lectureship was divided. Graham took over teaching in midwifery and Joseph Foreman taught diseases of women, the latter subject being known as gynaecology from 1907. Forster, op.cit., p.55.


33 A.M.G., Nov. 1895, p.467.
Those who objected to the bill in principle could not accept that it was feasible to restrict midwives to the conduct of normal labours. A fuller knowledge than they could possibly attain was needed to conduct other labours. The Medical Gazette commented, "Midwives must of necessity be drawn from the ranks of the lower classes, who are, as a rule, ignorant on general matters, and therefore cannot be expected to look upon their calling in the same light as medical men". Those who opposed the particular bill were critical of certain provisions such as that administration was to be carried out by the Board of Health, half of whose members were laymen. When the bill was introduced again in 1898, the Medical Gazette repeated the established objections of the profession, claiming it would make legal the activities of an inferior class of partly educated practitioners, which would be disastrous for the colony's mothers. It pointed out that the public had made no demand for the measure, nor had midwives themselves. A meeting of the profession in October heard various objections to the bill, including the objection that it would flood Sydney with incompetents who would take years to disappear. This would be detrimental to public welfare. It was argued also that the interests of the profession would be hurt. The registered midwife would steal patients able to afford a doctor, and midwifery had always been the great stepping-stone to fuller family practice for the young doctor. Graham replied that an inferior order of midwives already existed and that the legislation would actually reduce competition because fewer

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34 A.M.G., Nov. 1895, pp. 455-456.
midwives would qualify for registration. But the profession had set its face against this bill.

The matter of legislation was raised again in 1909 by Dr C.K. Mackellar, who had successfully pressed for a law to regulate private hospitals, in the interests of suppressing abortions. Just as the Private Hospitals Act carried into effect a recommendation of the Royal Commission on the Birth-Rate, so Mackellar's present bill reflected the Commission's concern about the contribution made by untrained midwives to the high maternal mortality rate. In debate Mackellar made clear that he would have liked to prohibit practice by the unqualified, but this was impracticable, given the small number of qualified women in the community. The measure was welcomed across party lines. The Labor leader, J.S.T. McGowen, hoped it would serve to halt "race murder". He also said, "Midwifery nurses in the exercise of their calling can affect the question of the population, and we have a right to see that they...are responsible to the board.... We must do this if we are going to build up the population of Australia on proper lines". The Wade Government accepted the bill in principle, but its progress was halted by prorogation. Over the next four years its progress was similarly interrupted a number of times. Although it enjoyed the support of Labor Governments from 1910, it was not enacted. The coming of the War further delayed legislation, as was the case with

37 A.M.G., Nov. 1898, pp. 480-482.
40 Idem. Concern about population growth was never too far away when the infant and maternal mortality question was being discussed.
other "less essential" health legislation.\footnote{For example, legislation concerning the metropolitan milk supply. Moreover, because of the exigencies of war, trained nurses were in short supply. In the 1920s the Hon. George Black said, while Labor Minister for Public Health, he had a bill drafted in 1915, but pressure of other legislation stopped its introduction. \textit{N.S.W.P.D.}, vol.98, 12/11/24, p.3574.}

In 1923 the Hon. S.R. Innes-Noad, President of the Royal Society for the Welfare of Mothers and Babies, asked the Representative of the Fuller Government in the Upper House, the Hon. Sir Joseph Carruthers, whether, since legislation had been promised by successive Governments and it was not a partisan issue, a bill would soon be introduced.\footnote{\textit{N.S.W.P.D.}, vol.91, 19/9/23, p.942.} Carruthers said it had high priority. Soon after, the Hon. C.W. Oakes, Minister for Public Health, introduced the Nurses' Registration bill. It provided for the State registration of general, psychiatric and midwifery nurses, vesting administration in a Nurses' Registration Board.\footnote{\textit{N.S.W.P.D.}, vol.94, 5/12/23, p.3048 and vol.97, 17/9/24, p.2088.} During debate the well-established argument that untrained midwives were mainly responsible for the excessive maternal mortality rate was again aired.\footnote{See Dr C.J. Fallon (Eastern Suburbs), \textit{ibid.}, p.2110.} This time the bill passed through all stages, and almost thirty years from when it was first proposed, New South Wales had provision for registration of qualified midwifery nurses.

The medical profession had successfully opposed early attempts to introduce regulation of midwives, fearing that a competent and officially recognised corps of midwifery nurses would compete too well for lying-in cases and perhaps other sorts of patients. It will be remembered
that the power of the organised profession and the recognition accorded the rights of private practice were such that the early infant welfare movement and Governments, Labor and non-Labor alike, accepted from the outset that treatment of infants would not be provided in baby clinics, treatment being accepted as the preserve of private medical practitioners. The organised profession jealously guarded that privilege, drawing attention a number of times over the years to what it saw as infringements by the clinics. The power of the profession is further illustrated in two other areas. Fred. Flowers, the most radical reformer in the field of health in my period, placed great importance on reform of the hospital system, on changing the emphasis from charitable effort and independent control to some form of State control. His ultimate objective was claimed to be nationalisation, although it is unclear how far he and his colleagues intended to take Government control. 45

The doctors adamantly opposed Flowers' aims, reaffirming the traditional charitable orientation of the public hospitals at the Australasian Medical Congress of 1911. Dr R. Worrall, who spoke in support of resolutions put to the Congress, insisted that public hospitals were for those unable to pay for private care and he condemned a national health system outright. 46 In 1912 the Medical Gazette, the

45 Dickey, Historical Studies, April 1967, pp. 542-545. Certainly, Flowers talked publicly in terms of nationalisation: "But since hospitals are essential to all...why should their existence be dependent on charity? A life saved to the Nation is a National asset gained, especially in this new Commonwealth to the destiny of which population is so essential. Every life is needed...should not our Public Hospitals be shielded under the sheltering wings of the State?" A Pamphlet on the Hospital System in New South Wales, Sydney, 1912, p.20.

46 Flowers pointed out in 1912 how heavily the State supported the public hospitals. In 1911 their total income was raised as follows, £153,000 from the Government, £120,000 from subscriptions, £39,000

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profession's journal, said Flowers' proposals were put "with the distinct object of uprooting all our cherished ideals...which would insist upon doing away with that spirit of benevolence and humanity which has always been the glory of the profession, and reduce Medicine to the level of a Trade". Although other factors were operating (Labor was not in a strong parliamentary position and from 1912 financial stringency prevailed), the opposition of the medical profession was an important reason why Flowers failed to carry through any major reform of the public hospital system.

The power of the profession is no better shown than in its curbing of the influence of the friendly societies or lodges. Indeed the beginning of the real political power of the organised profession in Australia might well be dated from this time, although the necessary professional organisation had been in existence in the case of New South Wales since 1880 and already in the 1890s the profession had been able to block attempts to regulate the practice of midwives. While the

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from patients and £16,000 from miscellaneous sources. Moreover, they needed Government approval for any large construction programme. Pace the profession, the traditional picture of the fees of the well-to-do supporting medical care of the poor, this being given freely by doctors attending at public hospitals, no longer fitted the facts. Not only were hospitals receiving some income from patients, but many potential clients of private practitioners were turning to the hospitals for treatment. Dickey, pp. 547 and 550.

Quoted in Dickey, p.550.

The first branch of the B.M.A. in the Australian colonies was established in South Australia in 1879. Branches were established in New South Wales and Victoria in 1880, Queensland, 1894, Western Australia, 1899 and Tasmania, 1911. A national medical journal, the Medical Journal of Australia, was formed by the amalgamation of New South Wales' Australasian Medical Gazette and Victoria's Australian Medical Journal in 1914. The profession also expressed its unity in a series of intercolonial medical congresses from 1887. After Federation this institution was renamed the Australasian Medical Congress. In 1912 the Federal Committee of the B.M.A. was created and from the outset it concerned itself with any projected legislation or other development affecting the interests of the profession. Thelma Hunter, The Politics of National Health, Ph.D. thesis, A.N.U., 1969, pp. 60-64.
work was often very onerous, doctors had welcomed lodge patients because the contract sum paid by the lodge represented a guaranteed income and private practice could be expanded through the contacts that lodge patients provided. In the early 1900s many of the profession expressed their resentment of the power of the friendly societies to impose contracts and in several States the B.M.A. attempted to lay down its own conditions. In New South Wales the B.M.A. was able in 1909 to force lodges to impose income limits for members.\(^49\) In 1912 Flowers proposed to the friendly societies that the Government use their dispensaries a number of times per week for the provision of treatment for those of the population unable to join a society. The scheme, which involved doctors providing their services free, was to relieve pressure on the outpatient departments of the public hospitals, where the inner-city poor sought treatment. The B.M.A. rejected the scheme outright, it being decided that the existing system of public hospitals, friendly societies and private practice adequately covered "all classes of the community" and that "no member shall accept a position as hon. medical officer to any free general dispensary under Government control". Representatives of the friendly societies conferred with Flowers over the dispensary scheme and over their disagreement with the B.M.A. about lodge practice. While seven societies accepted the scheme (four refused and three did not reply), apparently the scheme was never implemented.\(^50\)

Meanwhile Flowers arranged a conference between the friendly societies and the profession, at which a draft form of agreement was negotiated. When subsequently a number of societies rejected the

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\(^49\) Thame, \textit{op.cit.}, p.296.

\(^50\) Dickey, p.549. The Pharmaceutical Society of New South Wales also opposed the scheme. It argued that chemists dispensed drugs to the poor gratis. \textit{Idem}.
agreement, the B.M.A. withdrew doctors from lodge practice, and by the
beginning of 1914 the new contract was able to operate. Although there
was extensive working-class membership of the societies, Flowers and
Premier Holman appear to have been anxious to circumvent prolonged
confrontation with the medical profession and to ensure medical services
were forthcoming under the established system.\(^1\) It is clear, then, that
doctors rejected the claims of any third party to intervene between
their patients and themselves. They were determined to be independent
of Government and the friendly societies. In the years that followed,
the profession repeatedly asserted its adhesion to certain basic
principles: the fee-for-service payment method as the best financial
arrangement; complete privacy of the doctor-patient relationship;
complete, professional freedom; and the right of medical men to control
areas of policy they saw as purely medical. The B.M.A. at the national
level consistently distinguished between Government action to prevent
illness, which it endorsed, and projects that provided the benefits of
curative medicine, which it rejected.\(^2\)

In the field of maternity care the private sector virtually
monopolised the provision of services and the right of the profession
to this monopoly was never seriously challenged. Except for the public
maternity hospitals, which until about 1930 were used almost wholly
by those unable to afford other care, and the public antenatal clinics,
which again were intended for the use of women who could not purchase
medical supervision privately, the bulk of maternity services were
provided by private medical practitioners and decreasingly from about
World War I by midwives. While undoubtedly the general quality of

\(^1\) Dickey, p.551.

\(^2\) Hunter, op.cit., p.58.
midwifery practice and training, of both midwives and doctors, was a very significant factor blocking any major reduction of the maternal mortality rate in Sydney until at least the beginning of the 1930s — and I will discuss this in the next chapter — the organisation of maternity care in a mainly private system where it was the individual's responsibility to procure care contributed to the failure to reduce the maternal death-rate markedly until the close of my period. A public midwifery service, open to all and therefore not a charity, would have provided skilled care for the class of women who could not afford good private care but would not use the charitable public hospitals. This class generally turned to the untrained midwife. It would have catered also for the middle range who could afford to join a friendly society and used the services of the lodge doctor for a domiciliary confinement. As medical treatment became more specialised in this century, lodge practice became less adequate to the task of providing good-quality care. Moreover, over-work had always been a problem. In the 1890s one Sydney medical man complained at length of the "sweating" of the medical profession by the friendly societies. The large number of lodge cases that had to be seen by many doctors in addition to their private patients, the over-work built into the system, must have made inroads into the quality of service provided. Lodge midwifery cases were done at a special, reduced rate, and Bruck cited examples of lodge doctors having to attend 150 to 180 lying-in cases per year for lodge members in addition to private cases. Over forty years later the quality of treatment available to lodge patients in urban industrial areas was said to be often questionable:

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3 See L. Bruck, The Sweating of the Medical Profession by the Friendly Societies in Australasia, Sydney, n.d. [1899].
In industrial areas of cities where a doctor's practice may be predominantly or entirely composed of lodge members, the result is not so happy, and with the need to accept as many members as possible for the sake of the income involved, it leads to overwork and to bad work.\(^4\)

The organisation of maternity care itself as well as the standard of obstetrical education and practice retarded the possibility of a major reduction in the maternal death-rate.

Other factors which might be expected to have reduced the maternal mortality rate in Sydney were the institution of administrative controls by the health authorities, the spread of antenatal care and the development of the practice of giving birth in hospital rather than at home.\(^5\) Yet these factors appear to have had little effect up to the mid 1930s. The great decline in maternal mortality in Sydney occurred suddenly in 1936-37, the death-rate falling from 7.4 per 1,000 births in 1936 to 5.5 per 1,000 in 1937, most of the fall being due to the decline in the death-rate from sepsis.\(^6\) In 1925 in his

\(^4\)The Medical Survey Committee of the Joint Committee on Social Security, 1943. Quoted in Thame, \textit{op.cit.}, p.300.

\(^5\)Another factor, which received some attention in the 1930s, was the decline of the large family implied by the falling birth-rate. The hypothesis advanced was that with the decline of the large family, the proportion of first births in total births per year had increased and that, since first births entailed a greater risk for the mother, the falling birth-rate was producing an increase in the ratio of maternal deaths to total births. In 1936 Mary Dublin tested the hypothesis on Australian data, 1894-1934, and she concluded "the shift in the birth rate has not affected the maternal mortality rates and the failure of these rates to decline is not subject to correction on this score". Dublin, "Maternal Mortality and the Decline of the Birth Rate", \textit{Annals American Academy Pol. Science}, Nov. 1936, p.114.

\(^6\)The maternal mortality rate used here includes deaths from illegal operations in order to be consistent with figures from 1893, since it was the practice until the 1920s in the vital statistics of New South Wales not to differentiate criminal from natural abortions in deaths returned under abortion. See W.J. Wilcocks and H.O. Lancaster, \textit{J. of Obstets. and Gyn. of Brit. Emp.}, vol.58, 1951, p.946. The maternal mortality rate exclusive of deaths from criminal abortion in Sydney in 1936 was 5.8 per 1,000. It fell to 4.6 in 1937.
exhaustive study of maternal mortality in Australia Dr E.S. Morris pointed out that five of the Australian States had had legislation controlling midwives for some years, yet the legislation had hardly influenced the maternal mortality rate: "Each act allowed all women who were in practice as midwives at the time of passing of the act to become registered, but the mere fact of registration per se does not convert such women into trained and efficient midwives". The official approach had been restrictive rather than educative. Having become first Director of Maternal Welfare in New South Wales, Morris set out to have effective administrative controls implemented. From 1929 regulations under the Nurses' Registration Act required midwives to notify all cases of puerperal pyrexia. The midwife was suspended from practice, if on investigation the febrile condition was found to be due to infection. From 1929 all midwives in the metropolitan area were supervised by three nurse-inspectors from the Health Department's Division of Maternal Welfare. These inspectors also performed an educational function, communicating the more recent obstetric techniques and knowledge to older, uncertificated midwives. They supervised the work of private hospitals caring for lying-in patients. By the mid 1930s the inspectors were reporting considerable improvement in the

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7Tasmania and Western Australia, 1911, Queensland, 1912, Victoria, 1915, South Australia, 1920, and New South Wales, 1924.


9Under the Public Health Act medical men were required to notify cases of puerperal infection. This acted as a further check on midwives and private hospitals since investigation would establish whether the case was attended by a midwife or was located in a private hospital. Under the Private Hospitals Act cases of puerperal septicaemia in such institutions were notifiable. No new lying-in patient could be admitted, when a case of puerperal infection was reported, until official permission was given.
standard of practice and the conduct of private lying-in establishments. By 1930 about ninety per cent of all registered midwives in New South Wales had received training at one of the recognised midwifery schools. But the remainder, who had not had proper training, continued to practise for some time, and this problem could not be solved by the best of supervision and inspection. Moreover, for some years after the introduction of the notification system, the health authorities complained of lack of cooperation in the reporting of deaths by private practitioners and public hospitals. Problems like the continuing existence of unqualified midwives and lack of cooperation by practitioners and hospitals reduced the effectiveness of administrative controls.

Much was hoped of antenatal supervision in the fight against maternal mortality. Proper antenatal care can help reduce the death-rate from infection by ensuring the woman enters labour in a state of good general health and by detecting conditions which otherwise might cause a difficult labour and thus increase the risk of infection. It can likewise reduce the risk from other significant causes of mortality such as the toxaemias. Morris had high hopes of the impact of antenatal care. In 1925 he wrote,

Antenatal supervision will eventually be regarded as the key to success in preventive midwifery.... Until such supervision is regarded by both doctor and patient as a first principle of midwifery, we shall not be able to bring about the reduction of maternal morbidity and mortality in those directions in which the latter are most preventible.12

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The indifference of mothers and some doctors and midwives was a great obstacle to the spread of proper antenatal care. It was estimated in the early 1930s that only about twenty per cent of parturient women received antenatal supervision. And the problem of attendance was not solved at the close of the 1930s. In 1935 Dr Constance D'Arcy observed amongst the educated class, especially amongst young women, there is no difficulty about inducing expectant mothers to present themselves for regular examination, particularly when a composite fee to cover such attention as well as the period of parturition and puerperium is agreed upon. But in public maternity clinics and, I believe, in lodge practice, it is still difficult to get women to attend regularly.

One of the notable changes in midwifery in Sydney during the interwar period was the growing number of births which took place in public maternity hospitals. The well-equipped public maternity hospitals in Sydney and other cities of the Western world enjoyed an enviable record of safety. They could provide trained assistance and establish hygienic conditions usually not to be matched by the private practitioner or midwife working in a domiciliary setting. Even at an early date, the best public hospitals compared very favourably with private practice in the matter of puerperal infection. In 1897 an English doctor pointed to the contrast,

...notwithstanding the introduction of antiseptics, the almost complete banishment of the disease from our lying-in hospitals and the general advance in our obstetrical knowledge, the death-rate...in some districts has actually increased during the last few years.... I firmly believe that if the simple antiseptic precautions with which everyone is familiar were conscientiously adopted, puerperal fever would be as rare in private practice as it is now in the best lying-in hospitals.

15 C.J. Cullingworth, quoted in Munro Kerr et al., op.cit., pp. 266-267.
The great maternity hospitals in Sydney like the Royal Hospital for Women, Paddington and the Women's Hospital, Crown Street began, and remained for some time, as charitable institutions devoted to the care of the disadvantaged woman, the single mother or the married woman unable to afford private, domiciliary care. Towards the end of my period, as attitudes changed and appreciation of the advantages of hospitalisation spread, the public maternity hospitals were increasingly used by all classes. The Royal Hospital for Women pioneered training of nurses and medical students in obstetrics in New South Wales. Although other institutions provided training, the Royal and the Women's Hospital, Crown Street between them produced the bulk of trained midwifery nurses in my period. In the course of the 1930s the proportion of metropolitan births occurring in public maternity hospitals increased significantly: whereas in 1929 it was about 26 per cent, in 1939 it was around 48 per cent. Yet up to 1937, when the maternal mortality rate fell markedly, this change seems to have had little obvious impact on the rate of maternal deaths. After 1937 the medical and other advances proliferate, so that it becomes virtually impossible to disentangle the influences at work on the mortality rate. With penicillin available from 1945, the ambit of chemotherapy improved still more. The introduction of a blood transfusion service for the metropolitan area and a departmental scheme permitting access to obstetric consultants by patients who otherwise could not afford such services further reduced the dangers from puerperal infection for women confined in Sydney. Progress on the technical side by the 1940s is well summed up in the following statement:

The forties came to a close in an atmosphere of optimism for we now had the three prongs of successful attack: speed and accuracy in bacteriological diagnosis, the ready availability and use of blood, and the susceptibility of almost all obstetrical infections to the combination of penicillin and sulphonamides.... For the first time the
clinician, face to face with desperate infection, held that power which is infinity in the palm of the hand.\textsuperscript{16}

I turn now to look at earlier attempts to make progress on the technical side of midwifery, attempts to improve the standard of practice in Sydney.

On the eve of the great change in outlook for puerperal infection cases wrought by the new chemotherapy, the Director of Maternal Welfare in New South Wales, Dr E.S. Morgan, saw better training of doctors and midwifery nurses as the most likely source of hope for a reduction in the maternal mortality rate. She wrote, 'after all, it is mainly along these lines that one can look for a reduction in our high maternal mortality rate'. By 1936 efforts to improve the training of both doctors and nurses had been going on for over a decade. In the broadest sense efforts to improve the education of nurses doing midwifery had started in Sydney almost from the beginning of my period.

The lying-in section of the Benevolent Asylum began training midwifery nurses in the late 1870s. Then, and for some years after, this institution provided the only hospital facilities for maternity cases in Sydney. But the establishment of training facilities in Melbourne pre-dated those in Sydney by a decade and a half. Training began at the Melbourne Lying-in Hospital, later the Royal Women's Hospital, in 1861-62. In the early years training lasted about a month and a fee of three guineas plus three guineas for board was required. The period of training was extended to three months, and in the 1880s to six months. By the mid 1890s two courses were offered, a diploma course for general education and practice...


2The course at the Melbourne Lying-in Hospital would appear to have been the first nursing training established in Australia. Training of general nurses was instituted at Sydney Hospital in 1868. The Royal Women's Hospital, Centenary of Nurse Training in Australia, 1862-1962, Melbourne, 1962, pp. 1-2.
trained nurses and a certificate course for women who had no previous training. The establishment of hospital training in midwifery, pioneered in Melbourne and somewhat later in Sydney, took place at about the same time as early efforts to organise training were made in England.

On the suggestion of Dr William Farr, head of the Statistical Department of the Registrar-General's Office, the Obstetrical Society of London carried out an enquiry into the causes of infant mortality in the later 1860s. It was found that between thirty and ninety per cent of births among the poor in villages and large industrial towns were attended by midwives. The untrained midwife was found to be common all over the country. Pending compulsory examinations for midwives, the Society decided to offer proficiency certificates. It created an examining board in 1872. Until 1905, when the Central Midwives Board assumed control, the possession of this certificate indicated the trained midwife in England. Almost 7,500 of the 22,000 women listed on the first roll of the Board were holders of the L.O.S. certificate. Legislation of 1902, the stated aim of which was the better training of midwives and regulation of their practice, created a registration system.

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3 Ibid, pp. 6-7.

4 Florence Nightingale opened a lying-in ward, where training was given, at King's College Hospital, London at the same time as training was started at the Melbourne Lying-in Hospital. Ibid, pp. 1-2.

5 Whereas in East London 30 to 50 per cent were attended by midwives, only 2 per cent were so attended in West London.

6 Munro Kerr et al., op.cit., pp. 333-334.

7 Possessors of certificates from the Royal College of Physicians of Ireland, the London Obstetrical Society, the Rotunda Hospital, Dublin, the Coombe Lying-in Hospital and Guinness's Dispensary, or any other

Continued...
In Sydney until the turn of the century a hospital certificate was the proof of training. Then the nurses of New South Wales formed a professional association, the Australasian Trained Nurses' Association, and voluntary registration with this new body became the proof of competence. The first training course in obstetrics commenced at the Benevolent Asylum in 1877-78, but the institution was offering some sort of instruction to one or two pupil nurses per year for some years before then. In 1870 a qualified nurse, Mrs Elizabeth Blundell, who had come out to the Sydney Infirmary from Florence Nightingale's training school, was appointed matron. Nursing in the midwifery section of the Asylum was carried out by an experienced midwife even before Matron Blundell's appointment. Training at the Asylum lasted six months and included attendance at thirty deliveries as well as lectures. By the early 1890s seven to eight pupil nurses were doing the course each year. The Benevolent Society was quite conscious of the public service it was performing in training midwifery nurses. In 1896 the by-laws of the Society were revised and its objects were stated specifically to include the provision of training for midwives and nurses. At the suggestion of the A.T.N.A., midwifery training was extended in 1901 from six to twelve months, where the trainee had no previous nursing

7 (Cont.)
certificate accepted by the Central Midwives Board, or anyone who had pursued bona fide practice for a minimum of one year and was considered of good character, were eligible for registration up to March 1905. The last of the bona fide midwives did not disappear from the active roll until 1947. Ibid, pp. 336-337.

8 See evidence of Dr Arthur Renwick, medical officer in charge of the lying-in section of the Asylum, R.C. on Public Charities Second Report, 1874, Evidence-Benevolent Asylums, p.78.


experience.  

During the 1890s three other maternity institutions established training courses: St Margaret's Maternity Home, a Roman Catholic institution, founded in 1894; the Women's Hospital, Crown Street, founded in 1893; and the Home of Hope, later the South Sydney Women's Hospital, run by the Protestant, Sydney Rescue Work Society. The Royal Commission on Public Charities of 1897-99, which looked extensively at the hospital system in Sydney, was concerned with the fact that conditions of training varied between institutions. It thought the period of training was too short in some cases.  

The Commission, recognising midwifery training was of great public importance, recommended for this and other reasons establishment of a central public hospital for maternity cases. It believed its certificate of training would be a "valuable guarantee to the public of...competence". The Women's Hospital had been founded with the express aim of providing efficient training for midwives. As one of its founders, Dr James Graham, told the Commission, the Hospital had tried "to displace these dangerous Sarah Gamps by giving the public a supply of intelligent and properly instructed obstetric nurses". The Royal Commission on the

11By the early 1900s the lying-in section of the Asylum, soon to be known as the Royal Hospital for Women, offered a one-year course for untrained women and a six-month course for general trained nurses. Report of Royal Hospital, 1904, p.9.

12The Home of Hope offered a three-month course in midwifery, costing fifteen guineas if the trainee was resident and five guineas if she lived outside the institution. The Women's Hospital required six months of training, the cost of which was fifteen guineas for residence and five guineas for instruction. A working-class girl would have found it very difficult to meet these and other costs of training. Nursing became an acceptable occupation for young women of the middle classes. For wider discussion of nursing, and especially the ideology of ladylike behaviour, see B. Kingston, My Wife, My Daughter, and Poor Mary Ann, Melbourne, 1975, pp. 81-91.

Birth-Rate proposed creation of an examining body able to certify the competence of midwives. It found that the great majority of those practising as midwives or monthly nurses were untrained, were ignorant of the need for surgical cleanliness, and were to be held responsible for a great deal of the unsatisfactory midwifery performed in the community. At the 1901 census only 200 of 1,923 women classed as midwives had had training. The Commission wanted a situation where only trained women practised, but it recognised that disqualification of all untrained women would leave a gap not to be filled by the forty to fifty nurses annually trained in institutions in Sydney.

Within the next few years the number of trained women increased: 33 completed their course at the Royal in 1911, 39 at the Women's Hospital in 1912, 23 at St Margaret's in 1912, and 17 qualified at South Sydney Women's in 1911-12. But the supply was still relatively small. By the end of my period Crown Street Women's Hospital was training well over 100 midwifery nurses per year. The Hospital's graduates quickly won a good reputation. In 1899 the Matron, Miss Hannah McLeod, reported,

We hear of our Nurses being well employed after they leave...they appear to be giving satisfaction in their work. Three hold positions as Matron in Maternity Hospitals... one is sub-matron at Waratah, one Infirmary Sister in the Melbourne Women's Hospital, and another is sub-Matron at the Infants' Home, Ashfield.

By the early 1900s places were in such demand that applicants were

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14 R.C. on Birth-Rate Report, vol.1, 1904, p.32.


*Sometimes spelt MacLeod.
enrolling at least six months in advance of commencing their courses. Like the Royal the Women's Hospital complied with an A.T.N.A. recommendation and extended the period of training from six to twelve months.

Round the turn of the century a growing concern within the nursing and medical professions about the proper training of midwives emerged. James Graham's attempts in the 1890s to have legislation regulating midwives passed have already been discussed. The establishment of the Women's Hospital, with which he was closely associated, was intended to provide facilities for parturient women of the poorer classes and to create a supply of trained midwives for the community.

The Australasian Trained Nurses' Association (originally called the New South Wales Trained Nurses' Association) first met in 1899, with Dr F. Norton Manning as President. Its aims were to promote the interests of trained nurses, establish a system of registration, facilitate discussion of subjects relating to nursing, and to create a provident scheme for nurses. A general register of about 600 names, including all qualified nurses in New South Wales, and some in Victoria, Queensland, South Australia, Western Australia, Tasmania, New Zealand and Fiji, was compiled. Certain hospitals were designated training

17 See Report, 1902.

18 The Hospital sustained some loss of revenue in this change because at this time training fees represented a substantial proportion of total income. In 1901 total income was £1,919/2/7, of which £668/12/3 came from the Government, £623/3/- came from nurses' boarding and lecture fees, £405/13/- from public subscriptions, and £180/0/4 from patients' fees. Report, 1901.

19 In 1896 Dr F. Milford, examiner in Medicine to the University of Sydney, published what he claimed was the first manual on obstetric nursing in Australian conditions. He noted that nursing was now often chosen as a career by educated ladies. Milford, An Australian Handbook of Obstetric Nursing, Sydney and Melbourne, 1911 (1st edition, 1896).
schools and these reported annually to the Association on their educational work. Soon after its inception the Association created a Midwifery Nurses Auxiliary Branch, which decided upon a standard training period and curriculum, compiled a separate register of midwifery nurses, and recognised various institutions as schools of training.²⁰

The Association saw itself meeting two needs, the raising of the standard of midwifery training and the enabling of the public to choose between qualified and untrained women. It was always well aware that the level of training was not ideal and it would have been better to require general training before obstetrics. But in the shorter term it tried to work with the possible, believing six months' training made a more competent midwife than the average untrained woman practising among Sydney's working classes. At least those admitted to the Auxiliary Branch of the Association had reasonable skill, and a supply of such women was reaching the public. The Association wished to extend training to one year as soon as practicable. It ran into some conflict with the Victorian nurses' organisation (which stayed separate from the A.T.N.A.) over the question of comparability of training standards. The Royal Victorian Trained Nurses' Association was not happy with the A.T.N.A.'s registration of women lacking preliminary general training and having obstetrics training only.²¹ Formed in 1901, the Victorian body received a Royal charter in 1904, and from the outset it had required a higher level of midwifery training. The only training school was located at the Women's Hospital, Melbourne, and admission to the six-month obstetrics course required three years' general training

²⁰A.N.J., March 1903, pp. 2-3. The four schools in New South Wales were the four metropolitan maternity hospitals mentioned above.

at a recognised hospital. The Midwives' Act of 1916 stipulated six months of midwifery for a general trained nurse and twelve months for an untrained applicant. A Midwives' Board was established to control training, registration and practice. In 1933 the training periods in midwifery were increased to nine months and eighteen months respectively.

In New South Wales the A.T.N.A. raised its standards as it was able. By the end of 1906 it required the four Sydney schools to provide twelve months' training for the unqualified trainee. The A.T.N.A. had found that in New South Wales only a few general trained nurses went on to do obstetrics, and then mainly with the goal of a special appointment like a matronship in mind. Very few practised as midwives. Reviewing the training of midwives in 1925, E.S. Morris thought that in principle the requirements laid down under the various State Midwives' Acts were adequate. But the practical situation was deficient in various ways: too few general trained nurses doing midwifery went on to become midwives; the trainee doing the one-year course was not being produced in nearly enough numbers; there was in any case still doubt whether real efficiency was inculcated in twelve months. Morris commented,

The obstetric trainee...has so much to learn in a comparatively short time that attention is necessarily focussed on the main incidents and especially the labour itself. The necessary duties antecedent and subsequent to the latter are apt to assume a lesser significance....

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22 Centenary of Nurse Training, pp. 22-23.


24 A.N.J., July 1906, pp. 229-230. The Royal and Crown Street had already implemented this. St Margaret's agreed to do so, and South Sydney Women's was refused a temporary delay.


Only death or retirement could remove the considerable numbers of untrained women whose registration had been permitted at the time legislation came into being under the provision allowing those in practice to continue. Yet nowhere had refresher courses or any form of instruction been attempted for such midwives. It was to be some time before the old-style, informally trained midwife totally disappeared.

Thus a flow of trained midwives, swelling in the 1890s as more metropolitan hospitals introduced training, had been provided for the Sydney public. But a large reserve of poorly equipped practitioners continued to be active until well into this century. The nursing profession itself organised a system of registration and in time raised standards of education. The A.T.N.A. resisted inclusion in C.K. Mackellar's original private hospitals bill of provision for registration because it felt the standard required would be set too low. It wanted a separate bill covering registration of all categories of nurses. The Association supported Mackellar's Nurses Registration bill, but Governments, Labor and non-Labor, would not consider giving control of a State registration system to a professional body like the A.T.N.A. and would not totally prohibit untrained women from practice because they felt this amounted to deprivation of livelihood. As outlined previously, bills came and went without registration being established. The medical profession at the 1920 Australasian Medical Congress recommended the various State Governments appoint boards, similar to the Central Midwives' Board in England, to supervise midwives' practice and thus protect parturient women from the "ravages

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of septicaemia".  

In 1921 a deputation from the Council of the B.M.A. in New South Wales saw the Minister for Public Instruction, Greg. McGirr, and asked for immediate legislation for the registration of midwives. The Minister indicated a Nurses' Registration bill was already being drafted.  

In 1923 a deputation from the A.T.N.A. saw the Minister for Public Health, C.W. Oakes, to urge speedy introduction of legislation.  

Other bodies like the National Council of Women were also pressing for State registration. Legislation was finally passed in 1924, and the Act came into force from the beginning of 1926.  

From the late 1920s the system of nurse inspectors supervising the work of midwives was operated by the health authorities. The educational efforts of these inspectors did something to improve the skills of the midwife who had not had formal training. But the only really satisfactory solution was the disappearance of uncertificated women from practice. By 1930 about 90 per cent of registered midwives in the State were certificated, whereas in 1901 only a little over 10 per cent of those listed in the census returns as midwives had done training. Despite this marked increase in the proportion of trained

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30 M.J.A., April 1922, p.394.


32 Ibid, pp. 573-574.

33 The Nurses' Registration Board, which was created by the Act, required a minimum training period of one year, or six months if the trainee had done general training. It required capacity to carry out antenatal examinations, conduct a labour fully, and experience of at least twenty lying-in cases. Instruction in general anatomy and physiology, general and midwifery nursing, and in infant feeding and invalid cookery was prescribed. A.N.J., Jan. 1926, pp. 4-9.
women and the longer period of training, the maternal mortality rate in
Sydney remained obstinately substantial. It should be remembered,
however, that after about World War I the proportion of total births
attended in the home only by midwives fell considerably. Medical
practitioners assumed responsibility for a quickly growing proportion
of confinements.

In 1925 Morris said of this significant change in midwifery
practice,

This fact alone will exonerate the midwife from any
sweeping charge that she is wholly responsible for the
maternal mortality of the Commonwealth, unless one has
the temerity to argue that such deaths occur for the
most part in the progressively decreasing total which
she attends.34

For the nineteenth century section of my period there are no reliable
figures. But it is quite clear that a large proportion of births in
Sydney, as in the rest of the colony, was attended by midwives only.
A Sydney doctor estimated in the mid 1870s about two-thirds of midwifery
cases in the metropolis were attended by midwives, most of whom were
untrained.35 Dr James Graham said of the city in the late 1890s that
it was "honeycombed" with women who were quite without training yet used
the title of midwife.36 In 1914 a substantial proportion of births in
the City of Sydney was still attended by midwives.37 In the State as

35 J. Faithful, N.S.W.M.G., June 1874, pp. 289-290.
37 Out of a total of 826 births included in the survey, 401 were attended
by midwives alone, 145 by hospital nurses doing district work, 182
were births in public hospitals, 95 were attended by private medical
practitioners and 2 took place in private hospitals, while 1 was
a whole, figures based on applications for the Federal maternity allowance show that there was a rapid growth in the percentage of births attended by doctors. Yet the maternal mortality rate showed no tendency to fall significantly, despite the established argument in medical circles that the ignorant midwife was the fons et origo of problems of childbirth. E.S. Morris concluded that "a considerable amount of responsibility" must be assumed by the medical profession in the face of these figures.

Evidence from overseas studies pointed in the same direction. The author of an extensive study of puerperal mortality in New York City in the early 1930s concluded that two-thirds of all deaths could have been avoided had proper care been available to the mother. The study was dealing with the same problem of a high maternal mortality rate which was evident in Sydney at the time. Despite better methods of treatment and greater hospitalisation of the parturient, the puerperal death-rate had shown no tendency to decrease since about 1920, the study complained. Concerning the role of the attendant, the study said,

The incapacity of the attendants...contributed significantly to the large number of avoidable deaths. Their failure to provide proper prenatal care has already been pointed out.

38 In the absence of figures for Sydney itself these State figures must serve as a guide. In 1914, 58 per cent of births were attended by doctors, by 1923, 73 per cent and by 1935-36, approximately 80 per cent. Morris, M.J.A., Sept. 1925, p.309. D-G Report, 1936, p.38.

39 The pattern was the same in other Australian States. In South Australia, where by 1923 ninety per cent of births were attended by doctors, the average mortality rate for the previous few years showed no advantage over the rates in States where a lower proportion of births was supervised by medical practitioners. See Morris, M.J.A., Sept. 1925, p.309.

40 Ibid, pp. 308-309.

41 R.S. Hooker, Maternal Mortality in New York City, New York, 1933, p.213.
The prognosis of delivery was frequently incorrect. Labor was often improperly conducted. The physicians many times were apparently ignorant of indications and contra-indications for interference. Operative procedures were undertaken when there was no indication .... Labor was terminated by rapid traumatizing delivery when non-interference was called for. Operative procedures were performed on potentially infected patients. Attendants were tardy in obtaining proper consultations. There was a failure to treat severe complications with all the means...available. Difficult obstetrical operations were performed by physicians whose training and experience could not be considered adequate. At times the conclusion that proper asepsis had not been maintained could not be avoided.42

This was a rather damning estimate of the performance of some doctors. The answer, the study said, lay in the better education of doctors in obstetrics. Even so the medical graduate had to appreciate that his basic training did not make him a specialist obstetrician. This was so important, the study urged, that it was worth consideration whether only those qualified by postgraduate study should be permitted by law to carry out operative obstetrics.43

Not until quite late in my period did obstetrics attain a status comparable to that of medicine and surgery in the curricula of Australian medical schools. There had been a gradual improvement in the position of midwifery from the late 1860s, when the General Medical Council of Great Britain, with whose requirements the Australian medical schools complied, decided that medical students were to conduct twenty labours before examination for the diploma. From about the middle of the century all the medical schools in London and the provincial centres possessed lecturers in midwifery.44 The Medical Act of 1886 required

42 Ibid, p.215
43 Ibid, p.218
44 The first chair in the subject in Britain was the one established at Edinburgh in 1726. The Regius chair was established at Glasgow in 1815. At Dublin a chair was established in 1827. Midwifery was part Continued...
for the first time qualification in midwifery before registration, this provision being due to the efforts of the General Medical Council. The Council had found considerable differences in the number of labours required to be attended by the various licensing bodies. The Council resolved in 1888 that a minimum of twelve labours and attendance for three months at a maternity hospital be required. A great obstacle to reform was the limited availability of teaching beds, especially in London, and until well into this century proposals for reform foundered on this fact. In 1895 and again in 1900 the B.M.A. petitioned the Council for reform. In 1906 a committee of obstetric Fellows was appointed by the Royal College of Physicians to enquire into obstetric education, but its recommendations could not be followed because of the old problem of too few teaching beds. In the early 1920s the Medical Council again proposed changes which sought to establish midwifery as equal in status to medicine and surgery in the curriculum. Full implementation of these changes was delayed until the immediate postwar period.

The Act incorporating the University of Sydney provided for the granting of degrees in medicine. Although the University was founded in 1852, the teaching of medical students did not begin until the 1880s. The delay seems to have been caused by lack of funds for

44 (Cont.)

of the syllabus for the final medical degree at Oxford from 1860. At Cambridge from 1841 certificates of attendance at lectures on midwifery were required for the licence to practise medicine. A Professor of Midwifery was on the staff of University College, London from its opening in 1828. Yet it was not until 1886 that the conjoint board examination of the two Royal Colleges in England involved examination in medicine, surgery and midwifery. Munro Kerr et al., op.cit., pp. 296-298.

45 The Scottish universities required 6, Cambridge 10, London 20 and Dublin 30.
establishment of a medical school. The University received a bequest of almost a quarter of a million pounds from John Challis, a Sydney merchant, in 1880, and the Government agreed to the establishment of a medical school. A chair of Anatomy and Physiology was created. Dr (later Sir) Thomas Anderson Stuart, an outstanding Edinburgh graduate was appointed, and teaching commenced in 1883. Anderson Stuart was largely responsible for the early organisation of the school. He presided over its development as Dean of the Faculty of Medicine for almost forty years.

The Sydney school was organised mainly on the lines of the one at Edinburgh, where Anderson Stuart began as a teacher. The course involved three professional examinations. In 1889, several years before it was made compulsory in Britain, a curriculum of five years of scientific and professional studies was introduced at Sydney. The first lecturer in midwifery was Thomas Chambers, who was appointed in 1883 not long after his arrival from London. Chambers, like many sufferers from pulmonary disease at this time, decided to settle in

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46. There was strong opposition to creation of a school, the opposition being led by Professor John Smith M.D., who occupied the chair of Physics and was an unwilling Dean of the Faculty of Medicine. The Faculty, before creation of a school, was an examining body only. Smith had led the attack on the Medical bill of 1875 which was intended to help the public distinguish between qualified and unqualified practitioners. Smith hardly endeared himself to the medical profession in Sydney by statements like the following: "There is ignorance and unskilfulness in the profession as well as out of it.... As regards ignorance within the profession I have had opportunity as one of the medical examiners of the University of Sydney to come across some of it — some candidates legally qualified could not pass an examination, by no means difficult to a person of average ability and experience". Furious, the profession demanded his resignation as Dean of the Faculty. The bill of 1875 was not enacted, and control of unqualified practitioners, of which there were many in the colony, did not exist until the Medical Practitioners Act of 1898 and an amending Act of 1900. See A.M. McIntosh, M.J.A., April 1951, p.539.

Australia because of the climate. He already enjoyed a medical reputation in England, having founded with J.H. Aveling the Chelsea Hospital for Women in 1871. He became the first specialist in diseases of women in Sydney. He was succeeded in 1896 by James Graham, whose various efforts to improve the practice of midwifery in Sydney have been mentioned. In turn Graham was succeeded by Fourness Barrington in 1913. Barrington was to take a prominent part in the criticism of midwifery practice that developed from within the profession. In 1919 he relinquished his existing position to take up the lectureship in Gynaecology. J.C. Windeyer had the lectureship in Obstetrics, 1920-25, becoming foundation Professor of the subject in 1925. He held the chair until 1941, his tenure occupying the high period of attempts to improve obstetrical education. He established at the Royal Hospital for Women, where he had been on the staff since 1904, one of the earliest antenatal clinics in the world. The clinic operated from 1912. Windeyer was also much involved in the work of the Royal Society for the Welfare of Mothers and Babies.

Training of medical students began at the lying-in section of the Benevolent Asylum in 1887. Numbers were small in the early years, 3 in 1887 rising to about 12 in the later 1890s. Just before World War I the numbers rose to around 40 students per year. In the postwar period they increased again, climbing to about 90 in the early 1920s. Because the supply of teaching beds did not increase in the immediate postwar period, it was not possible to provide the additional practical

48 Forster, op.cit., pp. 48-49.
49 Ibid, pp. 55-56.
50 See Report, 1896.
1 See Report, 1922.
instruction the Faculty believed necessary. The other main training hospital was Crown Street, which was used by medical students from 1898. In that year the Matron reported, "The fifth year University Students who now attend the Hospital were a great help to us and were well received by the patients; the Students expressed themselves more than satisfied with the experience they gained". The outdoor maternity work of Crown Street was quite extensive and it was common practice for students to assist nurses in domiciliary work. In its first few years as a teaching institution Crown Street took about twenty students a year. The numbers increased round World War I. Later, a third hospital, South Sydney Women's, was recognised as a teaching hospital, but the Royal and Crown Street remained the main training centres in obstetrics in my period.

By the turn of the century candidates for the degrees of Bachelor of Medicine and Master of Surgery, the normal medical qualifications at the University of Sydney at this time, were required to present a certificate of attendance at a minimum of 12 labours before the final examination. In addition they attended 50 lectures on midwifery during the fifth year of their course. In 1922 the minimum number of labours to be attended was increased to 20. In the same year the University Senate accepted a Faculty recommendation that a tutor in obstetrics be appointed to each of the teaching hospitals and the period of practical instruction increased from 3 to 6 weeks. In 1924

2Report, 1898, p.8.


4A.M.G., Feb. 1902, p.86.

5The tutors taught mainly diagnosis of normal and abnormal pregnancies and labours, this work being done before the three weeks of hospital residence so that greater benefit could be had from clinical instruction.
the Faculty proposed that practical obstetric training be increased to 10 weeks: 3 weeks of tutorials, 3 of clinical instruction and 3 weeks at the prenatal and postnatal clinics, followed 3 to 6 months later by 1 week's refresher course in residence. But perhaps the most important development was the foundation of a chair of obstetrics. This was followed by a decision to appoint a lecturer in clinical obstetrics and a demonstrator in operative obstetrics at each of the main teaching hospitals. The 1920s, then, was a time of considerable change in the teaching of obstetrics in Sydney. In a report on recent achievements the committee on maternal welfare of the Royal Society for the Welfare of Mothers and Babies claimed in 1928 that obstetric education in Sydney was the best in Australasia and was better than what was available in most centres in the rest of the world. The committee said student contact with practical obstetrics had considerably increased, the number of beds at the teaching hospitals was growing, and more graduates were getting experience as resident medical officers. For the practising doctor the B.M.A. provided postgraduate courses at the large maternity hospitals and sent lecturers to meetings of suburban and country branches. The committee looked forward to a reduction of maternal mortality in time.

The improvement in obstetric education during the 1920s had not just proceeded quietly from decisions of the teaching body. It had been preceded and was accompanied by a considerable volume of criticism within and without the medical profession. As early as 1911 George Rothwell Adam, lecturer in Obstetrics and Diseases of Women at

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7 Composed of Prof. J.C. Windeyer, Dr E.S. Morris and Dr E. Ludowici.

the University of Melbourne, raised the question of the adequacy of obstetric education at the Australasian Medical Congress. Rothwell Adam suggested obstetrics was the Cinderella of the medical course. Yet it was "of such individual and national importance as to entitle it to rank with medicine and surgery on equal terms in a medical curriculum; and it can only do so by being afforded similar facilities for instruction". He was sure that much gynaecology was the result of bad midwifery, including the hasty use of forceps in delivery and a perfunctory approach to asepsis. Sydney graduates were equally critical. T.G. (later Sir George) Wilson, Senior Gynaecologist to the Adelaide Hospital, said in 1920,

As a student, I remember doing my practical midwifery at the old Benevolent Society lying-in department in Sydney, and speaking from recollection, I only remember our then teacher being actually present at one of the deliveries during my term of residence, and what practical teaching we got was from the matron or head nurse.

Another graduate of Sydney, referring to his experience in 1906, said, "We graduated after passing an examination in theoretical obstetrics without really knowing how to confine a woman". E.S. Myers, whose training was done a few years later, claimed,

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10 Ibid, p.331.

11 Wilson established at the Adelaide Hospital in 1910 the first outpatient antenatal clinic in the world. A Foundation Fellow of the Royal College of Obstetricians and Gynaecologists and a Fellow of the American College of Surgeons, he lectured in Gynaecology, 1920-23, and in Obstetrics and Gynaecology, 1924-40, at the University of Adelaide. In 1940 he became University Director of Obstetrics. Forster, op.cit., pp. 67-68.


Each one of us realizes how meagre our knowledge was on graduating and such lack of knowledge must be considered as a factor contributing to puerperal mortality. It was possible for a student (at any rate in 1914) to complete his training without having seen forceps applied.\textsuperscript{14}

In 1919 a senior member of the profession in Sydney, Edward Ludowici, called for hospital teachers of obstetrics to be given the same status as teachers in other areas of medicine. Given the little that was done in practical obstetrics by students, it was incredible, he thought, that morbidity and mortality were not heavier.\textsuperscript{15} The chorus of criticism swelled in the 1920s. At the 1920 Medical Congress T.G. Wilson called for a chair of gynaecology and obstetrics to be established at Sydney University. He believed the most obvious result of the lack of practical teaching was "the want of proper realization of the indications for the use of forceps". Premature use of forceps was often urged upon the doctor by anxious friends and relatives, he added.\textsuperscript{16} The President of the Obstetrics Section of the Congress, Fourness Barrington, said the quality of midwifery in private practice remained inferior to that attained in maternity hospitals, and the huge amount of illness resulting from poor midwifery accounted for a large proportion of gynaecological problems. He believed the poor quality of obstetrics was very much the result of inadequate training. The advance of obstetrics as a science itself was producing problems. Anaesthesia and the false sense of security given by antisepsis encouraged more frequent use of forceps; often their use was premature and the woman suffered damage.\textsuperscript{17}

\textsuperscript{14}M.J.A., July 1922, p.55.

\textsuperscript{15}M.J.A., Jan. 1919, p.10.


\textsuperscript{17}Ibid, pp. 152-156.
Criticism of obstetric practice had begun before the turn of the century. Much of the criticism centred on the issue of unnecessary interference — the inappropriate use of forceps and of Caesarean section. In 1892 W. Camac Wilkinson, lecturer in Pathology at the Sydney Medical School, told his colleagues,

I am bound to protest against the frequent use of forceps in midwifery...this...should be strongly discountenanced. Not only is it the universal experience of the best men that forceps operations increase the risk of infection to the mother, but the pressure on the foetal head may cause permanent injury to the child.18

A few years later the profession's journal, the Medical Gazette, warned against the habit of hastening labour by the use of forceps in order to save the mother pain or the doctor time.19 W.H. Crago, surgeon to the Royal Hospital for Women, said in 1909 that he thought many serious injuries were being caused by the excessive amount of instrumental interference.20 In 1912 W.T. Chenhall, a colleague of Crago, endorsed Rothwell Adam's claims about the amount of gynaecology resulting from bad midwifery.21 In 1916 P.L. Hispley, who was associated with the Royal Hospital for Women and the Royal Alexandra Hospital for Children, said after ten years' experience of general practice he was convinced


19 A.M.G., May 1906, pp. 239-240. Discussing contemporary condemnation of anaesthesia from quarters favouring natural birth, the journal said this would cause "a still further and serious reduction in the already falling birth-rate, for women nowadays will not face the ordeal of childbirth without the prospect of getting relief from their intense suffering at that time". Idem.


21 A.M.G., Jan. 1912, pp. 81-84. In 1916 Chenhall said it was amazing to see in consulting gynaecological work how many patients ascribed the beginning of their troubles to their first confinement. M.J.A., Feb. 1916, pp. 131-134.
the exercise of ordinary skill and care could keep the dangers of midwifery to a minimum. But the busy general practitioner was often tempted to employ forceps too early.22

In 1921 Felix Meyer, a distinguished Melbourne obstetrician and gynaecologist, maintained the bulk of the unduly large amount of illness attaching to childbirth was due to poor obstetrics.23 This was not a new observation from Meyer. In 1889 he had suggested at the Intercolonial Medical Congress that there were doctors who did a great deal of midwifery work year after year happily ignorant of the fact that many of their former patients sought help from specialists or hospitals for the relief of conditions arising directly out of their confinements.24 In his 1921 protest Meyer also discussed Caesarean section, counselling restraint in its use. The operation was not often done in the late nineteenth and early twentieth century, and the death-rate, when it was performed, was high, in part because it was commonly a last resort measure carried out when the patient was exhausted from long labour and performed often in imperfect aseptic conditions. A doctor, reporting a case of Caesarean section in 1902, justified its report by saying, "Caesarean section is still so comparatively rare an operation as to make every case worth recording".25 W.J. Stewart McKay, Senior Surgeon to

22M.J.A., Sept. 1916, pp. 221-223. E.S. Morris, Director of Maternal Welfare, observed in 1927 that the patient and her family were liable to view the doctor's refusal to hasten delivery as incapacity. He went on, "A practitioner is liable to enhance his reputation by the almost universal use of forceps.... So long as one competitor adopts this practice, all others must show an equal competence". D-G Report, 1927, p.38.

23M.J.A., May 1921, pp. 419-421.


the Lewisham Hospital for Women and Children, commented in 1913 that neither abdominal nor vaginal Caesarean section was common in Australia. Yet by 1922 Dr Constance D'Arcy of the Royal Hospital for Women said the operation had become so safe it could be asked if it were not too often employed. Another Sydney doctor, A.J. Gibson, said his experience at Crown Street and in private practice led him to think that many cases apparently requiring induction or section delivered spontaneously. The Medical Journal of Australia claimed in 1922,

At times it would seem that general practitioners have recourse to this operation merely to expedite delivery or to avoid preventible trauma.... It is frankly fraudulent to subject a woman to a major operation unnecessarily in order to enhance a doubtful reputation .... In the absence of definite indications, the practitioner must remember the dictum that meddlesome midwifery is bad midwifery.

The protests and complaints continued into the 1930s. Honorary Gynaecologist to the Royal North Shore Hospital, Herbert Throsby, wrote, "To the public it [Caesarean section] is a dramatic operation and one fears that it is often performed on this account to gain kudos and fame for the surgeon". At the 1935 Medical Congress the Section of Obstetrics discussed Caesarean section. Dr J. Bright Banister of London said it was often done because certain doctors lacked sufficient practical training to diagnose the cause of delay in labour. Dr H.A. Ridler of Sydney believed it was on the increase because of modern

26 A.M.G., Aug. 1913, p.121.
impatience with the demanding art of obstetrics and a desire to gain large fees easily. Another Sydney doctor, F. Brown Craig, said if it were done, it ought to be done by an experienced obstetrician, not a surgeon. A meeting of the New South Wales branch of the B.M.A. on Caesarean section in 1939 heard a spirited attack by Dr T. Dixon Hughes on what he saw as a rapid increase in the use of the operation. For him it was a life-saving measure that was turning into a malignant influence. In New South Wales he knew a large private hospital where it was performed at the rate of 1 in 50 births, and there was another hospital known to him where the rate was 1 in 16. The problem was that the more popular it became the more practitioners performed it. He quoted approvingly the 1933 report by E.S. Morris and E.S. Morgan on maternal mortality, in which they said, "Caesarean section appears to be employed with increasing frequency but with doubtful efficacy or justification".

Much of the discussion of the need to raise the standard of midwifery in the early 1920s centred on the demand for a chair of obstetrics at the Sydney Medical School. A leading figure in what amounted to a public campaign for this objective and more generally for the reduction of maternal mortality was A. Watson Munro, who with Sir James Graham, Dr L.E.F. Neill and David Fell founded the Women's Hospital in the 1890s. Watson Munro, writing to the Medical Journal of Australia in 1922, said, "...without doubt the teaching of midwifery at the Sydney Medical School remains at a low standard and reform is urgently required". For Watson Munro the essential first step was creation

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32M.J.A., Dec. 1939, pp. 947-948. In terms of mortality risk Caesarean section was one and a half times as dangerous as gallbladder operations and twice as dangerous as surgery in acute appendicitis.

33M.J.A., Jan. 1922, p.112.
of a chair. As mentioned before, the 1920s saw something of a public debate in Sydney over the issue of how best to lower the infant mortality rate. The merits of the Royal Society for the Welfare of Mothers and Babies had been discussed by critics and supporters of the Society. One of the participants in the debate had been J.S. Purdy, Armstrong's successor as metropolitan medical officer of health. Purdy wrote to the Medical Journal of Australia in 1923 pointing out Canada had already started to establish chairs of obstetrics throughout the country:

In Australia and New Zealand with our unenviable record of maternal mortality, we might well imitate Canada in establishing chairs of midwifery and gynaecology in our medical schools and raise the whole training of our future medical practitioners in these subjects.

As this is a provision which more intimately concerns women than men, I have sometimes wondered why our women medical practitioners have not made a special effort to secure more recognition for the teaching of midwifery in Australia.  

In 1924 the Medical Journal of Australia itself pointed out it had for some time been critical of the curricula of Australian medical schools. It looked to more competent future doctors to lower the maternal and infant mortality rates. Watson Munro kept up a steady flow of critical letters to the Sydney press. In 1923 he wrote of the strange complacency of the University over the matter of a chair of obstetrics. Early in 1924 he wrote to the press again, referring to the State's scandalous

34 See Chapter 5.


37 S.M.H., 28/11/23. Dr Constance D'Arcy, a colleague and a Fellow of the University Senate, replied that the Senate was ready to establish a chair, but lacked the funds. S.M.H., 14/12/23.
record in maternal mortality and the apparent indifference of University, legislature and public.  

In April 1924 a meeting of women's organisations at the Feminist Club discussed the problem of maternal mortality and resolved that a chair of obstetrics be established immediately. In August Cabinet received a submission from the Minister for Education supporting the proposal. Watson Munro continued his campaign, writing in October that it was absurd to have a chair of veterinary science yet to have human obstetrics relegated to a lectureship. He appealed to the women of the State to use their votes to keep the issue alive politically. During 1925 other critics publicly aired their views. E.S. Morris published his long critical essay on maternal mortality, which had won a national competition sponsored by the Victorian Branch of the B.M.A. The essay received much press publicity in Sydney. The Labor Minister for Public Health, George Cann, was reported as having endorsed the proposals of Watson Munro and Morris. A new member of the Legislative Assembly, Miss M. Preston Stanley, moved in the House that Morris' recommendations be implemented immediately. She also moved for a Royal Commission to enquire into the causes of the excessive

41 Sunday Times, 19/10/24.
42 Ibid, 26/10/24.
43 Sunday Times, 20/9/25. This newspaper said Morris had done a great public service by exposing the inadequacies of current maternity services.
maternal death-rate. In the later 1920s Watson Munro became very critical of Morris who had been appointed first Director of Maternal Welfare. In 1929 Watson Munro asked publicly what the Division of Maternal Welfare had really done to reduce mortality. He was very short with a statement by Morris which said the effect of better obstetric education would not be felt for a decade or so. This was intolerable complacency, Watson Munro believed. Morris replied Munro did not allow for the limits of the Division's capacity to influence the mortality situation. Munro rejected these pleas and went on hammering at official attitudes and actions. He was in print again in September 1929, endorsing Dr Henry Jellett's discussion on the causes of maternal mortality. Jellett's paper, presented at the Sydney meeting of the Australasian Medical Congress, received much public attention. Munro said his only quarrel with Jellett was that, unlike Jellett, he would put inadequate training of doctors and nurses first among the causes of mortality.

Women's organisations, with which Watson Munro was often allied, continued to press for reform. A motion that Federal finance be made available to the States for the establishment of chairs of obstetrics was put to the annual meeting of the Federal Council of the National Council of Women in 1929. Early in 1931 fifteen women's

44 D.T., 28/9/25.

45 Morris later became Director-General of Public Health.

46 S.M.H., 13/6/29.

47 For example, it could not force women to attend antenatal clinics, Morris said. S.M.H., 24/6/29 and 3/7/29.

48 S.M.H., 7/9/29.

49 S.M.H., 19/9/29.
organisations in two deputations saw the Minister for Health in New South Wales on the question of maternal mortality. The Minister claimed the obstetrics course at Sydney was now as good as any in the Empire. He favoured provision of funds for research in obstetrics but the current financial stringency ruled out immediate action. In 1932 the Medical Journal of Australia said, despite the extensive discussion of obstetric education and practice, "...there are still many who give only perfunctory antenatal supervision, who object to being called to the bedside before the head of the foetus is on the perineum, and who deliver the child by forceps in almost every instance". In 1933 a conference of women's organisations, over which Miss Preston Stanley presided, discussed maternal welfare. Resolutions put by Watson Munro concerning better obstetric education, better endowment of the University's Department of Obstetrics and other related matters were carried. Munro was writing to the press again in 1934. He argued the need was not for research into maternal mortality, but the acceptance of well-known obstetrical methods in general practice. In a pessimistic vein he said,

...with a sinking birthrate, a sparse population whose rate of increase gets smaller year by year, and a suspension of immigration from overseas, Australia stands faced to-day with her own riddle of the Sphinx, which she must soon unravel or perish.

That the teaching of obstetrics improved from the later 1920s seems certain. A new graduate wrote in 1935 that obstetrics was

\[\text{50} \text{S.M.H.}, 29/1/31.\]

\[\text{1M.J.A.}, \text{Jan. 1932, pp. 169-170.}\]

\[\text{2S.M.H.}, 22/3/33.\]

\[\text{3S.M.H.}, 27/12/34.\]
"convincingly taught and demonstrated". Better teaching in time was reflected as better practice. This was also the case with the training of obstetric nurses. As the period of hospital training lengthened, (by 1933 it was starting to approach contemporary standards) and as untrained women diminished in number, the general quality of midwifery nursing undoubtedly improved. Certainly, the health authorities envisaged improvement:

> With the increased amount of training in obstetrics given to students at the University, and the lengthened course of training now demanded of midwives and maternity nurses ...it is confidently hoped that the general standard of obstetric practice will gradually be raised....

Before the impact of better training on practice had manifested itself in terms of the maternal mortality rate, the new chemotherapy appeared. Almost like a deus ex machina it acted on the long-standing problem of puerperal infection, and the level of maternal mortality in Sydney, as elsewhere in the Western world where the new drugs were used, began to decline significantly. Yet there was a period of about ten years between the introduction of the first reforms in the teaching of obstetrics to medical students and the advent of the new chemotherapy. I suggest that an important factor tending to weaken the impact of better training on the quality of practice and on the mortality rate was the organisation of medical care itself in a system where the bulk of midwifery was performed by general practitioners on a fee-for-service or contract basis.

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6 Llewellyn-Jones wrote of the situation in Britain, "The most striking fall, initially, was of the deaths caused by sepsis, and this was due to Colebrook's work on cross infection by droplets, and to the discovery of the sulphonamides and penicillin". D. Llewellyn-Jones, op.cit., p.500.
Much evidence has already been presented concerning the widespread use of instruments to hasten labour and undue resort to operative procedures. In 1929 Dr Henry Jellett, discussing defects in the existing system of maternity care, listed first among the main, preventable causes of maternal mortality the fact that the average labour was conducted by the busy general practitioner, the demands of whose practice necessarily inclined him to speed up labour by resort to interference. Moreover, midwifery had traditionally been one of the most important areas of general practice. In the early 1930s it was still considered the backbone of general practice, most doctors doing more work in this area than any other except perhaps infections of childhood and other common infections. The general practitioner's standing and income depended very much on how good his midwifery work was considered to be, and a reputation established in this area brought work in other areas of practice. Pressure from relatives and friends to hasten labour was in such circumstances hard to resist. E.S. Morris, Director of Maternal Welfare, observed in 1927 that in the competition for patients the private practitioner gained advantage from being known to be ready to resort to the use of forceps on almost all occasions. In 1929 Morris said his investigations of maternal deaths in the State led him to conclude that the comparatively high mortality rate in some populous urban areas was related to the fact that confinements in these areas were commonly managed in a hurried fashion. Contract practice in such areas was believed to generate its own effect on the quality of medical care provided, the need to accept large numbers of lodge patients in order to achieve an acceptable level of income leading the


doctor into overwork and poor work.  

In the short term, then, better obstetric education had no clearly identifiable effect on the maternal mortality rate. A significant influence working against any impact was the existing organisation of maternity care, which limited the quality of care provided for many women. From this perspective the new chemotherapy of the later 1930s was an alternative to change in this system in the direction of greater state intervention to provide all women with adequate care before, during and after childbirth.

In the longer term the advent of a variety of new factors like the use of antibiotics, the ready availability of blood through the metropolitan transfusion service, and the further development of antenatal care and hospitalisation of birth, makes it very difficult to untangle the impact of better obstetric education and practice on the maternal mortality rate. A committee of the Royal College of

10 In a study of maternal mortality in New York City in the early 1930s, mortality was correlated with economic status. Of the four income groups, A, B, C and D, mortality was highest among the slum population, A group, and lowest among the most well-to-do, D group. Groups A and B included most of those who sought free hospital care. Yet the mortality rate of group C, most of whose members employed private assistance, was higher than that of group B. In explanation it was suggested that members of group C could not afford the best obstetricians and used general practitioners or less experienced specialists; "the difference in the results may be related to the difference in the ability of the two groups of physicians". R.S. Hooker, op.cit., pp. 150-152.

11 There is an analogy between this situation and the more general role of drugs in health in some contemporary underdeveloped countries. R.M. Titmuss described the role of drugs as substitutes for social and cultural change in such communities as follows: "The impact of the therapeutic revolution has radically changed...the allocation of scarce resources and the order of social and economic priorities. Relatively more may be spent on drugs and curative medicine; relatively less on food and preventive health measures"; and further, "Societies which desperately need preventive health practices are being told by Western scientific medicine that they can purchase health passively. Drugs become substitutes for cultural change". Titmuss, Commitment to Welfare, London, 1968, p.219 and p.225.
Obstetricians was not deterred by the difficulty. Reviewing the decline in mortality in England between 1937 and 1942, the committee concluded that "advances in general medicine" rather than improvement in the standard of obstetric practice had been responsible for the marked decline. By advances in general medicine they meant the greater use of blood transfusion, the use of sulphonamides, the use of face masks to prevent droplet infection, barrier nursing, and "the lowering of infection in hospitals by bacteriologically-controlled administration and discipline". Both their experience as obstetric consultants and their investigations of maternal deaths induced them to conclude that improvement in the standard of practice had not been great over the period, and what improvement there was was due to better undergraduate instruction, which in any case had been initiated in the mid 1920s. They distinguished between what could be attained by better undergraduate teaching and what could be achieved by postgraduate training. They suggested undergraduate work could not "compare with a period of postgraduate training for developing the judgment, technique and experience required for sound obstetric practice". It will be remembered that the bulk of midwifery done in private practice in Sydney in my period was carried out by general practitioners. Potentially, proper antenatal care and hospitalisation of birth could contribute much to the reduction of maternal mortality. The following chapter will trace their development in Sydney.

One of the notable changes associated with maternal health in Sydney during my period was the growing proportion of births in public hospitals, the increase being most marked in the period after World War I.$^1$ Between 1919 and 1933 domiciliary births almost halved in number, while births in public maternity hospitals almost doubled. During the 1930s the popularity of the public hospitals increased greatly. The women's hospitals expanded their public bed capacity and also introduced private and intermediate accommodation for paying patients. Routine use of such accommodation began to become accepted among the more well-to-do. Popular attitudes changed in the interwar period, as the safety of confinement in the large, well-equipped maternity hospital was appreciated and the old image of the lying-in hospital as an institution for the morally fallen or indigent woman disappeared. Further, the economic depression of the 1930s meant that many could no longer afford private care. The Director-General of Public Health in New South Wales commented,

Since 1934 there has been a steady reduction in the number of private hospitals in the State, with a corresponding decrease in the number of beds licensed. Concurrent with this has been a marked increase in the number of beds in public hospitals...indicating a growing preference by the

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$^1$In 1897 only 558 out of a total of 12,009 births registered in the metropolis took place in public maternity institutions. R.C. on Birth-Rate Report, vol.1, 1904, p.69. In 1919, there were 8,658 births at home, 6,379 in private lying-in homes, and 3,649 in public maternity institutions. J.S. Purdy, M.J.A., Jan. 1921, p.45. In 1933, the figures were 4,558, 6,098 and 6,425 respectively. D-G Report, 1934, p.76.
public for the community hospital with accommodation for all classes of patients.²

Yet private hospital accommodation for lying-in cases remained significant to the end of my period.³ And domiciliary confinement remained in vogue until the close of the 1930s.

Brian Abel-Smith has pointed out that the separate development of obstetrics was originally responsible for the emergence of the special maternity hospital in Britain.⁴ But the dangers of cross infection in general hospitals — the problem of puerperal fever — kept them separate.⁵ The early maternity institutions were for the use of the poor married women and for unmarried mothers "such as are deserted, and in deep distress, to save them from despair, and the lamentable crimes of suicide and child murder".⁶ The early maternity institutions in Sydney were beset by the same, ever-present danger of infection and served the same class of patients. For most of my period the bulk of public maternity accommodation was located in four maternity institutions: the Royal Hospital for Women, Paddington (formerly the lying-in department of the Benevolent Asylum); the Women's Hospital,

²D-G Report, 1939, p.3.

³In the early 1940s, 599 of the 1,403 maternity beds in the metropolitan area were located in private establishments. Thame, op.cit., p.177.

⁴The President of the Royal College of Physicians said in 1827 that "midwifery was an act foreign to the habits of a gentleman of enlarged academic education". Doctors specialising in obstetrics were largely responsible for the foundation of the early lying-in hospitals in London. B. Abel-Smith, The Hospitals 1800-1948, London, 1964, p.22.

⁵It was widely appreciated that parturient women were "sensitive of those conditions on which pyaemia and erysipelas depend". Indeed, various authorities wondered if maternity hospitals themselves should exist. Ibid, p.23.

⁶Idem.
Crown Street; the South Sydney Women's Hospital; and St Margaret's Hospital. 7 The first, and for some time the only, public maternity institution was the Benevolent Society's lying-in department. 8 The four maternity hospitals all developed out of a charity background, catering for the indigent married woman and particularly for the single woman with nowhere else to go. Illegitimate births accounted for 452 of the 558 births in public maternity hospitals in Sydney in 1897. 9

St Margaret's Hospital, a Roman Catholic institution, was founded in 1894 to serve the needs of indigent women. Besides medical and nursing aid, travelling costs, food and clothing were commonly supplied to destitute patients. By the early 1900s the institution was also admitting some who could pay part of the cost of their care. 10

The Home of Hope was run by the Sydney Rescue Society which G.E. Ardill founded in 1882. Inspired by evangelical Protestantism, the Society functioned under Ardill's direction for sixty years. 11 The Home, opened in the mid 1890s, provided for "Young women about to become mothers for the first time", who deserved to be "nursed through their time of trouble". The single mothers, who were not normally admitted for a second confinement, stayed some time after the birth, while outside

7Unlike the other three, St Margaret's did not receive Government funds in its early years. See R.C. on Public Charities. Fourth Report, 1899, p.xxxiii. The vast majority of voluntary, public hospitals in the colony received Government subsidies.

8Two general hospitals, Royal North Shore and St George, were by the 1930s providing for a substantial number of maternity cases, but in my period they were exceptional in this respect among general hospitals.

9In 1900, 576 of 761 births.

10See Annual Reports for 1909 and for 1911

employment was found and efforts to locate and persuade the father to
provide support were made. The inmates worked without pay in the Home
and in the Society's nearby commercial laundry. The Royal Commission
on Public Charities of the mid 1890s was critical of the Home's poor
finances and management. A trained nurse ran the midwifery department
under the supervision of a visiting medical officer. The premises were
inadequate and the Home had experienced an outbreak of puerperal fever
which caused a couple of deaths. In the early twentieth century the
Home, which had become the South Sydney Women's Hospital, was doing
valuable outdoor midwifery work in the working-class areas of Newtown,
Campberdown, Annandale, Leichhardt, Glebe, Ultimo, Pyrmont, Darlington,
Alexandria, Erskineville, McDonaldtown, St Peters and Marrickville.

Another public maternity institution to be established in the
1890s was the Women's Hospital and Dispensary, which began in four
rooms and an attic in Hay Street, Belmore Park in 1893. With the
Royal, it was to dominate the public maternity scene in Sydney. By
1938-39 more than two-thirds of births in Sydney's public hospitals
took place in these two institutions. Conceived by Drs James Graham
and A. Watson Munro to meet the need for systematic domiciliary
attendance on poorer women, the Hospital became a public organisation,
with Lady Windeyer as first President of the Board, in 1895. In

12 Third Report, 1899, p.XVII.
13 Ibid, p.XVI.
14 Report for year ended 29/2/12.
15 Jubilee Year Commemorative Annual Report, 1943, p.4.
16 Dr L.E.F. Neill and Mr David Fell joined Graham and Watson Munro in
getting the new venture under way. It was the practice in official
publications of New South Wales to call subsidised institutions
"public" institutions to distinguish them from "government" institutions
which were directly run by the Government.
1896 the first indoor patients were taken, but outdoor work remained for some time predominant. The first Matron, Miss Hannah MacLeod, described the patients served as follows: "Besides working among the recognised poor...we are sometimes called to help the genteel poor.... In some cases there is positively no furniture in the houses and no clothing but what is sent from the Hospital...." Each patient was attended by a pupil nurse and a certificated midwife, medical aid being obtained from the Hospital or from the local practitioner, when needed. The woman was usually delivered in the front bed-room, often the only decent room in the tenement. Frequently no clean sheets, towels or basins were available, and even fuel for the fire was lacking. The mother was taught infant care and encouraged to breast-feed. She was given post-partum care for ten days. Describing some of the conditions under which the early nurses worked, Miss MacLeod said, "...they have to go at all hours...to all sorts of places. After midnight they have often to travel on foot, or in rough carts.... Frequently they are many hours without food, as it would be impossible to eat or drink in such disagreeable surroundings...."

17 See Report for 1897.

18 Report, 1897.

19 Report for 1905.

20 Report, 1897. In 1912 the nurses' journal much praised the work done by the Hospital. Its comments also reveal concern about the relevance of the work to the problem of the birth-rate and assumptions about the uplifting moral and practical effects of the nurses on the poor: "Much idle...talk has been wasted on the question of the low birth rate and high death rate of New South Wales: Hannah MacLeod and her devoted band of Nurses passed quietly into the lanes of Sydney and its environs, to save the lives and conserve the health of hundreds of mothers and infants. The most modest of these missioners may well lay claim 'that they have done the State some service'. The influence, too, of the trim, neat painstaking young Nurse in the home of the poor...during the lying-in time is far reaching — a practical lesson in true godliness not to be achieved by many visits from Lady Bountiful nor by the enervating attentions bestowed on the same class of people by the injudicious distributor of charity". A.N.J., Dec. 1912, pp. 400-401.
The Benevolent Society's lying-in hospital, which became the Royal Hospital for Women in 1904, can be said to have been inaugurated in 1862, although for many years before then the Society's Asylum in Pitt Street had accommodated single women and destitute married women during their confinements. Before the reforms of the 1860s, which gave the Asylum's lying-in facilities more of the qualities of a hospital, the attitude of leading figures in the Society like George Allen and Deas Thomson to its accouchement activities was one of reluctant acceptance. Provision for single mothers was seen as promoting immorality. Allen told a public enquiry, "...we have taken them simply because there was no other place for them to go and because we felt that if we refused to receive them there, many of them must die on the streets".

A very high level of mortality among children admitted to the Asylum in 1860 (over ninety per cent) led to press criticism and a parliamentary enquiry into the affairs of the Society in 1861. The parliamentary committee was critical of the inadequate accommodation in the Asylum, which meant respectable married women, "fallen women", and prostitutes were all housed together in the lying-in ward. Soon after, the gross overcrowding was reduced and the institution henceforth accommodated only lying-in cases, deserted women and children, and destitute children. The Cowper Government assumed financial responsibility for lying-in women and children cared for by the Society. At the

21 As early as 1820 a committee of ladies, with which Mrs Macquarie, the Governor's wife, was connected, was formed for the purpose of visiting poor women in their homes during their period of confinement. A.N.J., July 1939, p.130. The Asylum was built for the Society by Governor Macquarie in 1820-21. The Pitt Street site was resumed by the Government and the Asylum demolished in 1901 in order to make way for the construction of the Central Railway Station.

22 Quoted in Gash, op.cit., p.54.

same time Dr Arthur Renwick was appointed honorary medical officer. He
carried through medical reorganisation of the Asylum. By 1866 the
north wing was completed. Separation of categories of lying-in patients
became possible and morality was satisfied. The department soon gained
such a good reputation for safety that many women sought paid admission.
The management committee refused such requests on the ground that the
facilities were exclusively for needy applicants. Indeed, the
department's mortality record was remarkable in these years. Between
1863 and 1872, 1,118 mothers (689 single and 429 married) were accouched,
with only three deaths, one from puerperal fever and two from convulsions.
This was a death-rate of 2.7 per 1,000 births. It compares very well
with rates of London lying-in hospitals in the same period, and that of
its sister institution, the Melbourne Lying-in Hospital, 1873-79: Queen
Charlotte's, 18.5 per 1,000; City of London, 14 per 1,000; York Road,
9 per 1,000; British Lying-in, 19 per 1,000; Melbourne Lying-in, 13.7
per 1,000. Renwick's ability and dedication — he saw every case and,
even if not able to be present at the birth, was in attendance soon
after — together with the presence of qualified nurses help explain the
excellent record in this period.

Most of the single mothers admitted were young servant girls,
mainly from Sydney. Most were having their first confinement. The

24 Other improvements included appointment of a qualified nurse as Matron
in 1870.

25 Mansfield, R.C. on Public Charities. Second Report, 1873-74, Minutes
of Evidence-Benevolent Asylums, p.12.

26 Renwick, ibid, p.79.

27 Rates of London institutions are derived from figures in Munro Kerr
et al., op.cit., pp. 262-263; the Melbourne institution's rate is
institution was reluctant to admit women for second confinements. The same moral considerations were expressed in the efforts made to find respectable employment for women after their confinement. One member of the Asylum staff observed that many "retrieved" themselves by marrying later. 28 The zeal to redeem fallen sisters tended to abate somewhat later in the century. The practice of publishing separately in the Society's report the figures of single and married women accouched and of including an annual homily associated with the distinction was discontinued after 1890. 29 A change of attitude is perhaps also illustrated in the approach of the Ladies' Committee, which interviewed applicants for admission to the lying-in department. In 1883 the Society's subscribers were assured that the Committee made searching enquiries concerning the acceptability of applicants. 30 Whereas in 1895 it was said that "Many of the poor patients seeking shelter during approaching maternity need the tenderest counsel, which has always been extended to them by the sympathetic ladies dealing with their cases". 31

Following the loss of three mothers from infection in 1876, the year of a puerperal fever epidemic in Sydney, efforts were made to have a new lying-in hospital constructed. But successive Governments shelved the matter. Sir Henry Parkes was encouraging to a deputation from the Society in the early 1880s, and negotiations for the purchase of thirteen acres of land on the Redfern estate were begun. A change of Government ended these plans. 32 Good care and good fortune kept the

28 Evidence of S.W. Mansfield, loc.cit.

29 Gash, p.74 ff.

30 Report for 1883, p.16.


mortality rate down in the ten years from 1883, although the rate of 14.5 per 1,000 births does not compare well with what was achieved when Renwick was medical officer. Disaster struck in 1893 when two outbreaks of puerperal infection resulted in eight deaths. The wards were vacated, cleaned and re-painted. But the medical staff's advice about a labour ward, isolation rooms and prevention of direct air communication between the children's wards, where diphtheria and scarlet fever cases were common, and the lying-in wards was ignored. The Directors followed their own plans, including provision of a sort of horse-box with double wooden walls (presumably to minimise noise) which, located in the corner of each ward, served as a labour room. The Medical Gazette acidly commented, "Such are the specimens of the scientific resources duly prepared in our only New South Wales Maternity Hospital for those creatures whom the wise Directors thereof are pleased to call 'the deserving poor'". 33

The medical staff of three resigned and an exchange of accusations took place in the Sydney press. 34 The Dibbs Government appointed a committee of enquiry, composed of Professor Anderson Stuart and Drs H.N. MacLaurin, C.K. Mackellar and J. Foreman. The committee suggested the School of Industry building in Darlinghurst, a central location, be resumed for use as a maternity hospital to replace the Asylum lying-in section. It further suggested that control of the new hospital be placed in hands other than the Society's. No action was taken on the recommendation. 35 In 1897 the Reid Government appointed a Royal Commission on Public Charities, which endorsed the Anderson

33 A.M.G., Jan. 1894, pp. 16-17.


35 Currey, op.cit., pp. 5-6.
Stuart committee's proposal to establish a new maternity hospital for Sydney. It too wanted to deny the Society control of the new institution. But the Society was unwilling to step down. It complained,

Since 1862 the Directors have worked under disadvantages with regard to the existence of a lying-in hospital in the present unsuitable building and, now there appears to be a prospect of removing to more suitable premises, it is proposed that the responsibility of management shall be taken from those of experience who have 'borne the heat and burden of the day'.

For some time the Board of the Women's Hospital had been seeking more adequate accommodation. An understanding was reached with the President of the Benevolent Society, Sir Arthur Renwick, that the Women's Hospital would amalgamate with the Society once the Society's new hospital, being built in Glenmore Road, Paddington, was completed. The Directors of the Crown Street hospital were confident that

...co-operation of these two Institutions will ensure the establishment of an up-to-date hospital for Women, controlled by an influential and efficient Body of Directors having at their disposal a modern and thoroughly equipped building. Such provision for the adequate accouchement and treatment of poor and necessitous women is a matter of general public interest.

The plan for amalgamation was confirmed by both organisations early in 1903. However, the union was of brief duration.

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36 Ibid, p.11.
37 Quoted Ibid, p.12.
38 Report, 1901, p.6.
39 In 1901 the Government had finally resumed the Asylum site in Pitt Street, paying £62,000 compensation. The Society purchased "Flinton" in Glenmore Road. Report for 1901, p.16.
40 Report, 1901, p.6.
After the dissolution of the marriage, the Directors of the Women's Hospital reported to subscribers,

The experience...during the period the Women's Hospital was under the administration of the Benevolent Society was sufficient to demonstrate that the basis of amalgamation agreed upon had evidently not been clearly understood by the authorities of the Benevolent Society...it was quite obvious that an obstetric hospital, to be carried on in an efficient and up-to-date manner, must be entirely separated from the joint control of a Society whose functions also extended to affording poor relief to the destitute.41

The main problem seems to have been the matter of the matronship. Miss Hannah MacLeod, who was in charge of nurses at Crown Street, was made sub-Matron, Matron Graham of the Benevolent Asylum being appointed Superintendent of Nurses in the new institution.42 In addition, the ladies of the old Board of the Women's Hospital resented what they saw as their exclusion from any say in the management of the new institution. The opportunity for dissatisfaction to be expressed came at a meeting at the Women's Hospital in June 1903, when the transfer of assets was not approved. A committee of the joint Board recommended in these circumstances "the amalgamation...should be discontinued for the present". Although the way was left open for union to be resumed, the two institutions continued their separate existences.43 Soon after, the Directors of the Crown Street Hospital proclaimed confidently, "The name of the Women's Hospital is now so well and favourably known ...that it can be safely maintained that with the advent of new premises ...its reputation as the leading Women's Hospital of Australasia will be upheld".44 Its late partner in Sydney and the Women's Hospital in

41 Report, 1903, pp. 8-9.
43 Currey, op.cit., p.25.
44 Report, 1903, p.10.
Melbourne would not necessarily have agreed, it may be assumed.

From the 1890s to almost the end of my period a good proportion of institutional births in Sydney occurred in private hospitals. But before the introduction of the Private Hospitals Act, 1908, no clear idea of the number of private lying-in establishments in Sydney can be established. A Sydney doctor, writing in the early 1890s, said they were "numerous". The Royal Commission on Public Charities of the late 1890s estimated there were about twenty private establishments in the city and believed the number was rapidly increasing in response to a definite public demand. The Commissioners agreed with many medical witnesses that a system of registration and inspection was desirable. Private hospitals catered for medical and surgical as well as midwifery cases. Fees were from two to three guineas per week and upwards. Some beds were available at reduced rates and were used by a class of patients unable to afford full private care yet unwilling to use the charitable facilities of public hospitals. Some private hospitals were owned by doctors and others by qualified nurses. But there existed another type, which was small and insanitary, and was really a private house run by a woman without qualifications, who charged a low fee. A.W. Green, a senior officer of the State Children's Relief Department, estimated in 1906 that seventy-five per cent of private hospitals in the State were run without medical supervision. He suggested that more than 2,000 lying-in cases per year were nursed in private hospitals in

45 Administration of the Act did not begin until late 1909.


Sydney and that about 150 such establishments functioned in the metropolitan area. There seems little doubt that private lying-in homes were popular with women of various economic levels above the poorest. Equally, there seems little doubt that many were poorly equipped, run by inadequately trained staff and lacked medical supervision.

The number of private hospitals continued to grow. In 1910 there were 104, and by 1924, 240 licensed establishments were operating in Sydney. Of 4,816 beds in private hospitals in New South Wales in 1924, 1,523 were used for lying-in cases. Some hospitals were reasonably large. The largest in 1924 had 121 beds. But the bulk were very small, averaging 1 to 5 beds. Just as the Federal maternity allowance, introduced in 1912, tended to perpetuate the existence of the untrained midwife, so it promoted the growth of private lying-in establishments. In 1925 Morris commented, "...it has brought into existence a plethora of private maternity hospitals, each scrambling after a portion of the bonus distribution". Official supervision under the Private Hospitals Act brought some improvement in the general standard. But various factors hampered this change. Shortages of staff and the advent of the 1914-18 War and then the influenza pandemic made it impossible for the health authorities to carry out regular inspections for some years after the passing of the legislation. Moreover, the authorities were always conscious of the fact that private hospitals relieved the pressure on public hospital accommodation in Sydney. In 1910, 21 of 104 licensed

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49 This obviously represents a great increase over the number estimated by the Royal Commission on Public Charities. The Commission did note there was a rapid growth occurring in the late 1890s, and it is possible that the Commission underestimated the number then existing in Sydney. For Green's evidence, see Progress Report. Sel. Com. on Private Hospitals Bill, 1906, pp. 7-13.


hospitals were run by uncertificated nurses. In 1924, only 3 out of 240 were under the control of nurses lacking certificates. Yet the improvement in conditions should be seen as limited. The Director of Maternal Welfare, E.S. Morris, said in 1927 a more effective Act was very much needed since the primary intention of the 1908 Act had been to control abortions and little cognizance was then taken of the need to pursue means of reducing maternal mortality. Also the nursing staff was normally made up of women who had done only the one-year course in midwifery. Usually even the head nurse lacked general training.

During the 1930s some further improvement in the general standard of care appears to have occurred. In 1934 the Director of Maternal Welfare reported that departmental nurse-inspectors had noted a considerable improvement in the way private hospitals were conducted since they had begun regular inspections a few years before. Moreover, as noted previously, there was a steady decline in the number of licensed private hospitals in New South Wales during these years. Yet the poorly equipped private hospital continued to function into the 1940s because war-time problems of construction and an increasing birth-rate meant demand for beds went beyond the capacity of public institutions. Private hospitals, which could not meet proper standards, remained in existence. About forty per cent of maternity beds in Sydney in the early war years were located in private hospitals. This was a factor retarding improvement in the maternal mortality rate before 1937, despite the notable increase in the proportion of births taking place in public

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2 Evidence of Suckling, loc.cit.


5 Thame, op.cit., p.177.
hospitals during the decade before World War II.

In the nineteenth century there had been much discussion among medical authorities about the safety of institutional confinement. Hospitalised patients faced the grave risk of septic infection. The maternal mortality rates of lying-in hospitals were very high for much of the century. Notable reductions in institutional death-rates began to be achieved from the 1880s when the employment of isolation and antiseptic procedures cut down the risk of septic infection. The women's hospitals in Sydney attained high levels of safety at an early stage. For the period, 1893-1903, Crown Street had 13 deaths in 3,891 confinements, a low death-rate of 3.34 per 1,000. There were no deaths from puerperal fever. With some satisfaction the medical staff reported,

In view of the facts that the majority of our patients receive attendance in their own homes, under very unfavourable hygienic surroundings, and that the clientele of this, as of all public hospitals, comprises a large share of the more difficult and complicated cases of labour, the Medical Staff have special pleasure in submitting this good statistical statement to the Board.

However, the public maternity hospitals became increasingly in this century reception centres for accidents and failed deliveries occurring outside. Also the practice of hospitalising potentially difficult lying-in cases became established. The very strength and safety of the great maternity hospitals meant they catered for cases which carried higher risks of fatality than the normal, and this undoubtedly influenced

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6 Munro Kerr et al., op.cit., p.276.

7 A French study published in 1866 cited figures from fifty-eight institutions throughout Europe. The average mortality rate was 34.2 per 1,000 births. Improvement in the rate late in the century is illustrated by the following figures from the Paris Maternité: 1858-69, 93.1 per 1,000 births; 1870-80, 23.2; 1881-89, 10.5. Ibid, pp. 264-265.

the mortality records of the public hospitals, especially before chemotherapy revolutionised the outlook for sepsis cases. This in part explains why the growing hospitalisation of birth in Sydney in the interwar period did not have much impact before the later 1930s. Moreover, if the development of the practice of giving birth in well-equipped maternity institutions is examined more closely, it can be seen that it is really only in the mid 1930s that the practice began to predominate over the practice of delivering in private hospitals or at home. After 1937 it is difficult to differentiate the impact of this factor from that of other new developments. Among the important contributions the public maternity hospitals made to reducing the risks of mortality in childbirth in Sydney was the pioneering of antenatal work.

The notion that regular supervision of the pregnant woman in the interests of a safe pregnancy and delivery was necessary was a product of early twentieth century medicine. To a very large extent it was the product of the work of J.W. Ballantyne of Edinburgh. In the beginning Ballantyne's advocacy of prematernity measures was related to his interest in the pathology of pregnancy. He was concerned to treat mothers suffering from diseases of pregnancy like hyperemesis gravidarum and to prevent harm to the foetus arising out of morbid pregnancies. Moreover, as was made clear in an early article, he saw prematernity care as a means of counteracting the effects of the declining birth-rate. It would "prevent miscarriages and that most

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9 See D-G Report, 1934, p.76.

10 Nineteenth century writers commonly devoted some space to discussion of health care during pregnancy. As early as 1837 an English-language text on health in pregnancy was produced. It ran to twenty-five editions over the subsequent forty years. Munro Kerr et al., op.cit., pp. 145-146.
terrible of all events, the dead birth, and cure before birth the
diseases and deformities of the foetus". While aware of the benefits
to be had from the antenatal supervision of all expectant mothers,
healthy as well as ill, Ballantyne made no attempt to establish
provision for such care for some time after his original call for
prematernity facilities. Indeed, it was antenatal work developed in the
United States which finally prompted him to introduce the practice in
Edinburgh. From 1901 nurses from the Instructive Nursing Association,
Boston, made domiciliary visits for antenatal work to outpatients of
the Boston Lying-in Hospital. In 1911 the Hospital opened a pregnancy
clinic for outpatients. Ballantyne persuaded his Hospital to employ
a nurse to make home visits, during which she advised on confinement
preparations, obtained information on the woman's health, tested her
urine and noted any problems to do with the pregnancy. In 1915 the
Hospital opened an antenatal clinic with Ballantyne in charge.

Australia possessed the first antenatal clinic in the world.
It was established at the Adelaide Hospital by T.G. (later Sir George)
Wilson in 1910. Wilson and J.C. Windeyer, who established an antenatal
clinic at the Royal Hospital for Women, Paddington in 1912, visited
Ballantyne in 1908-9. They returned to Australia eager to see antenatal
supervision introduced. Windeyer described the introduction of
antenatal work at the Royal as follows:

For many years a large amount of early prematernity work
was done at the gynaecological out-patient department.

\(^1^1\) Ibid, pp. 147-149.

\(^1^2\) Ibid, pp. 150-151.

\(^1^3\) During Wilson's absence at the War in 1914-19, the Adelaide clinic
did not function. It re-opened on his return in 1919. Ibid, p.152.
The minor derangements of pregnancy were treated there; the women suffering from the more severe derangements were sent into hospital for treatment...as the patients came to make arrangements for treatment by the members of the hospital staff, the matron interviewed them and those with obvious or possible pelvic deformity were advised to attend this department. This arrangement, though a step in the right direction, allowed many abnormalities to escape recognition early enough for successful treatment, and exactly 10 years ago I made a proposal...that a 'Prematernity out-patient department' should be inaugurated. This was... adopted by the Board of Directors.... Since then all the patients have been advised to attend this department for examination.14

During the first two years of the clinic's existence 29 per cent of all women confined at the Hospital were seen; in 1919-21, 50 per cent were examined.

The development of public antenatal facilities in Sydney was slow. When the baby clinics were first opened by the Labor Government, it was intended the honorary medical officer would carry out antenatal work at the clinic one day a week.15 Dr Margaret Harper, who was appointed medical officer to the first clinic, was assigned this duty along with the task of advising on infant care. It was expected that as the clinic's work grew, a second medical officer would assume sole responsibility for antenatal work.16 The Minister responsible for the introduction of Government baby clinics, the Hon. Fred. Flowers, indicated he saw antenatal care as one of the two primary services to be provided by the clinics.17 But the response from expectant mothers was poor. An educational campaign begun by the health authorities in


16 Minutes Baby Clinics Board, 4/9/14.

the later 1920s persuaded many women, and indeed many doctors, of the need for antenatal care. The public discussion of the causes of maternal mortality, especially by critics from within the profession, from the 1920s reinforced awareness of the value of preventive maternity work.

Yet the problem of getting all pregnant women to seek antenatal care was not fully solved by the end of my period. The problem of changing attitudes and behaviour was made the more difficult by the State's failure to offer anything other than very limited free public care. The medical profession's right to retain this service in the private sector, except in the case of the poorer patient who could use a hospital or Government clinic, was not challenged. While preaching the need for universal antenatal care widely, the health authorities assumed that for most pregnant women obtaining it was an individual responsibility. Neither the Government antenatal clinics nor the hospital clinics were intended to compete for custom with private practitioners.

In the 1920s leading obstetricians pressed for more extensive antenatal work in the community, and interest revived in the limited provision of antenatal care through the Government baby clinics in Sydney. In 1923 a conference of honorary medical officers attached to the baby clinics discussed antenatal work. The establishment of clinics in the metropolitan area was considered, but the meeting only went as far as deciding public lectures for prospective mothers should be given at clinics. In 1924 J.C. Windeyer addressed the National

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18 As early as 1917, a Commonwealth committee on the causes of death and invalidity in Australia had strongly urged the immediate establishment of antenatal clinics in the more populous areas of the country. Dept. of Trade and Customs Committee on Causes of Death and Invalidity. Report on Maternal Mortality in Childbirth, 1917, p.997 ff.

19 Minutes, R.S.W.M.B., 13/7/23. A little later the Baby Clinics Board decided to produce a booklet on antenatal care and to distribute it through the clinics. Minutes, 16/1/24.
Council of Women on antenatal work. He stressed how many infant and maternal lives could be saved by adequate prematernity work.\textsuperscript{20} F. Brown Craig, another leading Sydney obstetrician, told members of the A.T.N.A. in 1925,

\begin{quote}
It is to be hoped that in the not far distant future ante-natal clinics will be established in the more populous parts of the metropolis. These centres would provide for those who are unable to pay for private attendance. They will also help in spreading the knowledge amongst the public of the supreme importance of pre-natal care for every pregnant woman.\textsuperscript{21}
\end{quote}

E.S. Morris argued that the first task was to convince the medical profession and, through the doctor, the mother that antenatal care was absolutely necessary. He thought that until this was done maternal mortality and morbidity would not easily be reduced.\textsuperscript{22} He insisted the Government clinics would not compete with the private practitioner for where a woman was under the care of a doctor she would only attend the clinic on his suggestion. He commented reassuringly that clinics would not be expensive, nor would the existing organisation of antenatal care be adversely affected.

In 1925 the annual conference of affiliated local associations and the Council of the B.M.A. in New South Wales considered a memorandum on improvement of antenatal supervision prepared by Professor Windeyer and Drs Brown Craig and A.J. Gibson. The memorandum proposed that the private obstetric fee be made to cover antenatal care and the traditional attendance at the confinement plus ten subsequent days and that doctors assume responsibility for persuading mothers of the need for supervision.

\textsuperscript{20}A.N.J., Dec. 1924, pp. 581-584.


\textsuperscript{22}M.J.A., Sept. 1925, pp. 332-333.
It was further proposed that an educational campaign for doctors, in the form of lectures to local medical associations and postgraduate courses, be mounted by the B.M.A. The staffing of metropolitan public clinics, it was suggested, should be controlled by the public maternity hospitals. F. Brown Craig told the Commonwealth Royal Commission on Health in 1925 that, given the nature of antenatal work, medical control of clinics was highly desirable. T. Dixon Hughes, tutor in Obstetrics at the University of Sydney, said in 1935,

...antenatal care and the delivery of the patient are undoubtedly bound up with one another.... Apart from the indigent poor, for whom only the clinic should cater, this should be the patient's own doctor. The private medical attendant is best suited to carry out antenatal care by virtue of his personal knowledge of the patient...and of his ability to create an atmosphere of safety and security .... To render this service he must so equip himself that the need for multiple clinics will not arise.

This demand that antenatal supervision be carried out by a medical practitioner was quite reasonable. But it did not necessarily follow that free public care should be restricted to the indigent.

By the mid 1920s the public maternity hospitals in Sydney provided antenatal facilities for many women unable to purchase care privately. No definite figures could be established, but it was certain the bulk of pregnant women in New South Wales received no supervision. It was estimated in 1930 that only about twenty per cent

23 M.J.A., Oct. 1925, pp. 517-519. A.J. Gibson said he hoped there would not be too much free service provided in the clinics because antenatal work was worthy of proper remuneration.

24 Minutes of Evidence, pp. 339-344.


26 In 1928 it was estimated about 10,000 women used hospital clinics but on average women attended the clinic less than twice, so that they hardly received adequate care. D-G Report, 1928, p.31.
in the State enjoyed antenatal care. The new Director of Maternal Welfare, E.S. Morris, argued Government clinics were needed in Sydney to reach the woman who neither used a private medical practitioner nor a hospital clinic. The health authorities set out to provide very limited public facilities. In 1929 an evening clinic was opened at the Newtown baby health centre. Women from other suburbs were encouraged to attend the Newtown antenatal clinic. So many were unable to afford the tram fares in these years of economic depression that the Health Department introduced weekly antenatal sessions at nine baby clinics. Thus antenatal care was extended to more expectant mothers in Sydney. Yet many still went without its benefits. Total attendances at the Department's ten antenatal clinics in 1933 were 2,185. The number of attendances increased somewhat over the next few years, reaching 3,126 in 1935, falling to 2,324 in 1937, and reviving from 1939. These figures hardly represent substantial state intervention in the area of antenatal care, a factor considered to be of prime importance in the contemporary effort to reduce maternal mortality. Even adding the women supervised in public hospital clinics, a substantial number of women existed, who, if they sought care, continued to accept individual responsibility and use of the private sector, as fee-for-service or lodge patients. As late as 1937, G.J. Cuthbert, Director of Maternal Welfare, complained that many women still did not appreciate regular examinations over the whole of the prenatal period were necessary. Dr Constance D'Arcy, a leading figure in Obstetrics in Sydney, observed


29 It should be noted there were 17,083 births registered in Sydney in 1933, and 16,538 in 1934.

in 1935 that

Amongst the educated class, especially amongst young women, there is no difficulty about inducing expectant mothers to present themselves for regular examination, particularly when a composite fee...is agreed upon. But in public maternity clinics and, I believe in lodge practice, it is still difficult to get women to attend regularly.\footnote{M.J.A., March 1935, p.389.}

Universal antenatal care was expected by its advocates to reduce considerably the maternal death-rate from toxaemias and haemorrhages, and to have some impact on the mortality from puerperal infection, since haemorrhage not uncommonly contributed to deaths from infection. The treatment of eclampsia and haemorrhage for much of my period was difficult and the outcome often uncertain. Prevention was thus important. Haemorrhage was a particularly grave matter for the private practitioner, working alone or with only the aid of a single nurse in a domiciliary setting. The mortality rate from puerperal haemorrhage in Sydney showed no significant reduction before the 1930s. In 1911 it was 0.72 per 1,000 births, in 1921, 0.49, and in 1933, 0.64. But by 1947 it had fallen to 0.09 per 1,000 births. While antenatal care contributed something to this notable decline, it seems likely that the availability of a mobile transfusion unit from the beginning of 1939 was the chief cause of the improvement in the mortality rate. Operating from the Women's Hospital, the unit was available at any time to doctors throughout the metropolitan area. It had been realised for some time that among those who died from haemorrhage, many had been transported to hospital in a state of shock and dehydrated.\footnote{Investigating maternal deaths in New South Wales in 1929-33, Morris and Morgan were surprised to find that 42 of 91 deaths from ante-partum haemorrhage and 35 of 64 deaths from post-partum haemorrhage occurred in Sydney. They said that because of the adverse conditions...}

Continued...
eleven transfusions were carried out by the unit and almost certainly a life was saved in each case. In 1945 units were established at the Royal Hospital for Women, the Royal Prince Alfred Hospital and the Royal North Shore Hospital. The efficiency of the service was improved by the practice of taking blood to the patient rather than as in the past bringing a donor with the unit team.

The mortality rate from eclampsia in Sydney fell from 1.2 per 1,000 births in 1921 to 0.99 in 1933. By 1947 it was 0.34 per 1,000 births. Probably most of this improvement is to be attributed to antenatal care, despite the fact that it was rather less than universal in the community. That the incidence of eclampsia could be very greatly reduced by a system of thorough antenatal care was demonstrated by the Women's Hospital, Crown Street. By careful monitoring of blood-pressure and control of weight-gain during pregnancy, the incidence among booked patients was brought down from 1 in 400 in 1936-48 to 1 in 3,600 in 1948-53. The effectiveness of proper antenatal care was reflected in the decline in incidence in New Zealand: in 1928-33, the notification rate for toxaemias of pregnancy was 0.15 per 1,000 births.

A similar experiment carried out in New Zealand had equally favourable results. At Dunedin the incidence was reduced from 1 in 750 in 1932-47 to 1 in 3,012 in 1947-50. Munro Kerr et al., pp. 273-274.

32 (Cont.)
under which midwifery was often carried out in the country, it might reasonably have been expected that most such deaths would have taken place in country areas. Wrong judgment and lack of skill on the part of the practitioner was an important contributing factor: "It would appear in some of the cases that the treatment adopted...also tended to increase the amount of shock; and...in many cases, the necessity for replacing the lost blood by blood transfusion or even the administration of saline...was not appreciated". D-G Report, 1934, pp. 55-61.

33 D-G Report, 1939, p.46.

34 D-G Report, 1941-46, p.95.

35 The rate for toxaemias of pregnancy was 0.15 per 1,000 births.

36 A similar experiment carried out in New Zealand had equally favourable results. At Dunedin the incidence was reduced from 1 in 750 in 1932-47 to 1 in 3,012 in 1947-50. Munro Kerr et al., pp. 273-274.
rate was 3.14 per 1,000 births, whereas in 1950-52 it was 1.49 per 1,000.\textsuperscript{37}

The problem was to establish antenatal care as a universal habit among expectant mothers in Sydney. The Director of Maternal Welfare wrote in 1933,

\begin{quote}
Until some means of getting in touch with expectant mothers early in pregnancy, and of overcoming the usual prejudice on the part of such women to place themselves under supervision, can be devised, our hospitals will continue to be receiving stations for women in eclamptic convulsions and coma.\textsuperscript{38}
\end{quote}

The health authorities conducted an intensive educational campaign over many years to encourage mothers to seek antenatal care. Changing attitudes and behaviour was bound to take time, and the health authorities repeatedly complained of the indifference of many women to their own welfare in this area. The task of promoting a more positive attitude to preventive action in this area would have been made considerably easier and the habit of seeking antenatal supervision become more popular more quickly had the health authorities provided a free universal service like that so successfully offered to infants in the baby health clinics.\textsuperscript{39} Carefully respecting the rights of private

\textsuperscript{37}Ibid, p.155.

\textsuperscript{38}D-G Report, 1933, p.29.

\textsuperscript{39}At the beginning of the infant welfare campaign in Sydney efforts had been directed to the working-class mother primarily. By the 1920s the health authorities congratulated themselves on the fact that the clinics were used by mothers of all classes. Morris wrote in 1927, "Mothers in every grade of life are welcome...since every healthy baby is equally one of the State's best assets, and any mother may need mothercraft instruction...the mothers who attend the Baby Health Centres are drawn from every class in the community, and the fact that there is no discrimination whatever in the centres emphasises the essential national characteristic [sic] of the work". D-G Report, 1927, p.46.
practice in the area of antenatal care, the health authorities provided a free clinic service only to fill the gaps in the existing system of care. They expected the majority of women to obtain care in the private sector, if they could afford it, or otherwise to make use of the hospital clinics. Yet given the power of the organised medical profession, it would have been an extremely difficult task to establish a universal public service, even if the health authorities had contemplated such a development. Even in this important area of maternal welfare, the notion of individual responsibility for health provision powerfully limited the degree of state intervention. In the next chapter I will examine attitudes to maternity and how they affected the problem of maternal mortality.
The great turning-point in the trend of the infant mortality rate in Sydney occurred in the early 1900s. The equivalent point for maternal mortality was not reached until the later 1930s. I have argued that systematic infant welfare work was an important influence acting to reduce the infant death-rate and that concern for the welfare of infants was promoted greatly by fears about adequate population growth. The power of the population issue meant that the problem of infant mortality monopolised efforts in the early 1900s and only marginal attention was given to the health of mothers. Even when in the 1920s maternal mortality came to be recognised as a problem in its own right, deaths of mothers associated with childbirth were deplored not only for their own sake, but because the nation was robbed of a source of potential population. Even in the interwar period concern about population growth remained significant.

Attitudes to women, more specifically to their role as mothers, as articulated by members of the medical profession and other leaders of opinion about infant and maternal welfare, were influenced by the population question. If by the turn of the century contraception was enabling many women to limit the size of their families, to lighten the traditional burden of excessive reproduction, new emphasis was placed on the informed and successful rearing of children, of which the infant welfare movement in Sydney was an important manifestation. As one recent historian of the phenomenon put it, "Motherhood was seen to
be an all-consuming vocation'.\(^1\) Behind the new definition of the responsibilities of motherhood lay concern about population growth and national survival.

It is true that the matter of maternal mortality received some attention in the 1890s and early 1900s. Dr James Graham's efforts to have legislation regulating midwives passed by the New South Wales legislature arose from his concern about the damage done by incompetent and untrained midwives. Even the Royal Commission on the Birth-Rate paid some attention to the question of maternal welfare. Recognising deaths in childbirth were "unduly numerous", it recommended State certification of midwives and urged that only trained nurses be permitted to run lying-in institutions. It also said there was need for more public maternity accommodation in Sydney.\(^2\) But its interest in the welfare of mothers was limited and very decidedly subsidiary to its concern with the problem of the declining birth-rate.

At least until the 1920s the infant welfare movement, while professing to be involved in advancing maternal welfare, was almost exclusively promoting measures directed to the welfare of infants. From this perspective, the title of the Royal Society for the Welfare of Mothers and Babies was for some time after the inception of the organisation in 1918 something of a misnomer. Provision was made for antenatal work at the first Government clinic in Sydney, which opened in 1915. The then Minister for Public Health, Fred. Flowers, indicated he saw this work to be as much a responsibility of the clinics as advice on infant care. Yet little was done to promote antenatal work.


\(^2\)R.C. on Birth-Rate Report, vol.1, 1904, pp. 31-32.
In the face of a poor response from expectant mothers the objective was virtually abandoned. No effort was made, even when the War was over, to conduct a continuing educational campaign to change attitudes of pregnant women such as was mounted by the health authorities at the beginning of the 1930s.

In discussing obstetric education, I have already referred to the way in which debate about the problem of maternal mortality emerged and gathered momentum during the 1920s and 1930s. In large part the debate was due to the dissatisfaction of critics within the ranks of the medical profession. In Sydney the obstetrician, A. Watson Munro, carried on a long and vigorous public campaign to educate the community and force action to be taken by the authorities. Women's organisations like the National Council of Women were also active in publicising the problem and pressing Governments to take action. In 1924 the Victorian Branch of the B.M.A., led by the obstetrician, J.W. Dunbar Hooper, carried out a survey of midwifery practice among its members. A postgraduate course in obstetrics was instituted for general practitioners. The Melbourne Permanent Committee for Post-Graduate Work ran a national competition for the best study of the causes and prevention of maternal morbidity and mortality. E.S. Morris of the New South Wales Department of Public Health received the Committee's award. Pervading much of the criticism and demand for reform was the notion of prevention. Its popularity had been greatly enhanced by the war-time medical experience of many younger doctors. Antenatal care, which had been tried in a small way before the War in Sydney and Adelaide, now gained prominence

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as a potentially significant means of reducing the mortality and morbidity of childbirth. Even so, awareness that technical means were readily at hand for reducing the risks of parturition, and had only to be adopted widely to be effective in this direction, was not the whole reason for the emergence of the debate about maternal mortality. Concern about the reduction of infant mortality and about population growth continued to be shown. The Medical Journal of Australia, which itself did much to promote discussion of maternal mortality in these years, said in an editorial about maternal welfare in 1926,

It is useless to plead for larger families when men and women possess the knowledge of means to prevent conception and to interrupt pregnancy. The only practical remedy that remains is care of the pregnant woman and her unborn infant.5

In the introduction of his prize-winning study of maternal mortality E.S. Morris pointed to the connection between the problem of deaths associated with childbirth and the population problem:

Some seven hundred mothers in the hey-day of their lives die annually in the Commonwealth as the result of their carrying out the highest and most important natural function. They leave behind them nearly two thousand motherless children. Each family concerned is robbed of its most cherished guardian, the husband of his confidant and adviser, the new-born babe of its natural source of nourishment and the State of a potential source of population.6

Making explicit the connection between the emergence of interest in maternal mortality and the established concern about infant mortality, Morris said in his first report as Director of Maternal Welfare for New South Wales in 1927 that the failure of neonatal mortality to decline in the same measure as mortality of the subsequent months of the


first year had served to focus attention on the problem of maternal mortality. He claimed, moreover, that realisation of this connection and of the fact that many maternal deaths were preventable had together produced the contemporary campaign to reduce the maternal death-rate. The origins of antenatal care itself lay in the attempt to deal with the ante-partum causes of infant mortality and prematernity work, as proposed by Ballantyne, was not initially directed at maternal mortality as such. Awareness of the need for population growth remained strong in the medical profession to the end of my period. In 1939 Dr F.S. Hone concluded a review of twenty-five years of preventive medicine in Australia by reminding the reader that

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\text{efforts to improve national health are futile if in another twenty-five years there is a stationary population as present figures indicate will be the case. For a stationary population means a dying nation, and what is the use of saving individuals if the nation dies?}^8
\]

Another contributor to the Medical Journal of Australia wrote,

\[
\text{It is a somewhat staggering truth that in any one year the natural increase of our population is nearly equalled by the number of wasted conceptions. Admittedly much of this relative sterility is deliberate race suicide, outside the scope of medical control; on the other hand, preventive obstetrics should be in a position to prevent some at least of the wastage.}^9
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In the 1930s political leaders also showed they saw a relationship between the problem of maternal mortality and population growth. In 1934 the Prime Minister, J.A. Lyons, declared the Commonwealth Government would involve itself in solving the problem of maternal mortality.

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7 D-G Report, 1927, p.34.
the maternal death-rate.\textsuperscript{10} In a policy speech he declared,

Closely associated with the birth-rate is the care of mothers during and after maternity.... The Commonwealth proposes to co-operate actively with the States in making motherhood safe and materially reducing the death rate of infants in the first month.... The fall in the birth-rate makes these little ones and their mothers more than ever precious assets to the community.\textsuperscript{11}

The Federal Minister for Health, W.M. Hughes, told Parliament that a fall in the birth-rate had more serious consequences for Australia than for Britain because the White Australia policy and indeed ultimately the very existence of the nation were endangered by such a development.\textsuperscript{12}

At the first session of the National Health and Medical Research Council in 1937 Hughes said,

> We can only justify our claim to this great and fertile country by effectively occupying it. Australia must advance and populate or perish.... It is on the foundation of healthy motherhood that we must build up a strong, numerous and disease-resistant people.\textsuperscript{13}


\textsuperscript{11}Quoted in Report of N.H.M.R.C., 3rd sess., 1937, p.12.

\textsuperscript{12}S.M.H., 5/12/34. One group of British experts would not have agreed with Hughes that Britain faced less serious consequences. A committee, appointed to enquire into the problem of maternal mortality and presided over by Sir George Newman, said in an interim report of 1930, "A perusal of the text of this Report will indicate in no uncertain degree the gravity of the problem.... For here is an issue which involves the birth-rate and survival of a nation.... Moreover, the knowledge of these disasters [maternal deaths] is apt to produce in many women and their husbands a fear of maternity, with a deterrent effect on the birth-rate". Ministry of Health, Interim Report of Dept. Committee on Maternal Mortality and Morbidity, London, 1930, p.103.

\textsuperscript{13}Quoted in Thame, op.cit., p.154. In the late 1920s there had been a major debate in Australian demographic studies over the capacity of Europeans to work as efficiently as Asians in the tropics, the practical question being the effective occupation by European Australians of the sparsely settled northern areas of the continent. Helen Ware, ed., Fertility and Family Formation, Canberra, 1973, p.4. In 1935, to celebrate the jubilee of King George V and Queen Mary, a public appeal for funds to be spent on a scheme to reduce maternal mortality in Continued...
Concern about population growth inspired efforts to solve the problem of maternal mortality in the interwar period, albeit less urgently than it had inspired early efforts to reduce infant mortality. It had much to do with the production of a new image of responsible motherhood round the early 1900s. The basic image persisted to the close of my period. Late nineteenth century, middle-class notions about a woman's role taught that respectable women did not earn their living. Even for women who had to do paid work, marriage and motherhood were the real goals of their existence. According to these notions, it was desirable for the working-class girl to enter domestic service before marriage rather than to take up factory work. Domestic service taught the skills she would need later as wife, mother and housekeeper in her own right. Moreover, factory work was considered to have a bad effect upon her health and physical development, especially her capacity to bear children. Dr Arthur Renwick, a leading Sydney obstetrician, told a parliamentary enquiry into the employment of children of the mid 1870s that from his extensive experience of the matter he was certain that the use of pedal sewing-machines in factories had a harmful effect

13 (Cont.)
Australia was opened. State and Federal Governments contributed to the appeal, the Commonwealth giving £50,000. The Federal Health Council drew up a plan under which the States were to introduce new measures, many of which related to maternity services, to reduce the maternal death-rate. In the main, the existing organisation of maternity care was repaired rather than public facilities appreciably expanded. Indeed, £32,000 collected in New South Wales was put into a trust fund, the income from which was to be used for research relating to maternal and infant welfare. Report of N.H.M.R.C., 3rd sess., 1937, p. 17.

14 J.E. Woodward, managing partner of David Jones and Co., drapers, told a parliamentary enquiry into the employment of adolescents in Sydney in the mid 1870s that his firm over many years had advised parents to place their daughters in domestic service where conditions were better than in shop work. But, he said, parents often refused to follow this advice because they wanted their girls to be their own mistresses. Mary Donohoe, an employee of a tobacco factory, told the enquiry she preferred factory work because she had more time of her own: Saturday afternoons and Sundays were free. Progress Report on Employment of Children, 1875-76, pp. 16-19.
on adolescent girls: "The working of the feet causes congestion in the organs at the lower part of the abdomen, and this gives rise to uterine affections". In this way, he thought, many girls could be rendered incapable of reproducing. Further, in some cases use of the foot-driven machine "may produce an unhealthy excitement". He also objected to the factory employment of girls because their working with males provided opportunities for premature sexual relations, facilitating the spread of syphilis. Other leading figures in obstetrics and gynaecology voiced similar objections to the employment of young girls in factories and shops, and on occasion extended their cautions to intellectual work. Dr Joseph Foreman, addressing the Intercolonial Medical Congress of 1887, drew attention to the harmful consequences of the mental strain placed on young women preparing for University studies. He said he was struck by the disproportionate number of female teachers who suffered from uterine diseases. He was not sure whether these complaints resulted from the practice of standing for long periods of time or from mental strain. Dr W. Balls-Headley told the Congress of 1892 he believed the recurrent strain on the lower body experienced by factory girls working sewing-machines, the strain being commonly aggravated by poor diet, adversely affected their physical development, in particular development of the reproductive organs. Their capacity to bear children was jeopardised.

15 Ibid, pp. 36-38.
17 He advanced the thesis that modern civilisation produced two deviant types of women: first, the excessively intellectual, who tended to have deficiencies of the generative organs and so had difficulty in conceiving and giving birth; second, the excessively animalistic, who was subject to "undue sexual excitement" and who was noted for the frequency of her miscarriages and for inflammatory diseases. Thus civilisation threatened the natural end of a woman's development, the propagation of the species. Trans. Intercol. Med. Congr., 1892, pp. 512-523.
Concern about the effects of various types of extra-domestic work on what was seen as women's primary duty, child-bearing, was being expressed in Sydney by doctors and other bearers of middle-class values as early as the 1870s. In the face of a falling birth-rate, undoubtedly due to widespread resort to contraception and abortion in Sydney from about the beginning of the 1890s, a new aspect of motherhood began to be stressed — the mother's responsibility for the successful rearing of those infants that survived birth. This involved acquisition of information from expert sources on what had been a matter taught hitherto by family practice and what now was emerging as a medical specialty.18 As I have suggested before, the great strength of the infant welfare movement from the outset lay in its stress on maternal nurture.19 This involved emphasis on breast-feeding, the importance of

18 In the later nineteenth century paediatrics became increasingly concerned with the problem of infant feeding: "In the twentieth century, pediatrics was elevated from its ancillary status as a 'dependent dwarf' of ordinary medical practice, into the larger atmosphere of social medicine.... This was due to the menace of infant mortality as the chief cause of the depopulation of modern states, with the consequent extension of the science of infant nutrition and metabolism and the creation of the new science of infant welfare, as ways and means of combatting the evil". Abt-Garrison, History of Pediatrics, Philadelphia, 1923, p.130. For discussion of the contributions of various countries to the science of infant nutritional disorders from the later nineteenth century, see ibid, pp. 130-149. Although infant care became a special medical concern round the turn of the century, the traditional role of the grandmother as mentor by no means disappeared. A recent field study of infant care in Nottingham, a fairly representative industrial conurbation, found the influence of the maternal grandmother, while weakened by geographical and social mobility and the authority of the experts, was "still surprisingly strong". J. and E. Newson, op.cit., pp. 20-21. The modern mother's sense of responsibility for informed rearing of her child is well expressed by one of the Nottingham mothers: "Everything I do with him, I try to do the best thing for him, I'm thinking about that all the time. I'm careful about his food...he's inoculated so he won't catch diseases, later on I take them to the dentist so they won't get toothache: I'm thinking in advance for his comfort all the time...most people think more of their children's good. It used to be just the higher classes that did that, but now I think that that...thinking...has spread right through the general classes". Ibid, p.258.

19 I have found Anne Summers' notion of "education for motherhood" very useful. See Damned Whores and God's Police, Chp.10. An important Continued...
which was directly related in the movement's educational pamphlets and other material to the survival of the infant in an era of great mortality, and the provision of simple but crucial information on hygienic, artificial feeding and general care of the child. Another area where education for motherhood was developed in the early 1900s was the teaching of domestic science in State schools.

In the early years of this century each State reformed its public education system. Administrators like Peter Board in New South Wales and Frank Tate in Victoria, influenced by the idea of national efficiency which grew out of British fears of the expanding power of Germany, a power attributed to her superior scientific and technical training system, carried through educational changes aimed at promoting the nation's technical competence and political integration. The schools were to advance both technical skills and feelings of citizenship.

Peter Board, Director of Education in New South Wales, renovated the primary school system and constructed technical and secondary school systems. In his 1905 primary syllabus provision was made for the

19 (Cont.)

lacuna in her argument is her failure to discuss the infant welfare movement, beyond a brief reference to the City Council's establishment of an advisory service in 1903. The movement constitutes the link between anxiety about population growth and the new responsibilities assigned to motherhood.

20 It is an open question as to how important psychologically the interest of the lady health visitor or clinic sister was to the mother, especially to the young and inexperienced mother. Armstrong always maintained his health visitors were generally welcomed by working-class mothers in the early years of systematic welfare work. A recent American study found that indigent Negro and white mothers, who felt socially isolated or alienated, visited baby health clinics less often than other mothers and so were less likely to follow expert advice. The authors proposed a "reaching-out" type of service, including home visiting, as a possible means of overcoming the problem. This would represent a return to the original mode of contact in infant welfare work. N.M. Morris et al., Am. J. of Pub. Health, Nov. 1966, pp. 1874-1882.

teaching of domestic skills to fifth-class girls during Elementary Science lessons. Superior Domestic Science schools for girls were established in the metropolitan area following the reorganisation of secondary and technical education in the years before World War I. Domestic science was thus seen as a necessary part of the education of girls. Board's assumption was that all girls would become housekeepers and mothers. If education was now intended to promote the technical efficiency and political integration of the new nation, then education in domestic science was to serve the national need for efficient motherhood, a need made the more pressing by awareness of faltering population growth: those infants born alive should survive and should enjoy a healthy start in life as the basis for healthy and productive citizenhood.22

Fears about the declining birth-rate held by middle-class leaders of opinion such as the members of the Royal Commission on the Birth-Rate led to reinforcement of established ideas about the primacy of child-bearing among women's social functions. The connections between the national aim of occupying and exploiting the continent, the problem of the declining birth-rate, the enhancement of motherhood, and State concern for infant welfare were recognised by an early Australian sociologist, C.H. Northcott. He wrote in 1918,

22 Jenny Martin, The Introduction of Domestic Science into New South Wales State Schools, 1880-1930, Hons. thesis, Univ. of N.S.W., 1974, pp. 56, 59-61, 70 and 80. Women's organisations pressed for the teaching of domestic subjects in schools. In 1898 deputations from the National Council of Women and the Housewives Guild saw the Minister for Public Instruction, stressing the significance for public health of the mother's knowledge of food and its preparation. The National Council became concerned at working-class girls' lack of interest in domestic science courses. The Council was worried about the implications for the health of working-class families and for the supply of domestic servants to the middle classes. Ibid, pp. 29-31. For discussion of the long-standing issue of the supply of domestic servants in the Australian colonies see B. Kingston, op.cit., Chp.3.
The recognition of motherhood as a social function is the first step in the realization of this purpose [of creating a healthy, vigorous population in the service of exploiting the resources of the vast national estate]. When the problem of a sparsely settled continent was made more urgent by the declining birth-rate, frequent proposals were made to increase the population by immigration. Pronounced economic objections to immigration, coupled with a more thoughtful discussion of the national significance of the birth-rate, created a distinct change in public sentiment. Apart from a rise in the birth-rate, for which improved economic conditions are largely responsible, the most distinctive feature in this changed public sentiment is the recognition of the responsibility of the whole community for its child-life. 'The baby is the best immigrant...'.

Not surprisingly, any behaviour perceived as interfering with the function of child-bearing, such as contraception, abortion and factory work by women was condemned. The heightened concern about population growth also promoted the new notion of an educated approach to child-rearing, the saving of infant life by careful and informed nurture. The introduction of systematic infant welfare work in Sydney was one of the most significant expressions of this new notion. By the 1920s it had become clear that mortality of the first month of life was not succumbing to the established approach, as had post-neonatal mortality. Moreover, it was clear that a great deal of neonatal mortality arose from the same conditions which produced maternal deaths, themselves running at a scandalously high level. The attention of the medical profession, the health authorities and the infant welfare movement turned to the problem of maternal mortality.

The Royal Commission on the Birth-Rate identified the practice of contraception as the main cause of the decline of the birth-rate from the late 1880s. Induced abortion was named as a significant cause as well. The Commission believed the practice of surgical abortion was widespread in Sydney and was carried on by midwives, keepers of

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lying-in establishments and some doctors. It rejected the idea that inadequate income had forced restriction of fertility. Instead it named women's selfishness — their wish to avoid the trials of child-rearing and the discomforts of pregnancy, birth and lactation — as the real reason. To put down the practice of abortion, it suggested that government supervision of lying-in homes, which were seen as the main centres of the practice, be introduced.24 The Commission was concerned with the old issue of the effects of factory work on females, and accepted as proven that such work was harmful to reproductive capacity and "lessened vigour in the offspring". Undoubtedly the health of the race was being adversely affected.25 In 1898 the Medical Gazette claimed the practice of abortion was common in Sydney and involved married as often as single women. The Gazette called for prohibition of advertising of abortifacient products, which commonly appeared in newspapers and magazines.26 In 1899 the Gazette approvingly cited the opinion of the Chief Justice of the colony that Parliament should pass legislation to prevent advertising of means to procure an abortion.27 Over the next ten years the Gazette intermittently raised the question of rectifying defects in the law permitting abortion to flourish. In

24 C.K. Mackellar's Private Hospitals bill, enacted in 1908, implemented this measure.


26 Edit., A.M.G., Oct. 1898, pp. 453-454. The next month the Gazette editorialised, "Our wives and daughters must not have their senses offended by the announcements in the press and placarded throughout our chief thoroughfares that 'Dr So-and-So treats Private and Nervous Diseases' or removes irregularities from whatever cause arising. Is it too much to expect the guardians of our public morals to take up this subject which is eating the heart out of our young and otherwise healthy country?" A.M.G., Nov. 1898, p.503.

27 Edit., A.M.G., July 1899, pp. 306-307. It quoted the Sydney newspaper, The Truth, "When methods...of crushing out infant life...are openly and freely advertised, it is inevitable that both the morals and physique of the community must suffer deadly injury".
1905 it said,

If the present state of the law, or the present order of legal procedure, fails to bring an offender to justice, and prevent this needless waste of human life, then it is clear that an amendment in some direction is urgently needed in the interests of the whole community.28

A couple of years later it complained, "...we are afraid that by many of the 'common or garden' jurymen the abortion-monger is looked upon as a public benefit rather than a 'common nuisance'".29 In 1915 its successor, the Medical Journal of Australia, citing Dr Joseph Foreman's claim that abortion was procured on a large-scale in Sydney, urged ruthless measures to deter practitioners. The journal thought if a couple of practitioners were hanged for the deaths of women they aborted, the practice would rapidly fall away.30

In the late 1920s the Director of Maternal Welfare, E.S. Morris, claimed there had lately been a startling increase in the number of abortion cases treated at the Coast Hospital, the main centre for treatment of such cases in Sydney. He believed most were induced. Deaths returned under illegal operations, after a coroner's enquiry, represented only a proportion of the mortality resulting from artificial termination of pregnancy. Many deaths returned under sepsis following abortion and under accidents of pregnancy were undoubtedly due to deliberate interference.31 In the mid 1930s the new Director of Maternal Welfare, Dr E.S. Morgan, reported an "alarming increase" in deaths

28 A.M.G., April 1905, p.166.
29 A.M.G., March 1907, p.130.
30 Edit., M.J.A., March 1915, pp. 215-216. It also proposed that advertising be made an indictable offence.
classified as due to illegal operation. Whereas in 1915 such deaths constituted 3 per cent of total maternal deaths in New South Wales, in 1936 they represented 19.2 per cent. Reporting to the National Health and Medical Research Council, the successor to the Federal Health Council, in 1937 Morris said, "The most disquieting fact about these deaths is that the majority does not occur among single women driven to desperation, but among married women already the mothers of families". Morris identified economic hardship at a time of world-wide depression as the principal factor leading women to terminate pregnancy. He suggested that on the evidence available it was the woman whose family was just above the poverty level — whose husband was on the basic wage or on casual work, or who was working herself — rather than the very poorest, who was likely to seek an abortion or induce one herself. He commented, "Very few of them are willing to receive proper instruction in harmless methods of contraception which are available to them in certain quarters". This was a rather misleading statement, since instruction in reliable contraceptive methods was not easily obtainable in Sydney, especially by women unlikely to have access to private medical advice. Dr Norman Haire, writing a few years later, could find only two birth control clinics in the whole of Australia. He noted contraception was "still regarded as something not quite respectable" and "abortion flourishes to a surprising and alarming extent".


34 He also listed as contributing factors the better survival rate of infants, the enhanced status of women achieved by the women's rights movement, and "an instinctive reluctance to produce children who may become 'cannon-fodder'". Report of N.H.M.R.C., 2nd sess., 1937, p.28.

35 Quoted in Summers, op.cit., p.419. The Racial Hygiene Association operated a clinic in Sydney. Yet the clinic was restrictive about eligibility for services. In 1935 a member of the Association said Continued...
The cost of safer devices was another deterrent. Haire noted,

...[They] are sold to the women [at a price] so high as
to put it beyond the reach of a great many. Why a
contraceptive pessary which can be sold at a clinic in
England for Is 6d costs as much as 15s at one in Australia,
I cannot understand. Chemists here charge as much as
£1 Is for the same article.... Actually it is manufactured
in this country, and, even allowing for higher costs of
labour and material, the prices charged here are
extortionate.36

The resort to abortion, despite its being a criminal offence, becomes
more understandable. Thus a widespread desire to limit reproduction
coexisted with a pervasive ideology of pro-natalism and population
growth to the end of my period. The ideology sustained the notion of
educated motherhood, as it emerged in the early 1900s. It also shaped
concern about maternal mortality when it developed in the interwar
period.37

35 (Cont.)
on this matter, "We do not advertise indiscriminate Birth Control.
We only help people to use the best methods. We consider that —
(1) Hereditary Diseases
(2) Mental Deficiency on the part of one or other of the parents or
their near relation; and
(3) Want of finance to support any further children are justifiable
reasons why Birth Control should be used". Ibid, p.407. Single
women did not qualify for the clinic's services.

36 Quoted ibid, p.408.

37 W.D. Borrie has pointed to the continuing importance of population
growth as a national objective. Quoting the Royal Commission on the
Birth-Rate that "public men, seeing in the establishment of the
Australian Commonwealth the first step in the construction of a great
nation, and anticipating therefrom a rapid increase of national
prosperity and progress, have referred hopefully to the day when
Australia with her teeming millions will hold a commanding place among
the peoples of the world", he suggested the statement remained an
accurate reflection of the attitude to population in subsequent decades.
He identified the constituents of the traditional approach as "...the
desire to attain a population sufficient to maximise the utilization
of the known resources of this vast island-continent; fear that
population might be insufficient to meet the threat of aggression;
and optimism concerning the future role of the nation". Borrie,
The Birth-Rate Commission's warnings about the injurious effects of factory work on women's capacity to reproduce have been noted. Further public discussion of the issue took place in the years before World War I, discussion being much promoted by the work of the Royal Commission appointed by the McGregor Labor Government in 1911 to enquire into the alleged shortage of labour in the State and into the employment of females and juveniles in factories and shops. In October 1911 the Medical Gazette made its position on the question quite clear, stating it felt obliged to "protest against the employment of girls of any age in factories in which the work to be done is purely mechanical, and which does not fit them for their future life of wifehood and motherhood". The Royal Commission, presided over by A.B. Piddington, barrister-at-law, showed, like many of the medical witnesses, considerable concern for the health of female factory workers in Sydney:

As both the future husbands in the manufacturing class and their future wives are included in the employees who are the subject of this inquiry, it is at once seen that the health and development of women and juvenile workers in factories becomes a matter going to the root of what is recognised as the stem itself of progress in the Commonwealth, viz:- the increase in population, particularly native-born, and the maintenance and improvement of good health, physique, and moral type in that increase.

The assumption that underlay the approaches of the Commission and many of its witnesses was that motherhood and housekeeping were the proper and natural destinies of women. Factory work, it was feared, not only adversely affected the development of the young girl and so jeopardised her child-bearing capacity, but it deprived her of the opportunity to

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38 A.M.G., Oct. 1911, p.592. The Gazette's comments were reproduced in the nurses' journal. A.N.J., Nov. 1911, p.373.

39 R.C. on Hours and General Conditions of Employment of Female and Juvenile Labour in Factories and Shops Report, 1912, p.vi.
learn domestic skills to the great detriment of her future husband and children. The Commission listed the following objections to the factory employment of married women:

1. that it encouraged the practice of contraception
2. involved the risk of miscarriage among pregnant workers
3. interfered with the breast-feeding of infants with grave consequences for the mortality rate
4. induced neglect of the home
5. encouraged idleness among husbands (who were relieved of the obligation to act as the bread-winner), and
6. exposed single girls to sexually immoral influences coming from contact with mature women.

The Commission saw the first three as clearly threatening population growth and the other three as dangerous to established social institutions and behaviour.  

In a typically conservative response to the Piddington Commission's report, the Medical Gazette said girls should be directed away from factory work into domestic service for it trained them for their true vocation of child-bearing and child-rearing, and so would promote the birth-rate among the working class. Happily, the birth-rates of the middle and upper classes would also be stimulated because an adequate supply of domestic help being available, women of these classes would feel freer to devote themselves to child-rearing. The Gazette was prepared to endorse compulsion in the interest of this vital national objective. It proposed that

Ibid, pp. xliiv-xlviii.
every girl should be compelled to serve a training in domestic economy, just as young men are compelled to train for military service. If such conditions were enforced, then a very large number of girls who at present are wasting their precious young lives in useless drudgery would be fitted for healthy wifehood and motherhood, and the influence of such in an improved birth rate, and a healthier race of children would soon be apparent.41

The Gazette returned to the matter of the report, advocating further coercive measures in the interest of a higher birth-rate. While it welcomed Piddington's condemnation of the factory employment of married women, it believed he should have taken the issue even further. It wrote, "...the employment of females in a large number of factories should be absolutely prohibited, and we hoped that Mr Piddington would have carried his recommendation to that extent".42 The following year the journal stated,

...a woman's whole life is centred round that one function — childbearing...she is specially mentally endowed to tend it during infancy and childhood...to educate it for the battle of life. To the father belongs the duty of foraging in the world for the wherewithal to enable the mother to carry on these duties undisturbed. Monogamy is ingrained in the race and enforced by law to afford the mother this protection.

It proposed the State legislate to prevent a girl from being employed in any field not women's work until she completed an apprenticeship of six months in domestic service. It added that the apprenticed girls would not only work in the homes of the well-to-do.43 The proposal to use compulsion to promote population growth was an extreme position to

43A.M.G., March 1913, pp. 234-235. Later the same year the Bishop of the Riverina, addressing an Anglican conference in Brisbane, felt moved to protest against the decline of the birth-rate, the "dark blot of race suicide that had infected Christian nations like the plague". A.M.G., Oct. 1913, p.354.
adopt and was never popular. It probably reflected the frustration of conservatives in the face of unwelcome social change — widespread resort to control of fertility and challenge to established notions about women's work, which seemed to threaten not only the existing social order but the very survival of the nation. Concern about the birth-rate continued to be widely voiced in the interwar period, but much of the urgency had gone. The fundamental change from the large family of the Victorian period to the small modern family was perceived as likely to be permanent. The experience of the War did much to upset old values. The renewed immigration in the 1920s and the labour demands of an expanding manufacturing sector helped reconcile conservatives to this social change.

Concern about population growth was an important force determining the approach to the problem of maternal mortality. Another significant factor shaping the approach was the concept of individual responsibility for health care.

One historian of social work in Australia has written concerning attitudes to destitution in the colonial

44 In demographic studies there was a revival of interest in population growth in the later 1930s. The ruling United Australia Party made renewed immigration a significant plank in its platform. The Labor Party was opposed because it believed immigrant workers would threaten established wages and conditions and compete with the unemployed for scarce jobs. Moreover, for many observers it had no appeal on defence grounds because the numbers able to be absorbed in the short term would not be significant. Despite an actual revival in the birth-rate in the later 1930s, "there was a universal belief that the birth-rate was declining and must continue to decline and that any recovery could only be temporary". The Birth-Rate Commission and the debate about the birth-rate had been perhaps too effective in imprinting the idea of a declining birth-rate. H. Ware, op.cit., pp. 4-5. R.W.G. Mackay in J.C.G. Kevin, ed., Some Australians Take Stock, London, 1939, p.138.

45 I am indebted to Claudia Thame's Health and the State, a pioneering effort to trace the evolution of health policy in Australia at the State and Federal levels, for insight into the wider implications of the concept. In wider perspective the responses to the problems of infant and maternal mortality are particular, albeit pivotal, examples of the way in which this concept deeply affected the development of health care in Australia.
period:

The idea that each man could be master of his personal destiny was strong in the colonies. If he became destitute this was largely because of moral weakness. One of Australia's most notable early social workers [C.H. Spence] stated that generally it was vice and extravagance and improvidence that brought people to destitution.\textsuperscript{46}

It was widely believed that social services threatened the incentive to work. Middle-class principles of self-help and thrift dominated social thinking.\textsuperscript{47} Self-help through friendly societies or charity of a limited nature through government-subsidised, voluntary agencies were important means by which social services were provided in the nineteenth and early twentieth centuries.\textsuperscript{48} Health care was regarded as essentially the individual's concern. Prior to the mid 1930s this was accepted even by the Labor Party. Individual responsibility for health care remained the preferred principle to the end of my period.

Initially infant welfare work in Sydney was directed at working-class mothers of the inner-city area. By the 1920s the clinics, funded by the State, were intended for and used by all classes. To this extent the community accepted collective responsibility for the welfare of infants. Yet even this essay into collective responsibility was limited, for the organised medical profession from the outset


\textsuperscript{47}A recent review of Australian income security policies noted that these principles have been embodied in the income security system since the introduction of invalid and age pensions in the early 1900s. It also observed that their survival for so long "is indication of the system being geared towards a middle class ideology". M.T. Lewis, \textit{Values in Australian Income Security Policies}, Canberra, 1975, pp. 28-29.

\textsuperscript{48}In New South Wales the State provided direct, institutional care for the destitute aged and infirm from 1862 and outdoor relief for neglected and destitute children through the State Children's Relief Board from 1881. T.H. Kewley, \textit{Social Security in Australia}, Sydney, 1965, pp. 26-27.
required as a condition of its cooperation that the clinics should not provide treatment for sick babies. This still had to be purchased in the private sector or obtained as a charity through the public hospitals. The State, and implicitly the community, accepted that individual responsibility should continue to have a place even in an area of health care where the sense of collective responsibility was powerfully infused by concern about population growth and by humanitarian feelings towards the helpless infant.

The problem of maternal mortality was first identified and publicised by experts from within the medical profession itself. They criticised the quality of existing obstetric education and practice. They drew attention to the need for universal antenatal care if maternal mortality was to be significantly reduced. However, they did not doubt adequate reform could be instituted within the prevailing organisation of health care, based as it was on the belief that it was the individual's responsibility to provide for his own care. Governments, Labor and non-Labor alike, accepted that maternity care was the preserve of private practice. The public maternity hospitals were available for those who could not afford private care on a fee-for-service or contract basis. The antenatal clinics established in Sydney by the Health Department were intended for the same class of patient and did not compete with the private practitioner. They did not set out to serve all classes as the baby health clinics did. The departmental antenatal clinics were supplements to the maternity hospital clinics. They were a safety net to catch those expectant mothers of small means who for some reason did not attend a hospital clinic for antenatal care. At no time was there any serious possibility of a universal maternity service, supported by public funds and open to all women irrespective of means. Yet it was patently clear by the mid 1930s that the existing organisation of maternity care was making very little impact on the maternal mortality
rate despite various reforms. Collective responsibility failed to develop in response to the problem of maternal mortality in the interwar period.

The one point at which universal state assistance crept into maternal welfare in my period was the introduction of the Commonwealth maternity allowance. Introduced by the Fisher Labor Government in 1912, it was a universal cash benefit scheme by which a grant of £5 was paid on the birth of a live child. The measure was introduced unexpectedly and seems to have been urged by W.M. Hughes, the Attorney-General, with an eye to electoral advantage. The original objectives of the measure are not entirely clear. Prime Minister Fisher indicated he hoped it would help reduce infant mortality and so aid population growth. But he did stress that the object was care of the mother. Hughes implied that population increase was the principal aim. Certainly, it was widely assumed at the time and subsequently that the intention was to promote the birth-rate. This probably accounts in part for its wide acceptance. Some did oppose it. The Sydney Morning Herald saw it simply as a piece of electioneering, which met no real need. Others were particularly opposed to the fact that the allowance was paid to single mothers and

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49 Single as well as married mothers were eligible. In fact it was not strictly universal in scope because Asians and aboriginal natives of Australia, Papua or the Pacific islands resident in Australia were not eligible. Kewley, op.cit., pp. 103-104.

50 J.R. Collins, Commissioner of Maternity Allowances, told the Commonwealth Royal Commission on Health in 1925 that while the wish to reduce mortality associated with childbirth influenced the decision to introduce the measure, it was not the main aim. He said he understood from Prime Minister Fisher that the aim was a humanitarian rather than a health one. Minutes of Evidence. R.C. on Health, 1925, p.45.

so allegedly fostered vice and illegitimacy.\textsuperscript{2}

It was not long before there was talk that it was being wasted on purchases unnecessary to maternity by the well-to-do or on alcohol by the poor.\textsuperscript{3} In 1920 the Medical Journal of Australia pointed out it had not stimulated the birth-rate nor improved the infant death-rate.\textsuperscript{4} In 1922 the Federal Committee of the B.M.A. proposed that the funds be re-directed to finance more maternity hospitals, antenatal and infant welfare clinics, better training of nurses and medical students, and direct aid to needy mothers.\textsuperscript{5} The Victorian Branch of the B.M.A. presented a similar proposal to the Commonwealth Royal Commission on Health in 1925. Under its scheme the mother was to receive a grant of only £1. The Commonwealth would use the rest of the existing grant plus further funds to finance reforms in obstetric education, establishment of more maternity facilities and the cost of private care for mothers unable to provide for themselves.\textsuperscript{6} Clearly, any scheme emanating from the medical profession left the concept of individual

\textsuperscript{2}\textit{Ibid}, p.106. A committee of the Council of Churches in Melbourne held this view. The Anglican and Roman Catholic Churches appear to have favoured the measure.

\textsuperscript{3}\textit{A.M.G.}, Aug. 1913, p.126. \textit{M.J.A.}, Feb. 1915, pp. 150-151 and May 1920, pp. 509-510. In the early 1920s the National Council of Women carried out an investigation into how the scheme was working. It found that the majority of mothers were not wasting the grant, but were using it to purchase skilled assistance. It also found that only a very small proportion of the total annual sum went to families with higher incomes, that is, with incomes greater than £300 per year, so that very little was to be saved by restricting eligibility to lower-income groups, as some conservatives wanted. The price to be paid for such a change would be that the "poorer middle classes", who greatly needed the grant, would hesitate to claim it. \textit{A.N.J.}, July 1923, pp. 342-348.

\textsuperscript{4}\textit{M.J.A.}, May 1920, pp. 509-510.

\textsuperscript{5}\textit{M.J.A.}, March 1923, pp. 267-268.

\textsuperscript{6}\textit{Thame, op.cit.}, p.188.
responsibility for health care intact.

The Royal Commission on Health, noting that the allowance had not affected the maternal or neonatal mortality rate, recommended payment be made conditional on registration at least five months before the expected date of confinement and on proof of proper antenatal care. The Commission further suggested the Commonwealth subsidise the expansion of antenatal facilities and improvement of training in obstetrics. No action had been taken when financial restrictions imposed in response to the economic depression by the Scullin Labor Government included a reduction of the allowance from £5 to £4. The grant was restricted to families whose annual income was not greater than £260.

The maternity allowance, as a cash benefit scheme, served to strengthen the established organisation of maternity care, which was based on the assumption that the majority would seek assistance in the private sector and that public facilities existed only for those too poor or too improvident to provide for themselves. Even the failure of the established system to reduce significantly the level of maternal mortality by the mid 1930s elicited no questioning of the balance between private and public provision. So fundamental a change was not considered necessary. In 1925 E.S. Morris had suggested better coordination of units within the mixed private and public system was all that was needed:

7Kewley, p.111. The Royal Commission on National Insurance, appointed by the Bruce-Page Government in 1923, noted that the allowance had enabled many more women to employ medical assistance. It suggested the grant be continued as part of its proposed national insurance scheme, with the Commonwealth still meeting the whole cost of the allowance. The national insurance scheme was not implemented.

8The Lyons Government reduced the income limit to £208 in 1932. Further changes over the next few years liberalised the means test and increased the grant paid with the size of the family. Kewley, pp. 113-115. The Curtin Labor Government abolished the means test in 1943. Ibid, p.255.
The linking of maternity hospitals, maternity centres..., baby health centres, health authorities and all other allied agencies into one cooperating whole is necessary for the ultimate control of this vast territory of life. There is no necessity for a stereotyped homogeneity of action, but an intensive coordination is eminently desirable.9

Ten years later, when there had been no significant reduction in maternal mortality in Sydney or the State as a whole, Dr Constance D'Arcy, a leading figure in Sydney obstetrics, still suggested better cooperation as the solution to the problem of maternal mortality.10 The notion of individual responsibility for care remained a powerful factor limiting change towards collective provision in the system of maternity care.

Examining the principle of universalism expressed in British welfare legislation of the 1940s, R.M. Titmuss observed that an important historical reason for adoption of the principle was the desire to eradicate the stigma, the sense of inferiority, which attached to the fact of incapacity to purchase services when the private market in services predominated. Another important notion reinforcing the concept of universalism was the idea of prevention, which in order to be effective entailed "early and easy access" to preventive and remedial services. Universalism and prevention went together:

Slowly and painfully the lesson was learnt that if such services were to be utilized in time and were to be effective in action in a highly differentiated, unequal and class-saturated society, they had to be delivered through socially approved channels; that is to say, without loss of self-respect by the users and their families.11

In antenatal work, the great preventive service so far as maternal mortality and morbidity was concerned, the lesson was not learnt in Sydney in the 1930s. The notion of individual responsibility for care permeated the approach of the health authorities, Governments and the medical profession. Public facilities existed only to provide for those unable to afford private care. The health authorities repeatedly complained about poor attendance for antenatal care. They blamed the problem on the apathy and ignorance of many expectant mothers. Yet they failed to see that by cleaving to the belief in individual responsibility, they reinforced community attitudes which worked against their ultimate objective of proper antenatal care for all pregnant women.
This study of infant and maternal health in Sydney covers a period of seventy years, during which the effectiveness of medicine in its preventive and curative aspects advanced greatly, the population of Sydney itself grew dramatically from 137,000 to 1,337,000, and Australia developed from a collection of British colonies into a modern, industrialising nation. The study has been concerned with describing and explaining first, the very notable declines in the infant and the maternal mortality rates, and second, the responses made to what came to be seen as the "problems" of infant and maternal mortality. In looking at the responses, I have tried to identify attitudes and values, as well as the technical knowledge, which shaped action. I have pointed to characteristics of the situation in Sydney which were similar to those of situations in other cities of the Western world. In the matter of the interaction between poor nutrition and widespread diarrhoeal infection, which was responsible for so many infant deaths, I have suggested the situation in Sydney in the later nineteenth and early twentieth centuries was similar, if less serious, to that experienced by many communities of the contemporary Third World.

A broad perspective would see the problems of infant and maternal mortality in Sydney as part of an international phenomenon. This is not a comparative study so I have placed the primary emphasis on the Sydney experience. There were, however, direct connections between the infant and maternal welfare movement in Sydney and like movements in Britain, France and New Zealand. W.G. Armstrong, who as first metropolitan medical officer of health began systematic infant welfare...
work in Sydney, was influenced by pioneering French efforts to organise the provision of advice on infant care in special clinics, although Armstrong chose not to follow the French in distributing sterilised milk. He was considerably influenced by the extensive work of English public health doctors on the causes of the high mortality among urban infants and especially among infants of the working classes. Newsholme's work was a direct inspiration to Armstrong. His work, focussing on the domestic sources of diarrhoeal disease, the outstanding cause of infant mortality at this time, caused Armstrong to concentrate his own efforts on improving the quality of mothercraft, in particular on urging the vital need to breast-feed.

Armstrong's advisory service, begun in 1904, was clearly the first systematic work done in Australasia and among the earliest such work in the world. It preceded the beginning of Truby King's better-known work in New Zealand by three years. Armstrong's service and the first government clinics, which grew directly out of his work, owed nothing to Truby King. But from 1918, the beginning of the second stage of the movement's development in Sydney, King and his Plunket Society did have an important influence on the Sydney movement. The example of the Plunket Society was responsible, at least partly, for the creation of the Royal Society for the Welfare of Mothers and Babies. Perhaps more importantly, King's advice that uniformity of training for nurses advising on infant care was needed led directly to the establishment of the first Tresillian Home by the Royal Society. Although Tresillian teaching did not strictly follow King's approach, the fact that only Tresillian-trained nurses were employed in baby health clinics ensured

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1 Armstrong began sending pamphlets containing simple information on infant care to mothers of new-born babies in the City of Sydney in 1903. Domiciliary visits began in 1904.
the uniformity of advice that King had urged was attained. This uniformity had much to do with the clinics' success in reaching large numbers of mothers in Sydney and in other parts of New South Wales.

The infant death-rate in Sydney fell from 157 per 1,000 births in the early 1870s to 39 per 1,000 in the late 1930s. This remarkable decline began slowly in the later 1880s and continued steadily for the rest of the century. But the really significant turning-point came in the early 1900s. The great bulk of the fall at this time resulted from a decline in deaths from diarrhoeal and associated conditions, the terrible scourge of infant life in Sydney and in so many other Western cities in the nineteenth and early twentieth centuries. Early infant welfare work specifically aimed to prevent these very conditions. What factors determined the trend in the infant death-rate in Sydney? Any reasonable explanation of the changes in the rate must be multicausal. I have tried to identify the major determinants. I have suggested improvement in the environmental sanitation of the city from what was an appallingly low level before the late 1880s was a basic factor. It must have been in large part responsible for the slow, downward trend before the early 1900s. Public health measures of an environmental nature — an adequate water supply and sewerage system, and later, improvement in the garbage disposal system — significantly reduced the risk of intestinal disease infection for the general population, and in a mediated way the risk to infants of death from diarrhoeal disease and associated maladies.\(^2\) Evidence from past and contemporary sources

\(^2\)Unplanned changes like the disappearance of horses from the city as motor vehicles replaced horse transport during the first three decades or so of this century reduced the risk as well. The disappearance of horses reduced opportunities for flies to breed and to spread intestinal infections. The reduction of average family size over the same period meant the situation where older children in contact with foci of infection outside the family carried home infection to infants became much less common.
indicates the importance of this factor, and the close correlation in time between the decline in the infant mortality rate and the implementation of such measures adds to the plausibility of my suggestion.

I have argued that improvement in the quality of the metropolitan milk supply was probably a less important factor for most of my period than many reformers round the turn of the century envisaged and some contemporary commentators on infant health claim. For various reasons it is difficult not to conclude that at least until the 1930s, when the Milk Board introduced considerable reform, liquid milk as received in the home often contained high bacterial levels. Until almost the end of my period a substantial part of the total supply was not pasteurised. Moreover, in the late nineteenth and early twentieth centuries it seems that among hand-fed infants many were not fed on whole milk at all. Infants of poor families were fed substitutes, commonly condensed milk. Perhaps the most telling piece of evidence against ascribing too much to improvement in the public milk supply is the fact that in the 1920s baby clinic nurses routinely advised mothers, even in working-class areas, to use the more expensive dried milk in preference to fresh milk because the average fresh milk was so unsafe. Private doctors also seem to have commonly recommended powdered milk preparations for infant feeding. Even so, improvement in the milk supply cannot be dismissed as a cause of the decline in infant mortality. The slow decline from the late 1880s may well have been partly due to improvement in milk hygiene following the Dairies Supervision Act of 1886. Also the dramatic fall evident round 1904 may have owed more than has usually been recognised to the suppression of the use of chemical preservatives which the public health authorities achieved at this time. Boracic acid, ingested regularly by infants, may have contributed much to the high
death-rate from diarrhoeal and associated maladies.³

How important was organised infant welfare work in the reduction of infant mortality in Sydney from the early 1900s? I have argued it played a decisive role. First, there is the matter of timing. The dramatic decline in mortality began in 1904, the year Armstrong started his advisory service and a year after he began the practice of sending a pamphlet on infant care to every address in the City registering a birth. Moreover, no other major new influence so directly related to infant welfare can be identified at this time. Within a few years a considerable number of infants was being reached by the service, and the number continued to grow. It might reasonably be assumed from experience in other places that an additional number of mothers not in direct touch with the service was influenced through contact with those who were. It was, however, not just a question of sheer numbers for in the early years the mothers reached were working-class residents of the inner-city area, who were unlikely to be influenced by private practitioners and whose infants were more at risk, given their environment, from the threat of diarrhoeal mortality. The social group contributing disproportionately to infant mortality was the very one on whom the advisory service was concentrated for some years. The notable improvement in the mortality rate in the early twentieth century was largely due to the decline in deaths from diarrhoeal and associated conditions.⁴

³Boric or boracic acid, a mild antiseptic, widely used in medicine for wounds is not recommended for use on infants and young children because of possible toxic effects.

⁴In 1904 the infant death-rate in Sydney fell from 116 to 98 per 1,000 births. Of the reduction of 18 per 1,000 over 1903, 13 per 1,000 was due to the decline in mortality from diarrhoeal disease.
was the emphasis on breast-feeding. Where this was impossible, the
service stressed hygienic preparation of food and the use of nutritionally
sound substitutes for breast-milk. This approach, with its attempt to
minimise possibilities of infection and promote sound nutrition, was
admirably suited to the problem of the interaction of infection and poor
nutrition which, I suggest, gave rise to the enormous mortality from
diarrhoea and associated conditions in this era. American evidence of
the effectiveness of organised infant welfare work was cited previously.5
A study of infant mortality in New York City, 1885-1920, pointed to the
important role of systematic infant welfare work in reducing mortality
from diarrhoeal disease. It was found that in New York City, which
enjoyed the most rapid decline in infant mortality of any large city in
the country in the period surveyed, "No group of deaths is influenced so
vitally by infant-welfare work as diarrheal diseases".6

The strength of the work begun by Armstrong lay in its emphasis
on the quality of maternal care, a factor which research at the time, and
subsequently, revealed as very significant for the prevention of illness
and death. The factor can transcend to some extent the adverse material
effects of low socio-economic status. From early colonial days the
status of women in Australia appears to have been peculiarly low, so
that the quality of mothering in the nineteenth century among women at
the lower levels of the social hierarchy was probably often very

5 The findings of an extensive statistical study of a number of American
cities in the early 1920s were cited in Chapter 3.

6 E.C. Meyer, Infant Mortality in New York City. A Study of the Results
Accomplished by Infant-Life Saving Agencies 1885-1920, New York City,
1921, pp. 92-93 and 12-13. Given what has been suggested here about
the causes of the decline in mortality in Sydney, it is worth noting
that Meyer concluded that where infant mortality was high and the sanitary
environment poor, basic improvement of sanitation was more important
unsatisfactory. Miriam Dixson has written on this: "Attitudes towards mothering, as towards the body and sexuality, may be seen as linked with a lowly position in the dominance hierarchy and acceptance of a low self-concept". She continued:

If the casual poor universe, an important matrix of some central Australian folkways, was a dark one for women, how did children experience it? How much mothering were women, held in such low esteem and holding themselves in such low esteem, able to give their children? Mothering takes a great deal of psychic and physical energy; self-hate, however, drains such energies enormously...a few mid-century observers thought New South Wales, and Sydney particularly, constituted an especially damaging milieu for children.7

The infant welfare movement might successfully teach mothercraft and so contribute much to the notable decline in the general infant mortality rate in Sydney. And the spread of good mothercraft might to some extent counteract the adverse effects of low socio-economic status. Yet class differentials in infant mortality remained obvious at the close of my period. In Chapter 2 the infant mortality rates of three middle-class and of three working-class suburbs in 1901 and in 1911 were presented. While the rates of the three working-class areas showed in 1911 considerable improvement on the rates of the same areas in 1901 — I suggested this may well have been due to the impact of organised infant welfare work — even the lowest rate was a good deal greater than the highest rate among the middle-class suburbs in 1911. In 1935-39 the same six areas returned the following average rates:8

7Ibid, p.103.

8G.R. Bruns in a study of infant mortality rates of Melbourne suburbs in the 1930s showed the size of the rate correlated well with the socio-economic standing of the suburb. See Bruns, A.Q., Sept. 1944, pp. 72-73.
Infant Deaths per Thousand Births

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<tr>
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<th>Mosman</th>
<th>Strathfield</th>
<th>Lane Cove</th>
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<tr>
<td>Middle-class suburbs</td>
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<tr>
<td></td>
<td>30.6</td>
<td>30.1</td>
<td>24.3</td>
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<tr>
<td>Working-class suburbs</td>
<td>Waterloo</td>
<td>Redfern</td>
<td>Alexandria</td>
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<td></td>
<td>44.1</td>
<td>67.5</td>
<td>39.8</td>
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As the table shows, in 1935-39 the lowest rate among the working-class suburbs was still greater than the highest rate returned by a middle-class suburb, although the three working-class areas had clearly shared in the very considerable decline in infant mortality which had occurred in Sydney over the previous three decades. It would seem class differentials in infant mortality persisted in Sydney as they were observed to do elsewhere. W.P.D. Logan wrote that in England and Wales the "social class gradient of infant mortality is...as steep in 1950 as it was 30 years earlier".  

The great downward phase in the trend of the maternal mortality rate in Sydney did not begin until the later 1930s. If mortality from diarrhoeal and associated conditions was the key problem in infant health, deaths from puerperal sepsis were the outstanding problem in maternal welfare. Despite antisepsis and then asepsis, mortality from puerperal infection did not fall in a significant and sustained way until the advent of new chemotherapy in the later 1930s. This experience was shared by various Western countries, which saw the same dramatic decline in maternal mortality take place at about this time.

The problem of maternal mortality was more directly related to the technical issue of the quality of assistance available to the patient than was the case with infant mortality. The key to reduction of the infant mortality rate was the quality of maternal care given the infant. Medical and other expert assistance, while helpful, could not until well into this century supply particularly effective therapy for diarrhoeal and associated maladies. The royal road to success was prevention, which lay in the hands of the mother in the home. Yet as Newsholme felt obliged to point out in the wake of excessive claims for the mothering factor, economic differences still played an important part in the determination of infant mortality. As indicated above, class differentials in infant mortality continued to exist in Sydney even after the infant welfare movement had become well established. In maternity care class differences existed because, except for the really poor, individual capacity to pay for care determined the quality of assistance at childbirth. For much of my period competent, let alone first-rate, assistance was not universally available.

I have suggested this maternity care system itself retarded improvement in the maternal mortality rate, even after education in obstetrics was considerably improved in the 1920s. By the mid 1930s the system showed no capacity to reduce significantly the mortality associated with childbirth, and health authorities concerned with the problem could do little more than express the hope that improved training would eventually raise the general standard of practice and in time reduce the maternal death-rate. The call for reduction of the death-rate came from reformers within the medical profession. Their criticisms gathered volume in the course of the 1920s. The reformers, commonly specialist obstetricians and gynaecologists, believed better obstetric education of doctors and nurses was the way to solve the problem of maternal
mortality. In time the level of mortality may well have been reduced by this means. But suddenly, with the availability of new knowledge of how the infection spread and the new chemotherapy, the mortality from sepsis was greatly reduced. At the close of my period a number of new factors appeared. Among these was the hospitalisation of birth, which was fast becoming the norm, and the practice of antenatal care, which was coming to include a good proportion of expectant mothers.

Like early British maternity hospitals, public maternity institutions in Sydney developed as a charitable service for indigent married women and unmarried parturients with nowhere else to go. The first such accommodation in Sydney was provided by the Benevolent Society's lying-in section, which established a remarkable safety record in the 1860s and early 1870s. In the 1890s a number of new public lying-in institutions were founded. These included the Women's Hospital, Crown Street, which soon came to rival the Benevolent Society's Royal Hospital for Women as the most substantial maternity institution and training school for midwifery nurses in the city. About this time private lying-in establishments began to become popular, and they quickly proliferated, their growth after 1912 being promoted by the cash grant given to each mother under the Commonwealth maternity scheme. Some private establishments were well run and staffed by competent personnel, but many were small, poorly equipped and run by untrained staff without medical supervision. It was known that many were centres for the practice of inducing abortions. The Royal Commission on the Birth-Rate expressed concern about this, and Dr C.K. Mackellar, its President, subsequently introduced legislation which, as the Private Hospitals Act, provided for official inspection of private lying-in institutions. By the 1930s some improvement in overall standards had been effected, but generally private maternity institutions could not match the safety level.
offered by the well-equipped, properly staffed, large public maternity hospital.

There was some decline in the number of private hospitals in the course of the 1930s, partly because depression conditions reduced the capacity of many to pay for such care and partly because more women wanted to use public maternity hospitals as the quality of their services was appreciated and the old stigma of indigence associated with such places disappeared. But the growing use of public hospitals for childbirth in the interwar period did not result in any marked reduction of maternal mortality before the late 1930s. After this date it is difficult to separate its effect from those of other new influences which proliferate at this time.

One of the important contributions made by the public maternity hospitals in Sydney to maternal welfare was the pioneering of antenatal care. On the urging of Dr J.C. Windeyer, who had been influenced by Ballantyne, the Royal Hospital for Women provided in 1912 one of the first antenatal clinics in the world. This is a good example of the speed with which new medical developments, originating in Europe or the United States, were taken up in Sydney, even in comparatively early times. That proper antenatal care was capable of reducing mortality and morbidity associated with pregnancy and birth was well known. But the growth of

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10 From the outset of my period the colonial medical journals kept the profession informed about developments in the great centres of medical learning and practice overseas. Personal contact with such centres, by return visits or fresh migration of doctors, ensured continuing fertilisation in the later nineteenth and early twentieth centuries. Distance in such matters did not mean isolation and stagnation. Frank Forster has written concerning the early teaching of obstetrics and gynaecology at the Melbourne medical school, which began in the mid-1860s, "It is proper to recognise...the advanced state of obstetrical and gynaecological education as planned and undertaken by Tracy and others in the early years". Forster, Aust. N.Z. J. Obstet. Gynaec., Feb. 1966, pp. 103-104. See also F.M.C. Forster, "Caesarean Section and Its Early Australian History", M.J.A., July 1970, pp. 33-36.
public antenatal facilities in Sydney was slow because the health authorities, while strongly urging women to seek care, assumed the majority would purchase such care in the private sector. Reformers like E.S. Morris repeatedly stated the need for universal antenatal care if the maternal mortality rate was to be significantly reduced. Changing the attitudes and behaviour of women and certain members of the profession was not easy and was bound to take some time. But the State's failure to provide anything but very limited public facilities contributed to the slowness with which the new practice spread. By 1930 only about twenty per cent of expectant mothers in New South Wales were thought to receive antenatal care. Numbers increased during the 1930s, but by the close of my period the practice was by no means universal.

In 1929 an antenatal clinic was opened at the Newtown baby health centre. Within a few years there were ten departmental clinics operating in various parts of Sydney. The clinics were intended for those women who could not afford to purchase private care yet would not use the public hospital clinics. The departmental clinics never dealt with large numbers of women. Like the hospital clinics they did not compete with private practice, since they catered for a different class of women. Unlike the baby health clinics, at least from the 1920s, they were not intended for the use of all classes. They were essentially supplementary to care provided in the private sector. The slowness with which the routine practice of proper antenatal supervision spread in my period greatly limited its known capacity to reduce maternal mortality, especially mortality from haemorrhage and toxaemic conditions. It seems to have contributed little to the reduction of mortality before the great turning-point in the mortality trend in the mid 1930s.

The problem of infant mortality was "solved" about thirty years before that of maternal mortality. The dramatic reduction in maternal
mortality in the later 1930s was in large part effected by the new drugs which then became available. In the longer term other factors like better obstetric training, widespread antenatal care, and hospitalisation of birth, which were already in train, plus new factors like the ready availability of blood transfusions would almost certainly have pulled the mortality rate down as effectively. But in the short term at least, effective chemotherapy broke the stalemate. This fact serves to highlight a fundamental difference between the two problems. This difference lay in the significance of medical treatment and therefore the role of the medical profession.

The "solution" to the problem of infant mortality in Sydney in the early 1900s hinged largely on reduction of the enormous mortality from diarrhoeal and associated conditions. Once the significance of the quality of maternal care and the infant's domestic environment was fully appreciated — this was demonstrated by public health doctors in England, to whose work Armstrong was heir — the solution became one of straightforward prevention, essentially of changing maternal attitudes and behaviour. No great departure from traditional public health procedures was required. Medical treatment hardly came into it, so the prerogatives of private practice were not challenged by public intervention in the form of mass facilities. Even so, it will be remembered how the medical profession in Sydney insisted on the exclusion of treatment from clinic services before its approval for this new, if limited, area of state intervention in health was given. The health authorities and the infant welfare movement, in which doctors played a leading role in any case, were careful to observe this limitation on the functions of the clinics. The "solution" was so effective because improvement in the environmental sanitation of the city, planned and unplanned, was already successfully acting on the problem at one level, because organised infant
welfare work could become a mass service since it did not disturb the existing organisation of health care which involved purchase of private care for a very large proportion of the population, and because the promotion of breast-feeding was technically apt for the problem of diarrhoeal mortality and could be effective despite socio-economic differences. The infant welfare movement did not have to grapple with the problem of economic inequality, yet it did much to reduce mortality which was partly a function of that inequality. The answer offered by the movement did not need to challenge the social status quo. It could "solve" the problem of infant mortality despite extreme economic inequality and without raising doubts about the adequacy of the prevailing system of health care. 

In great contrast the factor of medical care was central to the problem of maternal mortality. The quality and distribution of expert care was primary in any solution of the problem. Given the strength of the forces supporting the existing organisation of health care, state intervention was bound to be very limited. The response to the problem of maternal mortality was made largely in terms of the need to improve obstetric training. This was necessary but not sufficient. It hardly dealt with the question of differential access to competent care because the major parties involved, the profession itself, the health authorities, both sides of the political divide, and as I shall argue, the community, basically accepted the current organisation of health care. The

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11 From the viewpoint of access to care the fee-for-service system worked reasonably well in many country towns because the more well-to-do paid somewhat more and so "subsidised" care of the poorer patient. But in poor, inner-city areas the balance did not exist and very few could afford private fees. The more well-to-do working class and elements of the middle class received care under contract practice. But only general medical care was included, although concessional rates were often granted for special services. As treatment became more specialised, contract practice became less and less adequate. Thame, op.cit., pp. 294-297.
organisation of the health care system tended to affect adversely the quality of obstetric practice. The pressures of competition and overwork in general practice tended to promote interference in the interests of speeding delivery. In this way significant reduction of the death-rate associated with childbirth was delayed.

The status and power of the organised medical profession shaped the responses made to the problems of infant and maternal mortality. The social status of the doctor in the Australian colonies was more considerable than that generally enjoyed by doctors in Britain. In a new society, which lacked an aristocracy or even an established and confident upper middle class, doctors were better educated than many other members of the well-to-do elite and were often prominent in political, scientific and cultural activities. In the colonial period almost all doctors were general practitioners, the public not differentiating between a superior caste of specialists and the ordinary practitioners. The isolation in which many doctors worked in places outside the heavily populated areas and the self-reliance which the training at the colonial medical schools promoted meant the local doctor enjoyed considerable social visibility.

Medical men like Sir Charles Mackellar, Sir Arthur Renwick, Sir James Graham, Sir Thomas Anderson Stuart, Sir Normand Maclaurin and Dr J.M. Creed, who have all been discussed at some point in this study, are good examples from nineteenth century Sydney. Mackellar and Renwick played leading roles in developing the social services of the colony. Renwick was President of the Benevolent Society and of the State Children's Relief Board for many years. Mackellar succeeded him as head of the Children's Relief Board. Mackellar, Maclaurin, Creed, Renwick and Graham were members of parliament, and three held ministerial office.

In the absence of an extensive historical study of the social standing of doctors, I have largely followed Bryan Gandevia's ideas as expressed in a recent brief article. M.J.A., Aug. 1972, pp. 381-385. Gandevia also claims doctors earned widespread respect for their work on emigrant ships coming to the colonies. However, Michael Cannon has argued that until the late nineteenth century when germ theory provided a

Continued...
The political power of the organised profession has been discussed earlier in the thesis. The profession successfully objected to legislation aimed at regulating midwives in the 1890s. Following its victory over the friendly societies in the matter of contract practice early this century, the profession went from strength to strength. The B.M.A. consistently argued state intervention in health should be confined to the preventive sphere. It firmly maintained certain basic principles over many years: that the fee-for-service payment was the best financial arrangement; that doctors should control policy areas they saw as purely medical; that they should enjoy absolute professional freedom; and that the privacy of the doctor-patient relationship should be inviolable. It is clear from evidence given by doctors to the Commonwealth Royal Commission on National Insurance, established by the Bruce-Page Government in 1923, that many believed national health insurance was unnecessary since everybody was covered by the tripartite system obtaining since the nineteenth century: private fees, friendly society insurance and public hospital outpatient care. In 1924 the B.M.A. indicated it would not tolerate lay control of professional matters such as had allegedly followed from the 1911 National Insurance legislation in Britain. The opposition of the B.M.A. was a vital factor in the conflict which led to the shelving of the U.A.P.-Country Party Government's National Health and Pensions Insurance Act in 1939.

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13 (Cont.)


15 Ibid., pp. 67-68.
Indeed, it has been suggested that the prominence given to the principles of voluntary insurance and private medical practice in the Liberal-Country Party Government's National Health scheme of the 1950s reflected the Coalition Government's experience of the organised profession's powerful defence of the fee-for-service system and private medical practice and the friendly societies' reluctance to relinquish their control of health insurance. Yet important as the profession's opposition to infringement of the principle of individual responsibility for health care was in shaping the responses to the problems of infant and maternal mortality, the profession's strength in this matter was based on the fact that the principle was rooted in widespread community attitudes, which in this respect remained in essence unchanged from the beginning of my period.

Until the later 1930s even the Labor Party accepted that with the exception of the indigent, people were responsible for making their own provision for general health care. Labor's real commitment to collective responsibility in health care might well be dated from its reaction to the 1938 National Health and Pensions Insurance Act. It opposed the measure on the grounds that the range of services covered and the range of persons insured were too limited and that the flat-rate system of contributions was socially unjust. John Curtin, leader of the Federal party, said, "this narrowness really means in practice an absolute failure to provide the thing which is the heart of the sickness problem in Australia, namely a national health service". Labor's commitment to collective responsibility was rather vague and uncertain before this time.

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16 Ibid, pp. 45-50 and 54-55.

17 Quoted in Hunter, op.cit., p.47.
Its 1929 election manifesto had promised a national medical service concerned with prevention and treatment, and for the needy, free medical and dental care. But the policy speech by the leader of the party, J.H. Scullin, promised national insurance and did not deal with health as such. Facing depression conditions, the Scullin Government responded with deflationary measures and reduced expenditure on social services.18 The Labor Party's plank calling for nationalisation of public health, which had existed for some years, was more an aspiration than a piece of carefully considered policy.19 Even the McGowen Labor Government, which took office in New South Wales in 1910 and was committed by the 1908 platform of the Political Labor League to a policy of providing access to care for the needy as a right, did not free itself of the established charity approach. It faced serious difficulties — financial stringencies, an insecure political position, and then the advent of war. Over the issue of government control of public hospitals it faced the powerful opposition of the voluntary hospitals and the organised medical profession which did not want the existing system of health care disturbed. Yet it chose to continue the traditional policy in social welfare of subsidising voluntary agencies as in the case of the National Association for the Prevention and Cure of Consumption and the Bush Nursing Association.20 Outside the issue of "nationalisation" of the public hospitals it did not try to interfere with the principle of fee-

18 Ibid, p.43.

19 Thelma Hunter has suggested that for most of the interwar period health as a political issue did not seem to excite the imaginations of the more able politicians on both sides of Federal politics: "One has the impression, looking through pamphlet literature of the time that health, especially health insurance, found its way into Australian legislation by accident rather than by design". Ibid, pp. 36-37.

for-service or friendly society provision, so leaving a large area of health care to individual responsibility. While in principle committed to ending the charity approach, it was in many ways only concerned to provide a better minimum standard of health care for the least well-to-do. This was an admirable and indeed necessary reform, but it fell far short of collective provision in health care.

The survival of the nineteenth century concept of individual responsibility, even in Labor circles, indicates the pervasiveness of the support it enjoyed. It suggests it was related to deeper social values. T.H. Kewley has claimed it is something of a paradox that while the demand for state action to further economic development was powerful in the colonial period and so subsequently was the demand for state regulation of industrial conditions, state action in aid of individual need was only reluctantly accepted.21 One result of the wariness of direct state responsibility was the central part played by voluntary bodies in social welfare. These agencies often received substantial public funds for their work. Another was the popularity of friendly or mutual benefit societies, a feature of Australian colonial life commonly cited by visiting observers. A more harsh example of the ethic of self-reliance in action in an area where a more compassionate attitude might have been expected is to be seen in the policy of the State Children's Relief Board over the payment of allowances to widows and deserted wives for the care of their children. In 1900 the Board paid on average 2/6 per child per week, which was about half the rate paid for the care of foster children. It was not intended that the rate of 2/6 per week should meet the total cost of maintaining the child because it was feared that such might deter the practice of industry and thrift.

21 Kewley, op.cit., p.7.
by the mother and older siblings. 22

The widespread acceptance of the notion of self-reliance in social welfare, including health care, survived because it was sustained, despite the depression experience of the 1890s, by a deep-seated faith in economic progress, which with some state intervention would provide a rising living standard for all. The individual could then provide for his own needs out of his share of the growing prosperity of the nation. As one historian has written of attitudes on the eve of the depression of the 1930s,

"The Australians were an optimistic people; there was a general conviction that Australia was a land peculiarly favoured. Few Australians saw reason to doubt, given the natural advantages of the country, the inevitability of uninterrupted economic progress." 23

It was widely assumed "the steady improvement of the conditions of the masses" was "guaranteed by a bountiful nature". The most important aim of social policy was not by any means collective provision of social services but the "achievement and maintenance of a high material standard of living" expressed to a large extent in terms of the level of the individual's disposable income. Originating in the buoyancy of an expanding capitalist economy in the second half of the nineteenth century, Australian optimism about material progress and about the chance to build a more egalitarian society than those of the Old World was tempered by the economic collapse of the 1890s. But the call for state intervention in the interests of social justice that emerged in the aftermath of this experience wanted state power to be used to ensure better wages and conditions, pensions for the aged and the invalid, and industrial


arbitration. State support for those suffering particular disadvantages, such as the unemployed and the sick, was not popular.

During 1860-90 wages in Australia for unskilled and skilled work were high and rising:

In the 'seventies and 'eighties railway workers, itinerant pastoral workers and miners were paid 7s. or 8s. a day.... This may have been nearly twice as much as was paid for similar work in Britain. 24

Contemporaries were well aware of the fact of higher wages and observed that poverty was not the great problem it was in European cities. 25

Writing after the period of high prosperity had ended, T.A. Coghlan, New South Wales Statistician, claimed,

The high rates of wages...and the cheapness of food have permitted the enjoyment of a great degree of comfort, if not of luxury, by a class which elsewhere knows little of the one and nothing of the other; and even in times of trade depression and reduced wages it may safely be said that the position of the wage-earner in Australia is equal to that occupied by his compeers in any other part of the world. 26

Michael Cannon has critically examined what he termed "the legend of the workingman's paradise". He maintained that conditions of work and of life for the majority in the urban lower classes were really "inferior to the rosy picture painted by those who wished to believe that the existing order of society was the best of all possible worlds". 27 With


26 Coghlan, A Statistical Account of the Seven Colonies of Australasia 1901-1902, p.691.

27 Cannon, op.cit., p.264.
higher wages, cheaper food and, except for the inner-city slums, better housing than in the heartland of capitalism, the working-class standard of living was better, but better "by comparison with the monstrous conditions tolerated by European and American industrial workers".\(^{28}\)

Whereas it took on average 127 days \textit{per annum} to earn the cost of food in Britain, 148 in Germany and 142 in France, it took only 111 days in Australia.\(^{29}\) Meat, considered a luxury by the European working class, was everyday fare in Australia. The working man's remarkable consumption of meat was noted by observers of Australian life from Trollope in the 1870s onwards.\(^{30}\) Some members of the urban working class, particularly artisans, could look forward to buying with building society aid their own homes.\(^{31}\) James Inglis observed in 1880 that because of the "prevalence of this desire of the artisan to become a proprietary householder, the land has acquired an abnormal value".\(^{32}\) Yet the margin of prosperity was thin for many. Prolonged sickness, accident or unemployment could wipe out the security won by years of effort:

\begin{quote}
The existence of even the more advanced working-class families was fairly precarious, requiring only slight misfortune to plunge them into an abyss from which few ever clambered back.\(^{33}\)
\end{quote}

\(^{28}\)Ibid, p.248.

\(^{29}\)Coghlan, \textit{A Statistical Account of the Seven Colonies}, p.367.

\(^{30}\)See A. Trollope, \textit{Australia and New Zealand}, p.178; Twopeny, \textit{op.cit.}, pp. 63-64; Buley, \textit{op.cit.}, p.134.

\(^{31}\)Twopeny, p.37.


\(^{33}\)Cannon, p.262.
Poverty was not considered to be a serious problem. Coghlan wrote, "the contrast between rich and poor, which seems so peculiar a phase of modern civilization, finds no parallel in these southern lands". Likewise, ill-health was not seen as a great problem. The "natural salubrity" of New South Wales was considered to be self-evident. That a favourable climate and the absence of debilitating endemic diseases like malaria meant basic conditions for health were good was believed to be obvious. The problem, as identified in the 1870s and 1880s, was the unnaturally high general death-rate and infant mortality rate in Sydney itself. In the late 1880s Coghlan observed, "...the rate at which children of tender years drop into the grave forms a pathetic commentary on our civilization". Neglect of proper sanitary measures, not "natural causes", was the reason advanced for the high metropolitan death-rates, so that "What Nature with lavish hand" had provided was "in danger of being destroyed or polluted". All that was needed was proper environmental sanitation. So far as actual treatment was concerned, the

34 Wealth and Progress, 1886-87, p.491.

35 The assumption that Australia enjoyed a basic advantage over Europe in the matter of social conditions is clearly reflected in Mackellar's remarks about the problem of infant mortality in a 1917 pamphlet: "...the mortality of both children and adults is by no means so unfavourable as that of many of the countries of the Old World.... But that circumstance should not engender in our people an attitude of self satisfaction...for it must be remembered that we have a healthy climate, a well paid and vigorous young people who are subject to none of the unfavourable conditions which so largely contribute to the excessive mortality of the people of the older countries, with their teeming population often crowded in insanitary tenements, and a majority of them working ten hours a day or more, in ill-ventilated workrooms amidst the grime and dust engendered by manufacturing processes". Mackellar, The Mother, the Baby and the State, Sydney, 1917, p.15.

36 Wealth and Progress, 1886-87, p.172.

37 Ibid, p.177.
tripartite system of private care, friendly society contract practice and the charity of the voluntary, public hospitals seemed to cover everybody.

The new Labor Parties did not seriously challenge the principle of individual responsibility in health care. Labor was meliorist and reformist, seeking a greater share of the growing product of a capitalist economy. It did not seek fundamental social change. Goodwin has observed:

Socialist doctrine came to be employed less and less to justify complete social reconstruction and more and more to support familiar and long-standing demands for land, banking and currency reform, control of monopolies, and public welfare measures. In the years that followed depression [in the 1890s], influential labor leaders advocated moderate experimental social legislation, and particularly schemes for wages arbitration, in attempts to improve conditions of workers without introduction of overall public ownership and rigid economic control.  

If individual responsibility for health care, originating in nineteenth century laissez faire principles and basically undisputed by the new Labor Parties, was one powerful force shaping the response to the problems of infant and maternal mortality, another, I have argued, was the widely held desire to maximise population growth. It is true that in times of economic hardship Labor wanted immigration to be limited to a volume which did not threaten the employment of Australian workers. In 1928, for example, the Labor Party moved a censure motion against the Bruce-Page Government "for its failure...to limit migration to the

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nation's ability to absorb new arrivals, together with its neglect to formulate proposals to deal with unemployment". With this proviso, Labor supported population growth as a necessary national objective, and certainly had no reservations about promotion of growth of the native-born population by natural increase.

Population growth, especially by natural increase of the native-born, was widely seen as desirable because it was believed to be necessary for the achievement of two fundamental Australian objectives: occupation and development of the continent, and security against invasion. Explaining the "special fascination" population studies, including the careful collection of vital statistics from an early period, have had for Australians, Goodwin wrote,

First, Australians hoped through analysis of population growth to understand and to control the development of their new and empty continent. Second, they saw in the population increase of their Asian neighbours a threat to national survival.40

The revelations about the declining birth-rate round the turn of the century gave urgency to the problem of population growth. The systematic saving of infant life acquired an unprecedented importance just when understanding of the basic problem of infant mortality of the time, diarrhoeal and associated conditions, was being established by public health doctors. Middle-class reformers like Sir Charles Mackellar could, in promoting infant welfare, marry humanitarianism and a vital national interest. Since population growth in the interests of national development and defence of White Australia was fundamentally bi-partisan, Labor Governments and their political opponents were equally assiduous


40 Goodwin, op.cit., p.397.
in their support of the infant welfare movement. Concern about population growth also lay behind the response to the problem of maternal mortality which emerged in the interwar period. I argued that the response to this problem came later than that to the problem of infant mortality not only because technical means to its "solution" were slower to develop and because of the advent of the War, but because population growth was so significant a consideration that the saving of infant lives bulked larger than maternal deaths.

The powerful force of concern about population growth in the interest of national strength promoted the development of organised infant welfare work in other Western nations. The intensification of international political and economic competition among Western nation states and empires in the last years of the nineteenth and early years of the present century gave rise to a search for means of building national power. The quantity and quality of population became important considerations. Infant lives lost were no longer considered inevitable sacrifices in a Malthusian world of scarcity but valuable assets to be saved and used in the emerging Darwinian struggle for survival among nation states and indeed races. In Australia in the late 1880s the Bulletin enthusiastically welcomed Thomas Huxley's suggestion that the struggle for existence had progressed from the level of the individual to that of nations and races. C.H. Pearson, a professor and a minister

41 R.S. Parker concluded a historical study of party policies concerning public enterprise by suggesting the study pointed to the validity of the proposition that "all Australians envisage 'development' as the prime concern of government". Parker, loc.cit., p.223. W.D. Borrie proposed that behind concern about the Australian population "problem" was "the desire to attain a population sufficient to utilize fully the country's resources, the fear that population might be insufficient to meet the threat of aggression, and optimism concerning the future role of the nation". Borrie, Immigration. Australia's Problems and Prospects, Sydney, 1949, p.6.

42 Goodwin, op.cit., p.344.
of education in Victoria, forecast that the white races would eventually be
dominated by "inferior" coloured races with the result that mankind
would regress to a lower evolutionary stage. His book, National Life
and Character: A Forecast, became well known in Britain and America
in the 1890s. W.M. Hughes, leading Labor politician and later a
Nationalist, used evolutionist theory to support state intervention. 43

In Britain in the 1890s there was considerable discussion of what
constituted "a progressive and ascendant racial group". In 1899 Joseph
Chamberlain, an important member of the Government, publicly canvassed
the possibility of a triple alliance of Britain, the United States and
Germany on the ground of racial affinity rather than the traditional
ground of similarity of material interests. Karl Pearson developed a
"scientific theory" of racial conflict which saw efficient races
(efficiency being measured in scientific, technological and military
terms) "naturally" crushing races whose physical and mental fitness
had fallen to a low level. Such extreme racialism was not widely
popular, but "many of its assumptions did enter into the political
vocabulary of imperialism and the cult of efficiency". Warfare became
the dominant image of human activity. It was seen as both inevitable
and desirable. 44 Bernard Semmel has noted how the military requirements
of European nations and the Social-Darwinist ideology of inevitable
warfare promoted concern about quality of population:

In the new world of the twentieth century...international
conflicts were going to be fought by mass national armies.
Could the hundreds of thousands of able-bodied, loyal
soldiers the mass armies required be obtained from an
unpatriotic and stunted working class? This seemed an
especially serious problem to the fin-de-siècle
statesmen who heard repeated warnings about war as a

43 Ibid, pp. 335-338 and 347-349.

44 Searle, op.cit., pp. 95-96.
natural law of history, the struggle for existence, and the 'survival of the fittest' from the Social-Darwinists — and who saw in Imperial Germany a 'national organism' determined to prove itself the fittest.\(^\text{45}\)

I argued earlier in the thesis that the debate about national efficiency which followed British defeats in South Africa and revelations about the poor physical condition of working-class volunteers for the war against the Boers brought to the fore the question of the health of the people. The problem of an unfit population and a falling birth-rate seemed central to the building of national power. The welfare of infants and children, which public health doctors and some local authorities had been trying to advance for some time, now assumed considerable significance. It was deemed worthy of central government attention. Concern about the falling birth-rate led Britain to inform the Imperial Conference of 1907 that the mother country could not afford to allow more than 300,000 emigrants a year to settle in the Empire. A similar concern marked almost every official enquiry concerning emigration until World War II.\(^\text{46}\) Until the Second World War such concern about population growth was common in the Western world. It gave rise to a number of pro-family and pro-natalist measures in various European nations.\(^\text{47}\) In France, the nation that pioneered organised infant welfare work, the birth-rate had been low from the beginning of the nineteenth century. The advance of German power after the late 1860s elicited a good deal of propaganda in France in favour of stimulating population growth. But large-scale propaganda really began with the


formation of the *Alliance Nationale pour l'accroissement de la population française* in 1896. It was responsible for establishment of an extra-parliamentary commission on population decline in 1902. In 1919 the pro-natalist movement was officially recognised by the creation of the *Conseil supérieur de la natalité* which was made responsible for enquiry into matters to do with fertility and mortality. To deal specifically with the problem of infant mortality, the *Ligue contre la Mortalité Infantile* was established in 1902. Its work for the welfare of mothers and infants was carried on in a broader form by the *Comité National de l'Enfance*, founded in 1922. 48

Considerable public discussion of the declining birth-rate took place in Germany also in the years before World War I, and it was commonly suggested that official measures to stimulate population growth be introduced. One of the more academic studies of the question was a work published by Max von Gruber in 1914. He advocated a range of measures including allowances for families with three or more healthy children, suppression of birth-control information, severe penalties for induced abortion, and special taxes on the unmarried and on childless and one child families. He anticipated the type of measures instituted by the Nationalist Socialist régime. 49 A number of German cities did infant welfare work in the broad sense round the turn of the century. A Society for the Prevention of Infant Mortality was founded at Dresden in 1909. But the headquarters of German work on infant mortality was the *Kaiserin Auguste Victoria Haus*, opened in Berlin in 1909. Under imperial patronage, it was intended to be a model institution for scientific research on infancy, for care of parturient women and sick

48 Glass, *op.cit.*, pp. 147-150.

babies and for the training of nurses.  

In the United States the declining birth-rate, seen by critics as "race suicide", became the subject of national debate in the early 1900s, although fears about population decline had been expressed for thirty or more years. President Theodore Roosevelt took a leading role in the debate. Roosevelt's warnings about the consequences of population decline were quoted in public discussion of the birth-rate issue in Australia in the early 1900s. As in Britain and Australia, systematic infant welfare work began in the cities in the United States. Work similar to Armstrong's in Sydney was started by the Health Department of New York City in the early 1900s. In 1909 the American Association for the Study and Prevention of Infant Mortality was founded. In 1912 the United States Government established the Federal Children's Bureau, the object of which was enquiry into "all matters pertaining to the welfare of children and infant life". The Bureau carried out a number of valuable surveys of infant mortality in various urban areas.  

Like other Western nations in an era of increasing international rivalry, Australia in the early 1900s became concerned about the size and quality of her population. Awareness of a declining birth-rate gave a sharp edge to this concern. But concern about population growth in Australia was motivated by local considerations as well, for while

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50 Abt-Garrison, op.cit., p.161. In a perhaps biassed way, Garrison observed that in Imperial Germany "the modern care of infancy in hospitals...in spite of the splendid organization of applied science...was more or less an expression of the concern of the metallic Prussian bureaucracy about the decline of the birth rate". It lacked that "humanistic 'mothering' which is deemed so essential in Anglo-Saxon countries". Idem.

1 Linda Gordon, Hecate, July 1975, p.41. See also A.W. Calhoun, op.cit., Chp.XI.

2 Abt-Garrison, pp. 163-164.
Australia was economically, culturally and politically part of Europe, she was Europe overseas — a continent of apparently great natural resources, which was only thinly occupied over large areas and which was located close to the huge populations of Asia. Moreover, Australian nationalists had ambitions to play a dominant role in the Western Pacific. The rise of Japan presented an ominous threat to such ambitions and perhaps to continued European possession of the continent itself.

The Royal Commission on the Birth-Rate had warned in 1904,

> The patriotic ardour inspired by this hopeful anticipation [of Australia as a powerful nation] is, however, destined to be cooled in the contemplation of the fact that, while Russia and Japan, prospective rivals of Australia for supremacy in the Western Pacific, are already seeking outlets beyond their own borders for the energies of their ever-growing people, it will be forty-six and a half years before Australia...will have doubled her population...and 168 [sic] years before her numbers will have reached the present population of Japan.\(^3\)

If dominance in the region was at stake, so was the vital cordon sanitaire of a White Australia, within which Australians of all classes could build cooperatively a prosperous and just society, unpolluted by the presence of non-European communities. The Birth-Rate Commission warned again,

> The future of the Commonwealth, and especially the possibility of maintaining a 'white Australia', depend on the question whether we shall be able to people the vast areas of the continent which are capable of supporting a large population. This can only be done by restoring...a high rate of natural increase, or by immigration on a large scale, or by both these means of recruiting posterity. With the maintenance of a high rate of natural increase is inseparably connected the preservation of infant life. We have shown that the defective birth-rate is aggravated in its effects in reducing natural increase by an excessive death-rate among the newly-born.\(^4\)


\(^4\) Idem.
The Sydney Chambers of Commerce and of Manufactures recorded their deep concern about the effect of slower population growth on economic progress and the survival of the race. The Chamber of Manufactures showed itself aware that the Australian predicament was part of a general Western problem. It was confident New South Wales could take the lead for the West in counteracting the trend. The Chamber regretted,

A tendency has been established which would end...in the subjugation...of our race within measurable time.... We desire emphatically to record our opinion, formed upon current European and American literature, that there is no difference in the state of society in New South Wales, in respect of the matters...relating to the birth-rate and to mortality, to that of other civilised countries ...

That racial homogeneity was considered by the vast majority as vital in itself, and not simply because Asians were undesirable on economic grounds, is indicated by the statements of politicians of all major parties and by the fact that Commonwealth Governments continued to deny Japanese, Chinese and Indians the chance to settle, irrespective of their social, economic or educational status. The right to settle was, however, accorded to peasants from Europe. T.A. Coghlan described Australian attitudes clearly in a statement of 1908:

The most serious objection to the coloured races is... the ethnical; the economic objections might perhaps be waived were the other non-existent. In all Australian cities there are large communities of non-British Europeans who are greatly objected to on economic grounds, but whose presence is tolerated because they belong to the races with whom Australians may intermarry, and who may thus ultimately become absorbed in the general population.6


The same central objectives — economic development and preservation of a White Australia — were held to be vital by the leaders of the infant welfare movement. Neville Mayman, President of the Benevolent Society, who was commissioned by the Holman Nationalist Government of New South Wales to investigate infant and maternal welfare in New Zealand, noted in his 1918 report that regrettably the birth-rate in New Zealand, as in most English-speaking countries, was falling. Urging state action in infant welfare, he said,

The State is deeply interested in the increase of its population, more particularly in a young country. Every baby born is a prospective taxpayer and wealth producer.7

That population growth was widely accepted as essential to the attainment of economic development and the preservation of racial homogeneity is well illustrated by the terms in which major charitable bodies, engaged in infant and maternal welfare work in Sydney, appealed for funds from the public in the interwar period. In 1918 the Benevolent Society asked for public support for its Renwick Hospital for Infants and the Royal Hospital for Women in the following terms:

Patriotic, thoughtful citizens will all agree that it is to the baby of to-day that we have to look to fill the gaps in our ranks caused by this devastating War. Save the Babies and so build up the nation.8

Developing Australia — that greater population is necessary for complete and essential development all will surely agree.... There is a constant wastage of infant life in Australia that...could be prevented. Every citizen who loves Australia should help the Society in its effort to build up the nation.9

7 Report of Mayman on Welfare of Mothers and Children in New Zealand, 1918, p.11.
9 Ibid, p.2.
War at Home and Abroad. From Aug. 1914 to Feb. 1917, 17,672 of our men killed at the Front. During the same period 32,000 babies died in Australia under the age of five years.\(^{10}\)

Healthy, happy children make a strong and virile race. Australia needs every baby it can save.\(^{11}\)

The Royal Hospital for Women, Paddington.... The Mothers of our race deserve the best we can provide for them, as the future of the nation is in their keeping.\(^{12}\)

Appealing for donations from the public in 1925, the management of St Margaret's Hospital, one of the major maternity hospitals in Sydney, declared,

In the last four years, 122,990 infants have died. This is more than twice the number of Australian soldiers killed during the war and more than the entire casualties of the A.I.F....

The Hospital's appeal quoted A.B. Piddington, who had conducted the 1912 enquiry into the effects of employing female labour in factories, as saying, "In Australia the birthrate is decreasing and the death rate is increasing. If this continues Australia as a nation will disappear". The editor of the Sun newspaper was quoted as saying, "What this country needs is not New States, but New Babies, and new conditions that will keep them healthy and alive". Finally, the Director of St Margaret's itself had this to say,

Just as surely as the White races took Australia by force from the aboriginals, so surely will the coloured races take Australia by force from the descendants of

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\(^{10}\) Charities Gazette, 3/1/18, p.8.

\(^{11}\) Ibid, p.4.

\(^{12}\) Ibid, p.5.
the present race, unless something is done towards self-preservation.13

Greenwood asserted that the period from 1901 to the depression of the 1930s was essentially one of national development. Occupation and material exploitation of the continent was not fundamentally interrupted until the onset of the depression.14 There was great optimism about the unique opportunities open to Australian nationhood. Faith in the ever-expanding horizon of national development: "A nation for a continent, and a continent for a nation". The first decade of the Commonwealth saw the achievement of a high degree of agreement between Labor and Liberal opinion on basic national objectives.

Underpinning the agreement was "an optimistic acceptance of the social democratic doctrine of progress".15 The agreement assumed the continued growth of national wealth from development of the favoured continent's natural resources and the need to establish a more equitable distribution of well-being, or at least to remedy manifest social injustice, by state intervention. Central to the compact was the assertion of a right to control the racial character of the new nation, essentially to exclude non-Europeans. To defend this cordon sanitaire and to develop more adequately the resources of the continent, a much larger population was required.

13 The Romance of St. Margaret's Hospital. Behind the Little Green Gate, Sydney, 1925. In an article on the history of the Royal Alexandra Hospital for Children C.R. Moss reminded his readers, "The strength of a nation rests in its people. A patriotic population is its strongest rampart, and in no better way can such a defence be built up as by conserving...the child life of our own race and land.... Every little one therefore that is saved at the hospital not only helps to lessen that National toll of death, but automatically helps to strengthen our British Empire". C.R. Moss, The Oddfellow, Dec. 1925, p.23.

14 Greenwood in Greenwood, ed., op.cit., p.204.

Race consciousness in Australia changed over time. Whereas in 1901, when legislative expression was being given to White Australia, a sense of superiority lay behind the desire for racial homogeneity — Prime Minister Barton stated coloured peoples were inherently inferior — by the early interwar period the need for White Australia was argued in terms of the incompatibility of European and Oriental cultures, the notion of superiority being explicitly rejected. Above all, it was the modernisation and great power status achieved by Japan which produced this change. Japan's achievements during the first two decades of this century gave the lie to the doctrine of inferiority of the coloured races. Sir Frederick Truby King, internationally known for his work in infant welfare, said observation of the beneficial effects of breast-feeding by Japanese peasant women made by him on a visit to Japan during the Russo-Japanese war eventually led to the foundation of the New Zealand Plunket Society. For him Japanese military prowess depended on a physical fitness which was based on sound infant rearing:

Some thirty millions of breast-fed people, reared in the open country, were impressive enough; and the high efficiency and prowess of the Japanese army was the natural result.

He contrasted the widespread lack of fitness among British recruits for the Boer War. Japan as well as Germany was a model for the exponents of the idea of national efficiency in Britain in the early 1900s. As an ally after 1902, Japan was easier to admire. Japan's victory over Russia in the war of 1904-05 was said to show the advantages of "organisation, dedicated patriotism and scientific method in the supreme test of war". Fabian as well as Conservative imperialists expressed

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16 Yarwood, op. cit., p.155.

admiration for what they saw as dedication and purpose in the pursuit of national objectives. 18 At the time of the Royal Commission on the Birth-Rate Dr C.K. Mackellar wrote to the Sydney press, presenting the views of a Japanese observer of Australasian behaviour. The account of these views amounted to a cautionary tale about the inevitable fall from power of Western nations, whose people in the pursuit of material well-being continued to restrict reproduction. The Japanese was reported as saying,

You look upon us as barbarians, unfit for admission into your country, but the sons of my nation...are even now gazing forward to the time when your descendent star shall have set. 19

In the interwar period the pursuit of population growth and the desire to maintain racial homogeneity remained key national aims. Japanese aggression and the increasing instability of the international order in the 1930s heightened concern about population size. The experience of near invasion by Japanese forces during the Second World War strengthened the resolve to increase population by large-scale immigration in the immediate post-war period. The cornerstone of policy remained a White Australia. 20

The close connections linking concern about population growth, the desire for racial homogeneity and attitudes to women were recently argued in the following terms:

The oppression of women is closely interwoven with notions of race. In Australia, which is a tiny enclave of white settlement isolated in the Pacific, the desire for a high

18 Searle, op.cit., pp. 57-60.
19 D.T., 27/6/03.
birthrate and the maintenance of racial strength and purity have long been national priorities....

Concomitant with the cry to 'populate or perish', the decimation and containment of Aborigines and the exclusion and restriction of non-white immigrants, has been the confinement of women to their reproductive functions. White women in Australia have been viewed primarily as breeders of the Anglo-Saxon strain and any threats to this role... have met with great hostility and resistance.21

I argued that concern about population growth, heightened by revelations concerning the declining birth-rate, gave rise to advocacy of education for motherhood. The most significant expression of the wish to educate women for the role of mother was the infant welfare movement. Another example was the introduction of domestic science teaching into state schools. Traditional education in infant-rearing and housekeeping within the family was now to be supplemented by state-supported instruction by experts.

Miriam Dixson has argued the critical importance for the status of women in Australia of the fact that the "formative decades" of settlement occurred when England was undergoing the process of industrialisation and modernisation which removed from women the status of co-worker in the home and took men to new work locations in factories and burgeoning bureaucracies:

Exit the sturdy partner, the practical helpmate who carried her share of the family's earning and living. Enter the romantic, inhibited, swooning Victorian whose fragility required cosseting (and corseting).22

Whether the status of women has been especially low in Australia and why

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21 Foreword to Linda Gordon, _loc.cit._, p.40.

22 Quoted in Dixson, _op.cit._, p.227. Dr Dixson has suggested the peculiarly low status of women in Australia was very much due to the fact that "casual poor" and convict women, products of the industrial revolution, were "an important source of role models for Australian females". _Idem._
this was the case cannot be explored here. But undoubtedly a sexual division of labour, in which the woman's natural place was assumed to be the home and her proper work care of the family, became established. What gave an edge to declamations of this fundamental truth by middle-class spokesmen for the existing social order in the early 1900s was realisation that significant social change was occurring. In the area of work young women of the lower classes were showing a growing inclination to forego domestic service for factory and shop work. Women generally were choosing not to reproduce as frequently. The declining birth-rate, with its implications for population growth, seemed to threaten basic national aims— even survival of the nation— as these were identified by such spokesmen. Economic development, capacity to defend a racially homogeneous society against external aggression, and the prospect of dominance in the Western Pacific were threatened. This was happening at a time of increasing great power rivalry in Europe and the uncertainty created by Japan's rise to power.

C.K. Mackellar wrote concerning women in the work-force in 1907:

> Industrial conditions... and the stress of competition, by which women are brought into active rivalry with men in the ordinary business of life, are a source of demoralisation. Women come into the industrial arena to the detriment or utter neglect of their social and natural duties — the care and nurture of children... the exercise of this 'mothering' is as important to the mother for moral reasons as it is to the child for physical reasons.  

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23 Mackellar, The Child, the Law and the State, Sydney, 1907, p.33. He argued that the unselfishness motherhood taught made women less disposed to commit crimes. Moreover, shielded by their domestic environment, they were not so subject to temptation. He had no answer to the problem of working women since "Society, as it is at present, constituted, requires the employment of women". Ibid, p.34.
The inquiry into employment of juvenile and female labour in factories and shops conducted by A.B. Piddington just before World War I was vitally concerned with the question of how such employment affected the health of young women because

...the health and development of women and juvenile workers in factories becomes a matter going to the root of what is recognised as the stem itself of progress in the Commonwealth, viz:- the increase in population, particularly native-born, and the maintenance and improvement of good health, physique, and moral type in that increase.  

The Birth-Rate Commission extensively quoted medical opinion to show that failure to reproduce could have unpleasant physical and psychological consequences for women. Contraception was said to be an important cause of the increase in diseases of the generative organs and to be a factor in the genesis of hysteria and other "nervous ailments". An alienist, Dr Chisholm Ross, believed it was a contributing factor in some cases of insanity. Refusing to accept that inadequate income was a reason why the size of families was being restricted, the Commission asserted that restriction resulted from selfishness on the part of women, who wished to avoid the discomforts of child-bearing. In the Commission's view women were failing to carry out their patriotic duty in their area of special expertise: child-bearing and child-rearing. The human resources, without which national development and power could not be advanced, were not being adequately produced.

Undoubtedly, the movement dedicated to saving infant lives was motivated by altruism and philanthropy. There was also present a

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24 R.C. on Hours and Gen. Condits. of Employ. of Female and Juvenile Lab. in Factories and Shops Report, 1912, p.VI.

strong instrumentalism which saw infant life as a potential resource in the building of national strength and saw the "servicing" of "real" people as women's proper function. Lady Rawson, President of the National Council of Women, in 1904 described this function as follows:

...women's [sic] first duties were her home duties...her first care should be to secure the well-being of her husband and children, her servants and those over whom she had influence.26

In a capitalist society, where the polarization of human qualities between those defined as "feminine" and those as "masculine" was extreme, and at a time when national rivalry was intensifying, it is hardly surprising that organised infant welfare work was motivated at least as much by the desire to advance national power and development as by compassion and the urge to nurture. Indeed, it was considerations of power and development which elevated the question of infant welfare to the level of public debate, as the fear of population decline expanded.

Likewise, concern about maternal welfare sprang from a twofold motivation: deaths of women in pregnancy and childbirth were deplorable as such, but they were also to be deplored because they robbed the nation of sources of future citizens and productive units. The infant and maternal welfare movement was further shaped by the values of a basically capitalist society which saw health care provision as primarily the individual's responsibility. The extension of state intervention in the area of health care was only reluctantly accepted. Yet state provision went further in infant welfare than it did in maternal welfare because it did not cost much and it did not trespass on the preserves of private medicine.

26 Quoted in Dixson, op.cit., p.204.

27 Feminine qualities would be, for example, compassion, nurturance, receptiveness, while masculine ones would be aggressiveness, initiative, and adventurousness.
Thus, the movement to save infant and maternal lives did not emerge ex nihilo. It was not an isolated phenomenon. Nor was it just another expression of the humanitarian or charitable spirit. Its emergence was fundamentally influenced by the national aspirations and social values of the time. It emerged in an urban setting because Sydney, like other large cities of the Western world, experienced a high level of infant mortality, an instance of the urban pathology which middle-class leaders of the town planning and other reform movements wanted to eradicate. The infant welfare movement, like the town planning movement, was not concerned to reduce the economic inequality which contributed so much to the high infant death-rate. Yet in the provision of simple advice on infant care, and in particular the advice to breast-feed, the movement wielded a notably effective weapon against the infant mortality of the time. The attack on maternal mortality, being very dependent on the quality of care available to the patient, was less successful in a system of care where capacity to pay to a large extent determined access to good-quality care. Moreover, full understanding of the problem of puerperal infection was only attained in the 1930s. Hard on its heels came the discovery of effective chemotherapy. The maternal death-rate fell dramatically. Effective therapy in the later 1930s achieved what provision of good-quality maternity care for all women might have achieved considerably earlier.
Appendix 1

Deaths of Infants per Thousand Births

<table>
<thead>
<tr>
<th>Years</th>
<th>Sydney</th>
<th>Rest of NSW</th>
<th>All NSW</th>
<th>Australia</th>
<th>New Zealand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1871-75</td>
<td>157</td>
<td>83</td>
<td>103</td>
<td>118</td>
<td>110</td>
</tr>
<tr>
<td>1876-80</td>
<td>169</td>
<td>92</td>
<td>114</td>
<td>121</td>
<td>95</td>
</tr>
<tr>
<td>1881-85</td>
<td>174</td>
<td>98</td>
<td>123</td>
<td>125</td>
<td>90</td>
</tr>
<tr>
<td>1886-90</td>
<td>154</td>
<td>92</td>
<td>114</td>
<td>119</td>
<td>84</td>
</tr>
<tr>
<td>1891-95</td>
<td>138</td>
<td>96</td>
<td>111</td>
<td>108</td>
<td>87</td>
</tr>
<tr>
<td>1896-1900</td>
<td>130</td>
<td>105</td>
<td>113</td>
<td>112</td>
<td>80</td>
</tr>
<tr>
<td>1901-05</td>
<td>106</td>
<td>91</td>
<td>97</td>
<td>97</td>
<td>74</td>
</tr>
<tr>
<td>1906-10</td>
<td>85</td>
<td>73</td>
<td>77</td>
<td>77</td>
<td>69</td>
</tr>
<tr>
<td>1911-15</td>
<td>73</td>
<td>70</td>
<td>71</td>
<td>70</td>
<td>53</td>
</tr>
<tr>
<td>1916-20</td>
<td>68</td>
<td>62</td>
<td>65</td>
<td>64</td>
<td>48</td>
</tr>
<tr>
<td>1921-25</td>
<td>59</td>
<td>57</td>
<td>58</td>
<td>57</td>
<td>42</td>
</tr>
<tr>
<td>1926-30</td>
<td>54</td>
<td>54</td>
<td>54</td>
<td>51</td>
<td>36</td>
</tr>
<tr>
<td>1931-35</td>
<td>40</td>
<td>43</td>
<td>41</td>
<td>41</td>
<td>31</td>
</tr>
<tr>
<td>1936-38</td>
<td>39</td>
<td>43</td>
<td>41</td>
<td>39</td>
<td>32</td>
</tr>
</tbody>
</table>

Appendix 2

Infant Deaths per Thousand Births among Male and Female Infants
in a Group of Urban and a Group of Rural Counties
in 1873-77 and 1898-1902, England and Wales

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Urban Counties</th>
<th>Rural Counties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males 1873-77</td>
<td>Males 1898-02</td>
</tr>
<tr>
<td></td>
<td>Females 1877</td>
<td>Females 1902</td>
</tr>
<tr>
<td>All causes</td>
<td>175.9 180</td>
<td>145.5 149.2</td>
</tr>
<tr>
<td></td>
<td>139.9 138.8</td>
<td>112.5 111</td>
</tr>
<tr>
<td>Smallpox</td>
<td>0.5 0</td>
<td>0.5 0</td>
</tr>
<tr>
<td>Measles</td>
<td>3 3.7</td>
<td>2.6 3.2</td>
</tr>
<tr>
<td>Scarlet Fever</td>
<td>1.5 0.3</td>
<td>1.3 0.2</td>
</tr>
<tr>
<td>Diphtheria/Croup</td>
<td>1.2 0.8</td>
<td>0.9 0.6</td>
</tr>
<tr>
<td>Whooping Cough</td>
<td>5.9 5.2</td>
<td>6.6 5.8</td>
</tr>
<tr>
<td>Syphilis</td>
<td>2.2 1.5</td>
<td>2.1 1.3</td>
</tr>
<tr>
<td>Rickets</td>
<td>0.1 0.8</td>
<td>0.1 0.5</td>
</tr>
<tr>
<td>Tuberculous disease</td>
<td>11.8 8.2</td>
<td>9.3 6.6</td>
</tr>
<tr>
<td>Convulsions/Meningitis</td>
<td>32 23.3</td>
<td>24.5 18.2</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>20.6 16.5</td>
<td>16.3 13.4</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>9.8 13.8</td>
<td>7.6 10.8</td>
</tr>
<tr>
<td>Disease of stomach/liver</td>
<td>1.9 3.5</td>
<td>1.3 2.9</td>
</tr>
<tr>
<td>Epidemic diarrhoea</td>
<td>22.1 36.6</td>
<td>18.8 32.5</td>
</tr>
<tr>
<td>Prematurity</td>
<td>14.2 22.3</td>
<td>11.6 17.9</td>
</tr>
<tr>
<td>Congenital defects</td>
<td>2 5.3</td>
<td>1.8 4.1</td>
</tr>
<tr>
<td>Atrophy/debility</td>
<td>29.9 23.8</td>
<td>25.8 19.4</td>
</tr>
</tbody>
</table>


Appendix 3

Infant Deaths per Thousand Births, Sydney and Suburbs,
1875-1904, by Causes

<table>
<thead>
<tr>
<th>Year</th>
<th>All Zymotic Diseases* (except diarrhoea)</th>
<th>Pneumonia and Bronchitis</th>
<th>Diarrhoeal Diseases</th>
<th>Convulsions</th>
<th>Dentition (Teething)</th>
<th>Atrophy, Dehility and Inanition</th>
<th>Prematurity</th>
<th>All Congenital Defects</th>
<th>Tubercular Diseases</th>
<th>All Causes</th>
<th>Combined mortality from causes in columns 4, 5, 6, and 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1875</td>
<td>22</td>
<td>14.1</td>
<td>24.7</td>
<td>18.6</td>
<td>8.4</td>
<td>43.6</td>
<td>15</td>
<td>2.6</td>
<td>10.9</td>
<td>176</td>
<td>95.3</td>
</tr>
<tr>
<td>1877</td>
<td>15.9</td>
<td>10.8</td>
<td>32.5</td>
<td>16.6</td>
<td>7.4</td>
<td>28.4</td>
<td>11.9</td>
<td>3.6</td>
<td>10.5</td>
<td>156</td>
<td>84.9</td>
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<td>1879</td>
<td>9.5</td>
<td>11.5</td>
<td>36.3</td>
<td>20.6</td>
<td>5.1</td>
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<td>10.4</td>
<td>1.8</td>
<td>9.8</td>
<td>153</td>
<td>92.8</td>
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<tr>
<td>1881</td>
<td>12.1</td>
<td>14.8</td>
<td>32.1</td>
<td>22.8</td>
<td>4.3</td>
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<td>8.9</td>
<td>2.5</td>
<td>9.2</td>
<td>162</td>
<td>94.7</td>
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<td>1883</td>
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<td>13.8</td>
<td>31.9</td>
<td>19</td>
<td>4.6</td>
<td>38.8</td>
<td>12.9</td>
<td>2.7</td>
<td>9.2</td>
<td>163</td>
<td>94.3</td>
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<td>1885</td>
<td>10.9</td>
<td>14.5</td>
<td>39.9</td>
<td>22.3</td>
<td>6.8</td>
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<td>13.3</td>
<td>2.5</td>
<td>11.1</td>
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<td>111.2</td>
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<td>1887</td>
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<td>10.5</td>
<td>34.6</td>
<td>14.2</td>
<td>6.3</td>
<td>22.1</td>
<td>12.6</td>
<td>3.4</td>
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<td>140</td>
<td>77.2</td>
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<td>1889</td>
<td>14.8</td>
<td>16.2</td>
<td>44.4</td>
<td>14</td>
<td>6.6</td>
<td>25.5</td>
<td>13.6</td>
<td>4.3</td>
<td>8.7</td>
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<td>8.7</td>
<td>17.7</td>
<td>34.5</td>
<td>13.6</td>
<td>4</td>
<td>23.9</td>
<td>14.8</td>
<td>3.8</td>
<td>5.1</td>
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<td>1895</td>
<td>7</td>
<td>10.1</td>
<td>39.2</td>
<td>9</td>
<td>0.7</td>
<td>21.7</td>
<td>15.1</td>
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<td>5.4</td>
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<td>1897</td>
<td>3.5</td>
<td>12.8</td>
<td>43.4</td>
<td>8.9</td>
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<td>17.1</td>
<td>3.7</td>
<td>3.9</td>
<td>129</td>
<td>73.9</td>
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<td>1899</td>
<td>9.2</td>
<td>10.7</td>
<td>33.6</td>
<td>6.1</td>
<td>0.2</td>
<td>16.8</td>
<td>17.1</td>
<td>4.6</td>
<td>4.7</td>
<td>120</td>
<td>56.7</td>
</tr>
<tr>
<td>1901</td>
<td>10.3</td>
<td>11.8</td>
<td>37.4</td>
<td>5.5</td>
<td>1.4</td>
<td>17.1</td>
<td>15.5</td>
<td>4.2</td>
<td>2.9</td>
<td>120</td>
<td>61.4</td>
</tr>
<tr>
<td>1903</td>
<td>6.7</td>
<td>12.5</td>
<td>44.2</td>
<td>3.9</td>
<td>0.8</td>
<td>12.5</td>
<td>14.5</td>
<td>5.4</td>
<td>2.3</td>
<td>116</td>
<td>61.4</td>
</tr>
<tr>
<td>1904</td>
<td>5.1</td>
<td>8.4</td>
<td>31</td>
<td>3.2</td>
<td>0.7</td>
<td>11.4</td>
<td>18.8</td>
<td>6.5</td>
<td>2</td>
<td>98</td>
<td>46.3</td>
</tr>
</tbody>
</table>

"Zymotic diseases" is an old term for the acute infectious maladies. As used originally in British vital statistics of the nineteenth century, it included a very large number of diseases, but it came to be restricted to the chief fevers and contagious diseases: typhus and typhoid, smallpox, measles, cholera, whooping cough, erysipelas, diphtheria and scarlet fever. Armstrong used it in the restricted sense.

Appendix 4

Deaths of Infants per Thousand Births in Salford, 1904,

by mode of feeding

<table>
<thead>
<tr>
<th>Feeding Method</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast-fed only</td>
<td>128.6</td>
</tr>
<tr>
<td>Breast milk and other food</td>
<td>190.4</td>
</tr>
<tr>
<td>Cows' milk only</td>
<td>263.9</td>
</tr>
<tr>
<td>Condensed milks</td>
<td>439.0</td>
</tr>
</tbody>
</table>


Percentage of Infants Fed in Different Ways, Brighton, 1903-05

<table>
<thead>
<tr>
<th>Feeding Method</th>
<th>Healthy Infants</th>
<th>Deaths from Diarrhoeal Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suckled only</td>
<td>62.3</td>
<td>6.5</td>
</tr>
<tr>
<td>Suckled plus farinaceous food</td>
<td>12.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Suckled plus cows' milk</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Suckled plus condensed milk</td>
<td>1.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Cows' milk only</td>
<td>7.2</td>
<td>36.0</td>
</tr>
<tr>
<td>Cows' milk plus farinaceous food</td>
<td>7.6</td>
<td>9.1</td>
</tr>
<tr>
<td>Condensed milk only</td>
<td>3.1</td>
<td>30.3</td>
</tr>
<tr>
<td>Condensed milk plus farinaceous food</td>
<td>2.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Farinaceous food only</td>
<td>2.0</td>
<td>1.7</td>
</tr>
<tr>
<td>Unknown</td>
<td>0.5</td>
<td>8.2</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

## Appendix 5

Deaths from Metria and Metria and Childbirth per Thousand Births,  
Sydney, 1871-74, and Sydney and Suburbs, 1875-81

<table>
<thead>
<tr>
<th>Year</th>
<th>Metria</th>
<th>Metria and Childbirth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1871</td>
<td>2.68</td>
<td>3.72</td>
</tr>
<tr>
<td>1872</td>
<td>5.56</td>
<td>5.56</td>
</tr>
<tr>
<td>1873</td>
<td>2.94</td>
<td>3.91</td>
</tr>
<tr>
<td>1874</td>
<td>7.37</td>
<td>8.65</td>
</tr>
<tr>
<td>1875</td>
<td>5.27</td>
<td>11.37</td>
</tr>
<tr>
<td>1876</td>
<td>4.24</td>
<td>8.79</td>
</tr>
<tr>
<td>1877</td>
<td>0.45</td>
<td>3.91</td>
</tr>
<tr>
<td>1878</td>
<td>0.56</td>
<td>3.63</td>
</tr>
<tr>
<td>1879</td>
<td>0.76</td>
<td>2.29</td>
</tr>
<tr>
<td>1880</td>
<td>1.32</td>
<td>5.86</td>
</tr>
<tr>
<td>1881</td>
<td>1.57</td>
<td>5.84</td>
</tr>
</tbody>
</table>

**Average**  

<table>
<thead>
<tr>
<th>Metria</th>
<th>Metria and Childbirth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.41</td>
<td>5.71</td>
</tr>
</tbody>
</table>

**Source:** J. Jamieson, A.M.G., July 1882, p.130.
## Appendix 6

<table>
<thead>
<tr>
<th>Year</th>
<th>Population of Sydney</th>
<th>Average annual growth rate (percentages) per decade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1871</td>
<td>137,586</td>
<td>5.0</td>
</tr>
<tr>
<td>1881</td>
<td>224,939</td>
<td>5.5</td>
</tr>
<tr>
<td>1891</td>
<td>383,333</td>
<td>2.3</td>
</tr>
<tr>
<td>1901</td>
<td>481,830</td>
<td>2.7</td>
</tr>
<tr>
<td>1911</td>
<td>629,503</td>
<td>3.6</td>
</tr>
<tr>
<td>1921</td>
<td>899,059</td>
<td>2.9</td>
</tr>
<tr>
<td>1931</td>
<td>1,200,830</td>
<td>1.1</td>
</tr>
<tr>
<td>1941</td>
<td>1,337,050</td>
<td></td>
</tr>
</tbody>
</table>

Appendix 7

Infant Deaths per Thousand Births in Some German Industrial Towns, 1901

<table>
<thead>
<tr>
<th>Towns of Westphalia (Metal)</th>
<th>Population</th>
<th>Infant Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dortmund</td>
<td>146,408</td>
<td>190</td>
</tr>
<tr>
<td>Duisburg</td>
<td>95,350</td>
<td>182</td>
</tr>
<tr>
<td>Essen</td>
<td>187,385</td>
<td>165</td>
</tr>
<tr>
<td>Mulheim</td>
<td>39,079</td>
<td>208</td>
</tr>
<tr>
<td>Oberhausen</td>
<td>43,547</td>
<td>221</td>
</tr>
<tr>
<td>Hagen</td>
<td>64,042</td>
<td>167</td>
</tr>
<tr>
<td>Bochum</td>
<td>66,917</td>
<td>184</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Towns of Saxony (Textile)</th>
<th>Population</th>
<th>Infant Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemnitz</td>
<td>210,004</td>
<td>331</td>
</tr>
<tr>
<td>Plauen</td>
<td>75,605</td>
<td>198</td>
</tr>
<tr>
<td>Zwickau</td>
<td>56,465</td>
<td>271</td>
</tr>
<tr>
<td>Löbtau</td>
<td>35,522</td>
<td>280</td>
</tr>
<tr>
<td>Meissen</td>
<td>31,976</td>
<td>225</td>
</tr>
<tr>
<td>Freiberg</td>
<td>30,279</td>
<td>220</td>
</tr>
</tbody>
</table>

Appendix 8

Development of the Sewerage System and Water Supply

<table>
<thead>
<tr>
<th>Year</th>
<th>Population served by sewers*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890</td>
<td>109,272</td>
</tr>
<tr>
<td>1898</td>
<td>257,125</td>
</tr>
<tr>
<td>1908</td>
<td>473,675</td>
</tr>
<tr>
<td>1918</td>
<td>698,885</td>
</tr>
<tr>
<td>1928</td>
<td>925,290</td>
</tr>
<tr>
<td>1938</td>
<td>1,038,146</td>
</tr>
</tbody>
</table>

*Includes Wollongong

<table>
<thead>
<tr>
<th>Year</th>
<th>Population served by water supply**</th>
<th>Average daily consumption per capita, in gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1888</td>
<td>296,246</td>
<td>27.49</td>
</tr>
<tr>
<td>1908</td>
<td>620,415</td>
<td>39.59</td>
</tr>
<tr>
<td>1918</td>
<td>992,970</td>
<td>41.63</td>
</tr>
<tr>
<td>1928</td>
<td>1,250,968</td>
<td>51.32</td>
</tr>
<tr>
<td>1938</td>
<td>1,438,233</td>
<td>73.21</td>
</tr>
</tbody>
</table>

**Includes Wollongong, Near South Coast and fringe towns like Campbelltown.

The three medical journals, the New South Wales Medical Gazette, the Australasian Medical Gazette and the Medical Journal of Australia, were very important primary sources. They provided information of a technical nature about infant, maternal and public health. They also provided information about attitudes and policies of the organised profession, and sometimes about differences of outlook within the ranks of the profession.

The New South Wales Medical Gazette was published in Sydney in the 1870s, in the period before the creation of a branch of the B.M.A. Its successor, the Australasian Medical Gazette, was the official organ of the B.M.A. in Australasia and flourished from the early 1880s to 1914. An amalgamation of the Australasian Medical Gazette and the long-established, Melbourne-based Australian Medical Journal produced the Medical Journal of Australia in 1914. I made use of the Australian Medical Journal where appropriate.

1. New South Wales Medical Gazette


Edit., (Cesspools), vol.4, May 1874, pp. 252-253.

———, "Impure Milk", vol.5, July 1875, pp. 302-306.

2. Australasian Medical Gazette

"A Meeting of the Medical Profession", vol.17, Nov. 1898, pp. 480-482.

"A New Babies' Hospital", vol.34, Dec. 1913, pp. 530-531.

"A New Women's Hospital for Sydney", vol.22, March 1903, p.117.


"Diarrhoea", vol.22, Sept. 1903, p.503.


——, "Baby Farming", vol.4, Sept. 1885, p.308.

——, "Charge of Manslaughter", vol.3, March 1884, p.131.

——, "Dairies Supervision Act", vol.6, Oct. 1886, p.22.

——, "Disposal of City of Sydney Garbage", vol.18, June 1899, pp. 256-257.


——, "Ignorant Midwives", vol.2, April 1883, p.150.


——, "Infantile Mortality in New South Wales", vol.22, March 1903, pp. 116-117.
[List of articles and references related to various topics in public health and hygiene, including infant mortality, midwifery, disease, and food safety.]

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"Increase of Population Through a Diminished Death-Rate", vol. 20, Jan. 1901, pp. 43-44.

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"Micro-organisms and Disease", vol. 1, March 1882, p. 83.

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"The Children's Hospital", vol. 19, May 1900, p. 208.

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"The Declining Birth-Rate", vol. 23, March 1904, p. 120.

---


---


-----, "The Sydney Benevolent Asylum and Its Late Medical Staff", vol.13, Nov. 1894, pp. 389-390.


-----, "Some Points with Regard to the Hygiene of Children", vol.5, Feb. 1886, pp. 116-120.


----- from W.H. Crago, vol.23, April 1904, pp. 188 and 249.

----- from A. Watson Munro, vol.23, May 1904, pp. 248-249.


-----, "Diet, Dystrophy and Diarrhoea in Infants", vol.34, Dec. 1913, pp. 581-583.


"Medical Notes - Alice Rawson School for Mothers", vol.31, Jan. 1912, p.46.


Munro, A. Watson, "Statistics of 1,000 Consecutive Cases of Labour at the Women's Hospital, Sydney", vol.20, June 1901, pp. 213-217.


"Qualified and Unqualified Midwives", vol.24, March 1905, p.140.


"State Registration of Nurses", vol.30, April 1911, p.234.


"The Lying-in Hospital in Connection with the Sydney Benevolent Asylum", vol.1, March 1882, p.81.


338

"University of Sydney", vol.21, Feb. 1902, p.86.

Worrall, R., "Case of Transfusion", vol.9, Feb. 1890, pp. 117-118.


3. Medical Journal of Australia


"B.M.A. News" (Regulation of obstetric nurses), vol.2, 1920, pp. 403-404.

(B.M.A. Meeting), vol.2, 1922, pp. 482-483.


(B.M.A. and Baby Clinics), vol.2, 1932, p.792.


Chenhall, W.T., "Suspension of the Pregnant Uterus in Cases of Threatened or Imminent Abortion", vol.1, 1916, pp. 131-134.

Clubbe, C.P.B., "Inaugural Address" (Paediatrics Section, N.S.W. Branch of B.M.A.), vol.1, 1922, pp. 599-605.

Collins, A.J., "Medicine, the State and the Public", vol.1, 1934, pp. 515-518.


———, "Baby Saving", vol.1, 1918, pp. 374-375.


Edit., "Infantile Mortality", vol.1, 1918, p.47.
——, "Invalid and Old-Age Pensions and the Maternity Bonus", vol.1, 1919, pp. 446-447.
——, "Puerperal Sepsis", vol.1, 1933, pp. 157-158.
——, "The Chair of Obstetrics at Sydney", vol.1, 1925, pp. 265-266.

(Federal Committee of B.M.A. on Maternity bonus), vol.2, 1922, pp. 140-141.


——, "Review of the Present Position of Infantile Mortality", vol.1, 1925, pp. 443-449.


Lambie, C.G. and Dew, H.R., "The Medical Curriculum of the University of Sydney", vol.2, 1932, pp. 795-800.


—— from J.S. Purdy, vol.1, 1923, p.734.

—— from A. Watson Munro, vol.1, 1922, pp. 112-113.


"Medico-Political" (Baby Clinics), vol.1, 1916, pp. 83-84.


   —— "Charles Percy Barle Clubbe", vol.1, 1933, pp. 70-73.
   —— "William George Armstrong", vol.1, 1942, pp. 272-274

Parker, L.R., "Nutritional Diseases of Infants and Their Treatment", vol.2, 1922, pp. 377-381.


   (Survey of N.S.W. schoolchildren and improvement in heights), vol.1, 1939, p.240.


4. Transactions of Australasian Medical Congress

Prior to 1905 the Congress was known as the Intercolonial Medical Congress of Australasia. From 1923 the Congress met under the auspices of the B.M.A.


Balls-Headley, W., "President's Address - Section of Midwifery", 3rd sess., 1892, pp. 512-523.


Byrne, W.S., "Presidential Address in the Section of Obstetrics and Gynaecology", 7th sess., 1905, pp. 229-234.


Foreman, J., "Chairman's Address, Section of Gynaecology", 1st sess., 1887, pp. 167-176.


-----, "President's Address, Section of Diseases of Children", 10th sess., 1914, pp. 516-520.


-----, "Rickets in School-Children: Frequency, Causation and Importance", 10th sess., 1914, pp. 541-547.

Verco, J.C., "Should a Medical Man Practise Midwifery While in Charge of a Case of Puerperal Fever?", 2nd sess., 1889, pp. 684-691.

Wilson, T.G., "The Early Recognition and Treatment of Puerperal Sepsis", 8th sess., 1908, pp. 24-34.


——, "Surgical Conditions Resulting from Labour", 1st sess., 1923, pp. 165-166.


5. Australasian Nurses Journal

From December 1951 the journal was called the Australian Nurses Journal.


——, "State Registration in New South Wales", vol.6, May 1908, pp. 149-152.


"Midwifery Training in N.S. Wales", vol.31, Jan. 1933, p.16.

"Obituary: The Late Matron MacLeod", vol.10, Dec. 1912, pp. 400-401.


"South Sydney Women's Hospital", vol.15, Aug. 1917, pp. 290-291.

"State Registration", vol.6, Oct. 1908, pp. 331-334.


"The Benevolent Society of N.S. Wales", vol.37, July 1939, pp. 130-133.


-----, "Maternal Mortality and Measures which should be adopted in order to reduce it", vol.23, Oct. 1925, pp. 484-492.


B. GOVERNMENT AND PARLIAMENTARY MATERIAL

New South Wales Royal Commission and Select Committee reports were rich sources of both technical and social information. The reports of the metropolitan medical officer of health, particularly during
W.G. Armstrong's tenure of the position, provided material on the health of Sydney not available elsewhere. Armstrong's reports were in the best tradition of English public health medicine. The reports of the Director-General of Public Health for New South Wales, which commenced in 1913, were considerable compilations of statistical and other material of high quality. They have been very useful in this study.

1. Commonwealth


2. Victoria

Allen, Professor H.B., Second General Report, Govt. Printer, Melbourne, 1891.

Central Board of Health, Report of the Board for 1885, Govt. Printer, Melbourne, 1885.

3. United Kingdom


4. New South Wales

New South Wales Parliamentary Debates, 1885-1931.

Milk. An Interim Report of N.S.W. Board of Trade upon conditions of production and distribution of certain commodities, Govt. Printer, Sydney, 1923.

Progress Report from Select Committee on Employment of Children, 1875-76, V and P (L.A.), vol.6, 1875-76.

Progress Report from Select Committee on Milk Supply for City of Sydney and Municipalities in Metropolitan Area, 1922, N.S.W.P.P., vol.3, 1922.


Progress Report from Select Committee on Nurses and Private Hospitals Bill, 1907, J. (L.C.), vol.71, 1907.


Report of Board of Health for 1897, Govt. Printer, Sydney, 1899.

Report of Board of Health for 1898, Govt. Printer, Sydney, 1901.

(The central health authority did not begin the practice of issuing regular annual reports until 1913.)


Reports of Director-General of Public Health, 1913 to 1941/46. (From 1913 the report of the metropolitan medical officer of health was included in the Director-General's report. In 1927 the first report of the Director of Maternal and Baby Welfare was included in the Director-General's report. The practice continued thereafter.)
Reports of Medical Officer of Health to Metropolitan Combined Sanitary Districts, 1898-1911.


Report on Outbreak of Typhoid Fever in Municipal District of Leichhardt due to polluted milk, 1886, J. (L.C.), vol.40, 1, 1885-86.


Report of Select Committee on Registration of Births, Deaths and Marriages, 1886, J. (L.C.), vol.40, 4, 1885-86.


——, Minutes, Evidence, Exhibits, Index, vol.II, 1904. (This volume was suppressed. A microfilm copy is held by the Menzies Library, Australian National University.)


Sydney City and Suburban Sewage and Health Board. Progress Report, J. (L.C.), vol.25, 1875.


——, Sixth Progress Report, J. (L.C.), vol.26, II, 1875-76.


Census of New South Wales, 1891.

Statistical Register, 1921, 1933, 1947.

Vital Statistics of City and Suburbs of Sydney, 1887.

C. VOLUNTARY AND OTHER BODIES

Annual Reports of Women's Hospital, Crown Street, 1896-1939 (Held at Women's Hospital, Crown Street, Sydney).

Jubilee Year Commemorative Annual Report, Women's Hospital, Crown Street, 1943.

Annual Reports of Benevolent Society of New South Wales, 1883, 1894-96, 1901-03.

The Charities' Gazette and General Intelligencer, 1910-13, 1918-21 (Held at Royal Hospital for Women, Paddington).


Annual Reports of Royal Hospital for Women, 1904-11, 1917-20.

Annual Reports of St. Margaret's Hospital, 1909-28.

Reports of South Sydney Women's Hospital, 1912-14.


Annual Reports of Infant's Home, Ashfield (formerly Sydney Foundling Hospital), 1876-84, 1889-1937, 1940.

Infant's Home, late Sydney Foundling Hospital, Bone, Sydney, 1877.


The Loan Training Fund of the Sydney Norland Institute, Sydney, 1909.


Proceedings. Second Australasian Conference on Charity, 1891.

Reports of Municipal Association of New South Wales, 1883-97 (Held at National Library of Australia).

Minutes of Baby Clinics, Pre-Maternity and Home Nursing Board, 1914-19.


Annual Reports of Society, 1919-42 (Held at head office of R.S.W.M.B., Sydney).

D. NEWSPAPERS

Sydney Morning Herald, 1875-79.


Note: These are the sources of all newspaper references other than the S.M.H., 1875-79.

E. PAMPHLETS AND BOOKS

The collections in the Mitchell and National Libraries were the main source of pamphlets and books on infant and maternal care that were intended for use in Australia in the later nineteenth and early twentieth centuries. The National Library's collection, "Australian Medical Pamphlets", is a valuable source of material on health and medical subjects for this period.
A Book for Mothers, Nestlé and Anglo-Swiss Condensed Milk Co., Sydney, [1908].

Ackermann, J., Australia from a Woman's Point of View, Cassell, London, 1913.


Aitken, E., The Australian Mother's Own Book, Philip and Son, Sydney, 1912.


Barclay-Smith, Mrs, A Happy Baby, Being Helpful Suggestions for Rearing Australian Babies, Brooks, Brisbane, 1922.


———, The Wealth and Progress of New South Wales 1886-87, Govt. Printer, Sydney, 1887.


Dept. of Public Health, How to Take Care of Babies during the Summer Months, Govt. Printer, Sydney, 1913.

———, Baby's First Twelve Months, Govt. Printer, Sydney, 1914.

Dept. of Public Instruction, The Care and Feeding of Infants, Govt. Printer, Sydney, 1914.


Fawcett, B., Childbirth Without Danger and Nearly Painless, Cunningham, Sydney, 1882.

Flowers, F., A Pamphlet on the Hospital System in New South Wales, Govt. Printer, Sydney, 1912.


Healthy Mothers and Sturdy Children, Peter and Knapton, Melbourne, 1893.


McCarthy, C., On the Excessive Mortality of Infants and Its Causes, Robertson, Melbourne, 1865.

McLeod, H., The Early Rearing and Handling of Children, included in H. Rankin, Handbook of Domestic Science, Specially Adapted for Use in Australasia, Brooks, Sydney, n.d. [early 1900s].


-----, The Mother, the Baby and the State, Govt. Printer, Sydney, 1917.

-----, The Child, the Law and the State, Govt. Printer, Sydney, 1907.

Maid, Wife and Mother: A Book for Womankind containing all the information necessary for the guidance of the sex in Pregnancy, Labour and Maternity, Ford and Booth, Sydney, 1883.

Milk Supplies of Metropolitan Areas, Metropolitan County Board, Adelaide, [1912].


Milk. The Sydney and Newcastle Milk Supply, Milk Board, Sydney, 1941.

-----, An Australian Appeal, Edwards, Dunlop and Co., Sydney, [1892].

-----, The Art of Living in Australia, Eyre and Spottiswoode, London, [1893].

-----, The Feeding and Management of Australian Infants in Health and Disease, Empson, Sydney, [1900].

Robinson, C., New South Wales: The Oldest and Richest of the Australian Colonies, Govt. Printer, Sydney, 1873.

Rules for the General Management of Infants, Australian Health Society, Melbourne, [1880s].


Sands's Sydney and Suburban Directory for 1890, John Sands, Sydney, 1890.

Sisca, N., Management of Children in Health and Disease, Robertson, Melbourne, 1892.

Smith, L.L., Medical Household Sketches or popular treatises for parlour and bush-hut on the diseases prevalent in Australasia, Cordell, Melbourne, n.d. [1870s?].

Sutton, H., Lectures on Preventive Medicine, Consolidated Press, Sydney, 1944.

The Cyclopedia of New South Wales, McCarron, Stewart and Co., Sydney, 1907.

The Romance of St. Margaret's Hospital. Behind the Little Green Gate, Sydney, 1925.


Usher, J.E., The Perils of a Baby, Mullin, Melbourne, 1888.

F. ARTICLES


(Infant foods), Australasian Journal of Pharmacy, vol.1, Aug. 1886, pp. XV and XXXI.


(Working-class dietary habits), Australian Home Journal, 2 July 1906, p.44.

SECONDARY SOURCES

A. PAMPHLETS AND BOOKS


Centenary of Nurse Training in Australia, 1862-1962, Royal Women's Hospital, Melbourne, 1962.


Epps, W., Anderson Stuart, M.D., Physiologist, Teacher, Builder, Organizer, Citizen, Angus and Robertson, Sydney, 1922.


Forster, F.M.C., Progress in Obstetrics and Gynaecology in Australia, John Sands, Sydney, 1967.

Gardiner, L., Royal Children's Hospital, Melbourne, 1870-1970. A History, Royal Children's Hospital, Melbourne, 1970.


Hooker, R.S., Maternal Mortality in New York City. A Study of All Puerperal Deaths, the Commonwealth Fund, New York, 1933.


**B. THESIS AND OTHER UNPUBLISHED MATERIAL**


C. ARTICLES


Newsholme, A., "Domestic Infection in Relation to Epidemic Diarrhoea", Journal of Hygiene, vol.6, April 1906, pp. 139-146.


