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Healthy Imaginations: A Social History of the Epidemiology of Aboriginal and Torres Strait Islander Health

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INTRODUCTION

There can be no denying the importance of epidemiology in describing the size, nature and determinants of public health problems. Indeed, epidemiology is often described as the central discipline of public health (Krieger, 1999). This paper is not a critique of that effort. It is however a critique of the view that epidemiology functions as a neutral, value free science. Like all science, it is part of the social world, no matter how much it might be privileged by claiming a space outside of social and cultural processes. As such the analytical framework of this paper draws on a heritage of social critique which has attempted to demonstrate the sociocultural nature of health science discourses (see for example, Martin, 1987; 1990; 1992; Treichler, 1987;1992) and in doing so supports the philosophical position of Singer and Baer (1995) that a critical medical anthropology must vigorously explore the sociopolitical context of health.

In this light, the epidemiology of Indigenous¹ Health is more than simply a technical public health tool with social consequences; it is intrinsically social. The rise of Australian Indigenous epidemiological description particularly over the past two decades needs to be understood in those terms if we are to ensure a critical, reflexive practice in public health. The social nature of epidemiological description can be no better exemplified than in the tension between, on the one hand, the political and public health value of being able to describe the nature and extent of health inequality between Indigenous and non-Indigenous Australians, whilst on the other hand the danger of reifying Aboriginal Health as no more than a series of numerical tables, pie charts and bar graphs. Thus, for many Indigenous observers the portrayal of poor health status through statistics can at times become repetitive and lacking a solution focus.²

The Australian epidemiological literature concerning Indigenous health has been an important part of the emergence of Indigenous health as a national political issue over the past two decades. The release of new Aboriginal health data from, for example, the Australian Bureau of Statistics now typically meets with significant

¹ The term Indigenous will be used throughout this paper to refer to Aboriginal and Torres Strait Islander people.

² See, for example, Hunter's (1995) discussion of Indigenous audience negative reactions to statistical conference presentations about Indigenous health.

media attention. Such attention predominantly tells a story of a chronic failure to improve the health of Aboriginal and Torres Strait Islander people. The media presentation of statistics including life expectancy, cause of death, birth weight, hospital stays, smoking, drinking, income constructs a social matrix in which Indigenous people inevitably rank lowest on all fronts (Brough, 1999:91). The statistical imagery of epidemiology is now firmly part of the public picture of Indigenous health. It has become 'common sense' for any book, report or article dealing with Indigenous health to begin with a statistical overview of the disparity between Indigenous and non-Indigenous Health.

It is difficult to imagine Indigenous health without the powerful descriptors of epidemiology. Yet such a quantitative representation of Indigenous Health is a phenomenon largely of the past 20 years. How was Aboriginal Health imagined without it? This paper seeks to describe the social significance of epidemiological representations of Indigenous Health. Using examples of epidemiological description of Indigenous health from throughout the twentieth century, a discussion of the social texture evident in those descriptions is discerned. Within these examples, epidemiology can be seen as providing an over-arching logic in which discourses about health surveillance could draw from. The colonial administration of Indigenous Australians is shown to be deeply intertwined with these discourses. A thematic, rather than strictly chronological history is provided which is then used to better understand the significance of contemporary epidemiological description of Indigenous health. Whilst acknowledging that epidemiology is not a uni-dimensional discipline and encompasses a range of applications and perspectives (eg descriptive, analytical, behavioural, social), the focus of this discussion concerns the common denominator (pardon the pun) of epidemiological imagination, that is, the health of populations understood through quantitative measurement. The paper is not intended to function as a history of either anthropology in epidemiology or of epidemiology in anthropology; rather it is an anthropology *of* epidemiology that is sought.

The central arguments of the paper are presented in the spirit of building reflexivity within Australian public health.

Lupton (1995:13) has defined this need in relation to exposing one's own participation in power relations: For public health workers and researchers reflexive practice involves the ability to critically interrogate their use of knowledge and to become aware of the interests they serve and reproduce as part of their working lives. Reflexivity requires a sensitivity to the manner in which ways of knowing are generally accepted as common-sense and taken-for-granted. Attention to language and discourse is central to any activity seeking to facilitate reflexivity.

THE POLITICS OF POPULATION

Foucault (1991:100) has argued that population has come to be, above all else, the ultimate end of government.

Technologies which concern themselves with population are thus crucial political resources. In health then, epidemiology represents such a resource. Epidemiology is concerned with the study of the distribution and determinants of diseases in human *populations* (emphasis added) (Christie et al 1987:1). Waldby (1996:96) has argued:

Epidemiology is a knowledge dedicated to 'imaging' and hence 'imagining' the entity 'population health', extrapolating its morphology and dynamics from an extensive data collection infrastructure. It solves the 'problem of invisibility' in a fashion similar to that of clinical medicine, through the process of diagnosis. Clinical medicine must generate its images of the body's interior through the inferential and interpretive strategies which take as their evidence certain effects produced *in vitro*, or certain visible symptoms on the body's surface...Similarly, judgements about the health of the population are derived from the gathering of morbidity and mortality data, from sentinel-physician reporting, from case investigations, laboratory and clinical notification, and so on.

Epidemiological data thus functions as a 'visual metaphor' for health, as necessary to the imagination of public health as the x-ray or ultrasound is to the clinician. Vision functions as the dominant sense of biomedicine with its ability to record change and to enhance the viewer's own autonomous authority - "free to choose from everything he/she sees" (Gordon, 1988:32).

Typically epidemiology seeks to discern risk groups within larger populations. In epidemiology the risk group can be socially 'artificial', constructed in order to aggregate shared risk factors rather than shared lives (see for example, Kane and Mason's (1992) discussion of 'sex partners of IV drug users'). Alternatively risk groups can be based on lived social identities such as the category Aboriginal and Torres Strait Islander. The appropriation of the latter as risk group necessarily involves both the recognition of lived identity and the construction of a site for social and medical intervention.

In transporting the category 'Aboriginal and Torres Strait Islander' into epidemiology, much more is achieved than simply the utilisation of a convenient population label. Also transported are a whole series of ideologies, truths, falsehoods, assumptions and perceptions. This is the undeclared baggage of epidemiology, not able to be left behind, but not acknowledged either for fear of disrupting the privileged travel arrangements of objective, value free science. When we speak of the health of the Aboriginal and Torres Strait Islander population, what population do we imagine? As we peruse the growing catalogue of epidemiological description of Aboriginal and Torres Strait Islander health what do we see besides the numbers? What capacities or threats do we imagine to be contained in this population? To discern these 'imaginings' requires us to see through the "rationalised mathematical logic

and rhetoric of the discourse of epidemiology” which “serves to obscure moral judgements about individuals’ or groups’ behaviour” (Lupton, 1995:67). The privileged knowledge of ‘hard science’ carries with it a capacity to further entrench social ideologies, hence any science dealing with ‘populations’ must be wary of its power to not just reflect but reinforce prejudice. The politics surrounding the ‘Chinese leper’ of the late 1800s (Collins, 1993), the ‘Spanish’ Flu of 1919 (McQueen, 1975) or the ‘Asian’ Flu of 1957 (Strahan, 1994) shows the power of epidemiological description as it utilises cultural identity in its epidemic labelling. We should be concerned too, as DiGiacomo (1999) is, about the possibility of fragmentation within the culture concept as it is broken down into statistically manageable units capable of generating correlations and causal explanations of disease.

Much has been written in the past decade about the rise of the risk society. Beck (1992), Giddens (1991), and Douglas (1992) are among a growing list of theorists who have attempted to describe some of the implications of the risk society. All have described the growth of risk discourses. For Beck and Giddens risk is a key aspect of a postmodernity based on a reflection of the negatives of progress (such as environmental degradation, unemployment and family breakdown). For Douglas (1992) we must look to culture to fully explain these risk discourses. Most importantly, much has been written about the degree to which individuals are constructed as self managing agents in the risk society. Following Foucault, there are now many exponents of governmentality theory who have shown the manner in which liberal government now seeks to govern via an emphasis on voluntary self-discipline rather than coercion (Burchell et al 1991). Population may be the ultimate ‘end’ of government, however somewhat ironically, it is the smaller social world of the individual and family who have become the targets of new forms of governance.

Rose (1996) has identified this as part of an important shift in the nature of the welfare state in which individuals are governed through the establishment of norms about how to avoid and manage risk. The active engagement of individuals in their own governance is crucial in this. Strategies of the ‘self’ which encourage active participatory citizens have thus become part and parcel of government. The dramatic increase in epidemiological description of Indigenous health over the past two decades needs to be considered then in relation to emerging trends in liberal governance. Epidemiology provides a key expertise required to define and measure populations. As Lupton (1995:10) has argued governmentality needs an expert knowledge in order to be able to “compare individuals and make decrees on their relative ‘normality’ in comparison to others”.

THE SOUNDS OF SILENCE

The epidemiology of Aboriginal and Torres Strait Islander people was largely a non-existent enterprise until the 1970s. Indeed a significant body of epidemiological description only began to evolve in the 1980s. This silence reflects more than simply the underdevelopment of epidemiology in Australia, rather, it also reflects the trivialisation of Indigenous health as a concern within Australian public health.

Epidemiological data exists for the white Australian population dating back to the first colony of 1788. Cumpston's (1928) history of Australian public health covering the period from the first arrival of Europeans until 1928 essentially provides an overview of the major epidemiological data used in the development of Australian public health policy. Cumpston's work is both substantial and significant in its review of the patterns of disease in the Australian population. That the description of Aboriginal health is minute in this work is not surprising given the prevailing demographic assumption of the time that the 'Australian' population did not include Aboriginal and Torres Strait Islander people. Cumpston (1928) describes the health of an 'Australian' population growing exponentially from just 1000 in 1788 to 6 million in 1926. Public health was then as much a product and reinforcement of *terra nullius*³ as any legal code. Throughout these early years epidemiological description was almost exclusively concerned with the health of white Australians. Only rarely was the health of Aborigines measured, and when it was, it was usually within the context of either a contagious or polluted other (see later discussion for examples of this).

The incidental nature of Indigenous health status within Australian public health history was reinforced through a public health research paradigm which even when focused on environments which contained substantial populations of Indigenous people, nevertheless still managed to make the health of Indigenous people marginal. Thus much of Anton Breinl's work at the Australian Institute of Tropical Medicine in Townsville in the early 1900s was focused on *white man's* capacity to live in the tropics rather than with the health of the Indigenous inhabitants of the tropics (Moyal, 1981:303). In 1910 Breinl wrote:

Tropical Australia affords a unique opportunity for studying the adaptability of the white race to a tropical climate and conditions, not only of a white race surrounded by a host of native servants, but of a white race doing hard manual labour under a tropical sun. (quoted in Moyal, 1981:303)

³ The Australian legal doctrine which denied the occupation of Australia by Aboriginal and Torres Strait Islander people which was rescinded in 1992 by the high court in the Mabo native title case concerning Murray Island.

Indeed as Harloe (1988:149-152) shows, once that question had been answered the political significance of a public health institute in Townsville disappeared and its relocation to Sydney was ensured. The politics of who got counted in epidemiological reporting and who did not was clearly based on racial grounds. Apart from the 'automatic' exclusion of Aboriginal and Torres Strait Islanders, Patrick (1987:214) has noted also the example of South Sea Islanders for whom (during the late 1800s) there were statistics available concerning tuberculosis mortality (showing an alarmingly high incidence) but who were officially removed from Queensland death rate data in spite of - or perhaps - because of such a high incidence. During the 'Spanish Flu' pandemic of 1918-1919, data was collected regarding the spread of this influenza strain within the Queensland population. That 30% of the total deaths during this time were suffered by Aboriginal people was largely ignored in the reporting of the pandemic and would only be fully explored over 75 years later as a matter of history (Briscoe, 1995).

Up until the 1960s, the description of Australian Indigenous health dealt largely with problems of an exotic other. Gray (1989:1) has noted the Aboriginal population provided a vehicle for exploring disease syndromes understood as characteristic of a hunter-gatherer society (eg Mountford, 1960), or the disruptive effects of introduced disease on hunter-gatherer people (eg. Abbie, 1960).

Invisibility was further reinforced in national data collections which had as their statistical benchmark an Australian census which prior to 1971 did not include Indigenous people as part of the Australian population (Gordon, 1976:102). The 1980s saw a gradual increase in epidemiological activity in Indigenous health, though even in this decade the official journal of the Australian Epidemiological Association (Community Health Studies - later to become the Australian and New Zealand Journal of Public Health) published only one or two Indigenous health articles each year.

THREATENING BODIES

Racial explanations of infectious disease transmission were an important part of epidemiological thinking in relation to leprosy. Cook's (1927) *Epidemiology of Leprosy in Australia*, for example, suggested a chain of infection starting with Chinese lepers who then transmitted the disease to Aboriginal women who in turn passed the infection on to white men. Cook (1927:20) described the chain of infection as follows:

The matter of aboriginal gins is much more important, since the aliens (Chinese), deprived of the society of women of their own kind, and unable, except in rare instances, to overcome the racial prejudices of the white women, fell back for conjugal relationship upon the salacious aboriginal...Herein lay the danger to the white, for in the pioneering days when white women were few in number cohabitation between white men and aboriginal women was frequent... This

tendency to cohabitation, rarely more than a temporary expedient in the case of the white, was a regular practice with the Chinese, who encouraged the natives to visit their camps and dwellings by the use of opium and the practice of other vices.

As notions of hygiene took hold of medical thought in the early part of the twentieth century, Indigenous communities were regularly seen as likely reservoirs of disease. Kidd (1997:90) relates the story of an epidemic of fever breaking out in the Cairns area in 1916 resulting in a public rumour mill that the sanitary habits of the residents of the Yarrabah mission were to blame. Health and morality were bound together in a racist logic of exclusion. For example, Queensland Health Department annual reports from the 1930s used the terminology of 'gins, half-castes' as a 'Source of Infection' category in analysing the spread of sexually transmitted diseases. A good deal of the paternalism and strengthening of powers of government administration of Aboriginal Affairs can be explained within the health/morality nexus. For example, the 1934 amendments to the Queensland Aboriginals Protection Act which strengthened the range of interventionist powers available to government were described by Bleakley (then chief protector of Aborigines in Queensland) as a means to ensuring that a 'big proportion' of the 'coloured population' who might be 'a menace to health and morals because of their low caste condition' be brought under surveillance (Kidd, 1997:109).

An important element in this expansion of powers in 1934 was the widening definition of the Indigenous population in need of protection. In particular, various 'half-caste' groups not specifically covered before now came within the boundaries of government control. As Kidd (1997:110) explains, a 'list' of all persons 'whose breed brings them within the provisions of the Amending Act' was subsequently constructed with the specific aim of processing disease, 'to facilitate the discovery and treatment of disease' as Bleakley put it.

The epidemiological profiling of the Aboriginal population of Queensland during this period reflected not just a fear of contagion, but also a proactive instrument of assimilation in public policy. Raphael Cilento, the director-general of the Queensland Health Department in 1932, argued that the first step in assimilation was improving health and even suggested a medical grading system in which Aboriginal people would be classified according to different coloured cards ranging from an A1 white card (young and healthy) through to a D1 red card (mentally infirm, paralysed, or deformed) (Kunitz, 1994:88). During this same period, exemptions from government protection were all temporarily suspended until each exempted individual underwent a medical examination and produced a clean medical report.⁴

⁴ Without this 'exemption', Aboriginal people were forced to live in missions under the management of a government 'protector'. Such missions were highly regulated and in effect operated as concentration

As Bleakly reported, this resulted in 'a good deal of cleaning up' of 'a source of danger and infection to our own wards' (quoted in Kidd, 1997:110). In Western Australia the *Natives (Citizenship Rights) Act 1944* included a clean bill of health as one among many necessary conditions for Indigenous people to be able to seek application for citizenship of that state. Specifically 'native applicants' had to show they did not suffer from leprosy, syphilis, granuloma, or yaws and further their citizenship was able to be removed if they at any later date contracted any of these conditions (see McCorquodale, 1987:98-99).

This focus on contagion was a regular feature of Australian government health policy thinking leading Rowley (1978:197) to conclude that prior to the late 1970s, the 'main concern of governments about Aboriginal health was that disease might spread among whites.'

AUTHENTIC POPULATIONS

Much has already been written about the ideologies and politics of 'authentic' Aboriginality (Birch, 1995) typically based on notions of the 'traditional full-blood Aborigine' living in remote Australia. It should come as no surprise that such dominant ideas of Aboriginality should find a place in the discourse of epidemiology. The racist distinction between 'full-blood' and 'half-caste' Aborigine common in Australian social policy in the first half of the twentieth century (McGregor, 1997) reflected prevailing social evolutionary ideas about the inevitability of the extinction of 'real' Aborigines.

Epidemiology reflected these notions of Aboriginality. Much of the epidemiological description provided throughout the twentieth century, was based on data from rural and remote communities. Whilst this was not unreasonable when most of the Aboriginal population resided in such areas, it became clearly imbalanced by the 1960s when a strong rural urban migration resulted in significant urban populations and by the 1990s is incomprehensible with some two thirds of the Indigenous population living in urban areas (Australian Bureau of Statistics, 1997:7).

Queensland Health Department reporting of Indigenous health status has from the 1960's until very recently been dominated by data obtained from remote communities. Whilst the technical reasons for this unbalanced picture are now being addressed, there can be no doubt that such shortcomings in part reflect an historical conflation that

camps (Hammill, 2000:31).

remote=traditional=full-blood=authentic whilst urban=modern=part-Aboriginal=non-authentic.

This was certainly clear from the presentations in 1972 at a National Seminar on Health Services for Aborigines later published in the book *Better Health for Aborigines?* (Hetzl et al 1972). Part 2 of the book is entitled "The Epidemiology of Disease in Aboriginal Communities" and includes two chapters; the first is entitled "The traditionally oriented community" whilst the second is entitled "The part-Aboriginal Community". The taken for granted manner in which this distinction was used can also be seen in Gordon's (1976:101-105) overview of the demography and health of Indigenous people. Here Gordon (1976:104) uses the part/full blood dichotomy noting the many 'part-Aborigines have now found their way to the capital cities where they tend to live in poor areas'. Indeed, Gordon (1976:104) develops an analysis of the reasons for high morbidity and mortality as being related to the parenting styles of 'part-Aboriginal' women:

The crucial fact, however, is that part Aboriginal girls rarely if ever have either European or Chinese mothers. It is usually the father who is European. Hence one of the most important ways of socialising a child in the prevailing ways of life accepted by the majority of the Australian population is absent.

Writing just a few years later Hetzel's (1980:185) overview of Aboriginal health uses the same logic by equating degree of assimilation with standard of health:

Of course, there are some part-Aborigines who do not have this pattern of ill health - they are the ones who belong to families which have successfully established themselves in white Australian society. Their good health in contrast to that of the majority of part-Aborigines indicates the importance for health of environment and motivation.

These sorts of assumptions no doubt explain the findings of Lake's (1992) review of 10 years of Aboriginal health research which showed only 3 per cent of published material in the Aboriginal Health Information Bulletin dealt with Aboriginal people who lived in or around capital cities.

EMPHASISING CHILD HEALTH

Child health data provided some of the first real evidence of genuine health inequality. In the late 1950s and early 1960s, the Northern Territory began collecting data on infant mortality, the first large reliable data set on any aspect of Aboriginal health (Smith, 1978 cited in Gray 1989:1). Child health data was used then for much of the 1960s and 1970's as a proxy for Indigenous health status generally. For example, the 1979 House of Representatives Standing Committee on Aboriginal Affairs (1979:11) report on Aboriginal Health used predominantly child health data in a generic manner with the explanation that 'Infant mortality rates, which are the number of deaths of live born children within one year of birth per 1000 live births, are widely used as an index of community health.'

Similarly, the epidemiological accounts of Indigenous Health provided by Kirke (1972) and Moodie (1972) referred to earlier, were constructed using child health data. Kirke's analysis was based on mortality data for one and two year olds from central Australia whilst Moodie's analysis used morbidity data of 1-15 year old children. Not surprisingly, the dominant Indigenous policy and program focus by government during the 1970s was on maternal and child health. These efforts resulted in significant reductions in child mortality which local level staff were well aware of in the early 1970s, but which were not identified epidemiologically as a national trend until the late 1970s because of a lack of reliable aggregate level data (Gray, 1989:3).

This focus on child health data proved valuable not only because it emphasised an area of Indigenous health which was improving, but perhaps also because child health retains an 'innocent' and therefore 'deserving' social imagery. Paternalism had, after all, been a central plank of Australian government policy for a large proportion of the twentieth century. Indeed, it was a conventional wisdom of the first half of the twentieth century to describe Indigenous people as a 'child race' (see, for example, Kidd, 1997:70).

By the early 1980s cracks in the generic use of Indigenous child health data emerged. Ironically these cracks appeared at a time when Indigenous child health status was improving significantly. Not only did the improvements for Indigenous child health of the 1970s clearly not reflect trends for the Indigenous population as a whole, they also did not represent the substantial improvements they were sometimes used to indicate for Indigenous children. Reid (1983:349) commented that the fall in infant mortality during the 1970's was not the boon it appeared, noting that, despite the improvements, the infant mortality rate was still three times higher than the national average and adding that 'the child's suffering does not end as he or she grows up, but continues into adulthood with different, but equally distressing, causes.'

INEQUALITY DISGUISED

Like all statistical data, the manner in which epidemiological information is presented has enormous consequences for how it will be understood and what significance will be attached to it. Queensland Health's annual reports of the 1970's provide revealing examples of how presentation of data avoided meaningful comparisons with non-Indigenous health. Data on Queensland Indigenous mortality was first published for the period 1972-1974. It was reported simply as numbers of cases. By 1976 this mortality information was expanded to include cause of death.

No attempt was made to calculate death rates other than perinatal and infant mortality because the age compositions of communities were not known. By restricting the reporting of mortality to number of cases, meaningful comparisons with non-Indigenous Queensland was impossible. Reporting for example, that there were 456 deaths in 14 Aboriginal Communities in the period 1972-1975 doesn't really say very much even when shown in a table indicating there were 16, 731 deaths in the total Queensland population (Queensland Health Department, 1976:149).

A style of reporting was used in Queensland Health Annual Reports which emphasized improvements in infant health, and de-emphasized adult health as an area of concern. The focus on numbers of cases ensured that the definition of the problem was 'contained' solely within the context of the Aboriginal population. Improvements could then only be registered in relation to that population and not compared to others. The inequality that this form of reporting disguised only became fully apparent in 1981, when a criminologist, Dr Paul Wilson, sought Aboriginal health data from the Queensland Health Department to use as background material for a criminal case involving an Aboriginal man. Wilson's research assistant, Robyn Lincoln, met a clerk at the front counter of the Aboriginal Health Program and was given reams of computer print-outs on Aboriginal mortality rates apparently without the permission of senior management. Wilson and his colleagues later published this data (Wilson, 1982; Lincoln et al, 1983a; Trigger, 1983) in a format which allowed direct and meaningful comparison with non-Indigenous Queensland health, much to the chagrin of the Department. The Premier of Queensland at the time Mr Joh Bjelke-Petersen dismissed the figures as 'out of date,' whilst the Aboriginal Affairs Minister, Mr Bird, said he would be 'amazed if the study was correct' (quoted in McGregor, 1983).

It was not just the political reaction which made comparisons between Indigenous and non-Indigenous health problematic though. The reactions contained in letters to the editor within the Medical Journal of Australia following the publication of the Queensland data are also revealing. Some of these letters argued, for example, that comparisons with the 'general' population were 'unscientific'. Flegg (1983) was outraged at the very notion of comparing the mortality rate of a 'socioeconomically disadvantaged group living in remote areas with that of a western urban society'. In another letter the significance of the data was attacked because of its failure to describe the three 'lethal conditions' of 'intolerance of Aborigines to Alcohol', 'Aborigines susceptibility to infectious diseases' and the 'very high rate of syphilis among Aboriginal people' (Shanasey, 1983). The debate was muddied further

by a corrigendum published later in 1983 showing some miscalculations in the original paper which exaggerated the level of Indigenous mortality (Lincoln et al 1983b)

THE NEW ORDER OF RISK

The final and most recent theme to be conveyed through the epidemiological profile of Indigenous people is that of risk group. Silence has been replaced with the new language of risk. No longer hidden from view in overviews of 'Australian' health, Aboriginal health now frequently figures as an important risk group sub-category. One of the earliest examples of this sort of positioning is contained in the Better Health Commission's (1986) manifesto for improving the health of the Australian population. Within this document the epidemiological profile of 'Australians' health is carefully mapped out, followed by a number of chapters dealing with health promotion, evaluation, community participation and so on. In chapter 12 the focus shifts away from the 'general community' to instead outline the special cases of 'Health Problems of Groups at Additional Risk'. Here the needs of Aborigines, the disabled, immigrants, older people, women and young people are dealt with.

Thomson's (1986) discussion of Aboriginal health in volume 3 of the Better Health Commission's report provides an illuminating discussion of the degree to which epidemiological data was assuming greater significance than ever before in Indigenous Health. Thus, Thomson (1986:12) argued that more epidemiological data was a key solution to addressing Indigenous health inequality. In 1989, a small group of experts in Aboriginal mortality met in Kioloa, New South Wales presenting various epidemiological studies to each other and also recording their discussion of those presentations in a monograph (Gray, 1990) published the following year.

A theme of their discussions was the need for more epidemiology and the need for more influence of epidemiology upon government policy. Gray (1990:127) noted:

The occasional studies which have been done in different parts of the country are published generally by state governments and then not really noticed at a national level. The awareness of this pattern of Aboriginal mortality and these extremely high relative risks of mortality in middle adulthood are not addressed by governments.

In the same discussion Briscoe (in Gray, 1990:129) argued for a stronger voice for epidemiology:
I have never heard one Aborigine mention to me a concern about the fact that their women are dying at their most productive ages. Now I do not care what anyone says, they are ignorant about this fact, totally ignorant. It's a great problem and there is only one way of overcoming this. That is by bringing Aborigines together and raising their awareness about the importance of data gathering...

This ability to construct epidemiology as knowledge which Indigenous people 'need to know' in order to 'know themselves' better functions not only as a moral imperative for more research but also reflects the tension in 'new public health' language between the active, self-determining citizen, who nevertheless requires 'expert' knowledge to best understand their own needs (Lupton, 1995:61). Weeramanthri and Plummer (1994) attempted to address the need to communicate epidemiology more effectively to Aboriginal people by presenting their mortality data using a land, body, spirit classification of cause of death. A particular benefit of this, they argued, was the possibility of such data presentation as part of a health promotion activity.

Throughout the 1990s a specialised public health and epidemiological literature did emerge describing the health status of Aboriginal and Torres Strait Islander people (eg Australian Bureau of Statistics 1997; Runciman & Ring, 1994; Plant, Condon & Durling, 1995). In addition, it is now 'common sense' to include special chapters on Aboriginal and Torres Strait Islander health within broader state and national documents dealing with Australian health (eg Ridolfo, B & Codde, J., 1998; Farrell, D & Wraight, R, 1993; Australian Institute of Health and Welfare, 1998). The emergence of this literature has undoubtedly raised the level of political and social concern surrounding Aboriginal and Torres Strait Islander health. However it has also emphasized a particular version of Aboriginality which focuses attention on Aboriginality as risk factor. Although there is widespread acknowledgement of the importance of culture in understanding and solving Aboriginal health problems, epidemiological representation struggles to convey real depth to the culture concept. Instead, culture is reduced to risk behaviours typically focused on nutrition, body weight, smoking and alcohol. Meaning is often attached in terms of comparing the 'reality' of risk behaviours with the 'perceptions' of community about health problems, thus guiding 'policy makers to determine where education and dissemination of information needs to be given priority' (Australian Bureau of Statistics, 1997:41). As I have discussed elsewhere, media now regularly use epidemiological accounts of Aboriginal health to reinforce fatalism and despair, rather than hope for healthy futures. In a national newspaper article which attempted to summarise the risk behaviours of Aboriginal Australia, the authority of statistics is reinforced in the imagery of a photograph of a traditional Indigenous man surrounded by a series of bar graphs and pie charts constructing a metaphoric battle line between 'traditional' society and modernity with the fatalistic headline 'Blacks destined to lose battle for good health' (Brough, 1999:91).

FROM IGNORED TO HIGH RISK: THE IMPLICATIONS OF RISK DISCOURSES FOR INDIGENOUS HEALTH

This emergence of a growing body of epidemiological information represents a substantial victory over the forces of

silence and trivialisation of Aboriginal health within Australian public health history. This should not mean however that social analysis of the epidemiological enterprise should stop. Indeed the phenomenon of the risk society and its capacity to measure, monitor and govern risky populations should be seen as part of a global social phenomenon and one that Aboriginal health is now enmeshed (eg see Mackey 1999 for an example of the proliferation of risk discourses in the Australian native title debate). Two key areas of concern need to be raised here.

1. Better numbers or Better health?

Whilst there is widespread acknowledgement of the need for holistic definitions of Aboriginal health, there can be no denying that the dominant public representation of Aboriginal health in Australian society is one of statistics. Gifford (1986:411) pointed out the dangers of this dominance in her critique of Thompson's (1986) portrayal of Aboriginal health and its solutions. Whilst not disputing the need for better data, Gifford reminds us that real health improvements come through social justice and that inadequate data should not be used as a scapegoat for lack of effort to improve Indigenous health (Gifford, 1986:412).

Moreover we must be careful to acknowledge the limitations of statistics as a medium to convey the depth of human experiences associated with poor health and in particular ensure that such statistics do not become deterministic statements of despair. For example, O'Neil et al (1998) have discussed these dangers in relation to Canadian Indigenous people citing the example of epidemiological data being used in a child custody case to support the claim of a non-Indigenous parent by painting a squalid future for a child growing up in an Indigenous community. O'Neil et al (1998:231) note the political ramifications of such a picture:

The portrait of a sick, disorganized community implicit in this epidemiological discourse is increasingly dangerous in a tough world of negotiation for self-government and economic development.

2. Risk and Citizenship

Public Health silences concerning Indigenous health in earlier times clearly reflected broader government social policy which explicitly excluded Indigenous people from citizenship within their own country. What sort of citizenship can Indigenous people now expect? The epidemiological emphasis on health risking behaviours can lead to, what DiGiacomo (1999:452) refers to as the reification and factorisation of the culture concept. This has deep sociological significance in a society which increasingly utilises the risk concept in social administration.

Governmentality theorists argue that the risk society helps solve the problems of the modern welfare state by re-ordering the relationship between the citizen and the state through the moral code of active citizenship (Higgs, 1998). Thus there are now substantial expectations and consequences to being deemed 'at-risk'. The unemployed (Dean, 1995), the poor (Cruikshank, 1994), gay and lesbian communities living with AIDS (Kinsman, 1996), pregnant women (Weir, 1996) and the target populations of health promotion in general (Petersen, 1996) have all provided sites for the development of governmental strategies involving the subjectivities of the self.

Current Australian government welfare rhetoric of 'mutual responsibility' sits neatly within this approach to governing through the self. The potential is there to not only 'blame the victim' but to institutionalise new forms of inequality through what Castel (1991:294) refers to as a 'two speed' society. For Castel (1991:295) the 'profiling' of populations from epidemiological method provides the possibility of organising marginality, by providing 'circuits laid out in advance, which individuals are invited or encouraged to tackle depending on their abilities'. In deeming Indigenous people 'at risk,' we must be wary of who shall ultimately carry the greatest burden of blame and responsibility. New welfare state logics which seek to reserve effective citizenship only for active, self-managing populations have the potential to re-invoke old logics of exclusion. The major concern in this scenario must surely be that those most 'at risk', will also be those most likely to be expected to follow paths of active citizenship now required in emerging formulations of the welfare state. Hence the language of community participation and control, now firmly established within Indigenous health and welfare discourses can simultaneously represent empowerment as well as resistance on the part of Indigenous communities (O'Malley, 1996). From this perspective *self*-determination in health is both a hard fought Indigenous political struggle and at times a useful political appropriation on the part of government policy-makers, convenient to the needs of social administration.

CONCLUSION

Indigenous Australians continually have to remind non-Indigenous Australia of the importance of history in understanding the present. Although this plea has been acknowledged as a critical component of public health understanding of Indigenous Health (see, for example, Ring & Elston, 1999), rarely has the history of public health itself been acknowledged as in need of the same review. This paper has sought to demonstrate the inescapable interconnections between epidemiology and the broader sociopolitical environment.

In summary, epidemiology has both reflected and helped to construct popular ideologies about who Aboriginal and

Torres Strait Islander people are. That historical notions of assimilation, social Darwinism, and dangerous others are all evident within scientific discourse should not surprise us. Public health in general, and epidemiology in particular, is no more or less a part of the sociopolitical environment of Indigenous health than any other arena. In this light the more recent construction of Indigenous people as risk group may not automatically bring the rewards that a scientific imagination might assume. The realisation of this, in my view, strengthens - rather than weakens - the potential for a critical, reflexive epidemiology in what is the most urgent area of its practice within Australian public health. As Rose (1996:353) has concluded, we should not assume the worst in the new risk based strategies of governance, we should however engage in diagnosing points of weakness so that the knowledges, authorities and the practices that will govern, do so in the name of our freedoms and our commitments.

References

- Abbie, A.
1960 Physical changes in Aboriginal Australians consequent upon European contact *Oceania* 31 (2) 140-144
- Australian Institute of Health and Welfare
1998 *Australia's Health 1998: the sixth biennial health report of the Australian Institute of Health and Welfare*. Canberra: AIHW.
- Australian Bureau of Statistics
1997 *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples*. Catalogue No. 4704.0. Canberra: AGPS.
- Beck, U.
1992 *Risk Society: Towards a new Modernity*. London: Sage.
- Better Health Commission
1986 *Looking forward to better health v.3*. Canberra:AGPS.
- Birch, T.
1995 A Mabo blood test. *Australian Journal of Anthropology* 6(1-2)32-42.
- Briscoe, G.
1995 *Queensland Aborigines and the Spanish Influenza Pandemic of 1918-1919*. Canberra: Australian Institute of Aboriginal and Torres Strait Islander Studies.
- Brough, M.
1999 A Lost Cause? Representations of Aboriginal and Torres Strait Islander Health in Australian Newspapers. *Australian Journal of Communication* 26(2)89-98.
- Burchell, G., C. Gordon, and P. Miller eds.
1991 *The Foucault Effect: Studies in Governmentality*. Chicago: University of Chicago Press.
- Castel, R.
1991 From dangerousness to risk *In The Foucault Effect: Studies in Governmentality*. G. Burchell, C. Gordon, and P. Miller, eds. Pp. 281-298 Chicago: University of Chicago Press.
- Christie, D., I. Gordon, and R. Heller
1987 *Epidemiology: An Introductory text for medical and other health science students*. Kensington: New South Wales University Press.
- Collins, Y.
1993 The Chinese and Public Health in Bendigo 1854-1916 *In "Outpost Medicine" Australasian Studies on the History of Medicine*. S. Atkins, K. Kirby, P. Thomson, and J. Pearn, eds. Pp.71-80 Hobart: Australian Society of the History of Medicine.
- Cook, C.
1927 *The Epidemiology of Leprosy in Australia*. Canberra: Government Printer.
- Cruikshank, B.
1994 The Will to Empower: Technologies of Citizenship and the War on Poverty. *Socialist Review* 23(4) 29-55.
- Cumpston, J.
1928 *Health and Disease in Australia: A History* - edited and re-published by Lewis, M (1989) Canberra: AGPS.
- Dean, M.
1995 Governing the unemployed self in an active society. *Economy and Society* 24(4) 559-83.

- DiGiacomo, S.
1999 Can there be a "Cultural Epidemiology"? *Medical Anthropology Quarterly* 13(4) 436-457.
- Douglas, M.
1992 *Risk and Blame: Essays in Cultural Theory*. London: Routledge.
- Farrell, D and R. Wraight
1993 *State of Health in NSW*. NSW: Department of Health.
- Flegg, B.
1983 Letter to the Editor. *Medical Journal of Australia* September 3 P.211.
- Foucault, M.
1991 *Governmentality In The Foucault Effect: Studies in Governmentality*. G. Burchell, C. Gordon, and P. Miller, eds. Pp.87-104 Chicago: University of Chicago Press.
- Giddens, A.
1991 *Modernity and Self-Identity: Self and Society in the late Modern Age*. Stanford: Stanford University Press.
- Gifford, S.
1986 Better Health for Groups at Risk: Special Needs or Basic Rights? *Community Health Studies* 10(4)411-414.
- Gordon, D.
1976 *Health, sickness, and society: Theoretical concepts in social and preventive medicine*. St Lucia: University of Queensland Press.
- Gordon, D.
1988 Tenacious Assumptions in Western Medicine *In Biomedicine Examined*. M. Lock, and D. Gordon, eds. Pp. 19-56 Dordrecht: Kluwer.
- Gray, A. ed.
1990 *A Matter of Life and Death: Contemporary Aboriginal Mortality*. Canberra: Aboriginal Studies Press.
- Hammill, J.
2000 *Culture of Chaos: Indigenous women and vulnerability in an Australian rural reserve*. Unpublished PhD, The University of Queensland.
- Harloe, L.
1988 From North to South: The Translocation of the Australian Institute of Tropical Medicine. *In Pioneer Medicine in Australia*. J. Pearn, ed. Pp. 145-158 Brisbane: Amphion Press.
- Hetzel, B., B. Dobbin., M. Lippman, and E. Eggleston eds.
1972 *Better Health for Aborigines*. St Lucia: University of Queensland Press.
- Hetzel, B.
1980 *Health and Australian Society*. Third Edition Ringwood, Victoria: Penguin.
- Higgs, P.
1998 Risk, governmentality and the reconceptualization of citizenship *In Modernity, Medicine and Health: Medical Sociology towards 2000*. G. Scambler and P. Higgs, eds. Pp.176-197 London: Routledge.
- House of Representatives Standing Committee on Aboriginal Affairs
1979 *Aboriginal Health*. Canberra: AGPS.
- Hunter, E.
1995 *Aboriginal Health, Social and Cultural Transitions Conference*. *Aboriginal and Islander Health Worker Journal* 19 (6) 15-17.
- Kane, S. and T. Mason
1992 'IV Drug Users' and 'Sex Partners': The limits of epidemiological categories and the ethnography of risk. *In The Time of AIDS: Social Analysis, Theory and Method*. G. Herdt and S. Lindenbaum, eds. Pp. 199-224 Newbury Park: Sage.

- Kidd, R.
1997 *The way we civilise: Aboriginal Affairs - the untold story*. St Lucia: University of Queensland Press.
- Kinsman, G
1996 'Responsibility' as a Strategy of Governance: Regulating People Living with AIDS and Lesbians and Gay Men in Ontario. *Economy and Society* 25(3) 393-409.
- Kirke, D.
1972 *The traditionally oriented community*. In *Better Health for Aborigines*. B. Hetzel, B. Dobbin, M. Lippman, and E. Eggleston, eds. Pp. 81-87 St Lucia: University of Queensland Press.
- Krieger, N.
1999 *Questioning Epidemiology: Objectivity, Advocacy, and Socially Responsible Science*. *American Journal of Public Health* 89(8)1151-1153.
- Kunitz, S.
1994 *Disease and Social Diversity: The European Impact on the Health of Non-Europeans*. Oxford: Oxford University Press.
- Lake, P.
1992 *What Research has been done in Aboriginal Health?* *Aboriginal and Islander Health Worker Journal* 16(2)8.
- Lincoln, R., J. Najman., P. Wilson, and C. Matis
1983a *Mortality rates in 14 Queensland Aboriginal Reserve Communities*. *Medical Journal of Australia* April 16, 357-360.
- Lincoln, R., J. Najman., P. Wilson, and C. Matis
1983b *Corrigendum - Mortality rates in 14 Queensland Aboriginal Reserve Communities*. *Medical Journal of Australia* September 3, 208-209.
- Lupton, D.
1995 *The Imperative of Health: Public Health and the Regulated Body*. London: Sage.
- Mackey, E.
1999 *Constructing an endangered nation: risk, race and rationality in Australia's native title debate*. In *Risk and Sociocultural Theory: New directions and perspectives* D. Lupton, ed. Pp.108-130 Cambridge: Cambridge University Press.
- McGregor, A.
1983 *Black death statistics from Government's own records*. *Courier Mail* April 19, p. 4.
- McGregor, R.
1997 *Imagined destinies: Aboriginal Australians and the doomed race theory 1880-1939*. Melbourne: Melbourne University Press.
- McQueen, H.
1975 *'Spanish Flu' 1919: political, medical and social aspects*. *Medical Journal of Australia* 1(18) 565-570.
- Martin, E.
1987 *The Woman in the Body: A Cultural Analysis of Reproduction*. Milton Keynes: Open University Press.
- Martin, E.
1990 *Towards an anthropology of immunology: the body as nation state*. *Medical Anthropology Quarterly* 4(4) 410-26.
- Martin, E.
1992 *Body Narratives, body boundaries* In *Cultural Studies*. L. Grossberg, C. Nelson, and P. Treichler, eds. New York: Routledge.

- McCorquodale, J.
1987 *Aborigines and the Law: A Digest*. Canberra: Aboriginal Studies Press.
- Moodie, P.
1972 *The part-Aboriginal community* *In* *Better Health for Aborigines*. B. Hetzel, B. Dobbin, M. Lippman, and E. Eggleston, eds. Pp. 88-96 St Lucia: University of Queensland Press.
- Mountford, C. ed.
1960. *Records of the American-Australian Expedition to Arnhem Land: Volume 2: Anthropology and Nutrition*. Melbourne: Melbourne University Press
- Moyal, A.
1981 *Medical Research in Australia: A Historical Perspective*. *Search* 12(9) 302-309.
- O'Malley, P.
1996 *Indigenous Governance*. *Economy and Society* 25(3) 310-326.
- O'Neil, J., J. Reading, and A. Leader
1998 *Changing the Relations of Surveillance: The development of a discourse of resistance in Aboriginal Epidemiology*. *Human Organisation* 57 (2) 230-237.
- Patrick, R.
1987 *A History of Health and Medicine in Queensland 1824-1960*. St Lucia: University of Queensland Press.
- Petersen, A.
1996 *Risk and the regulated self: the discourse of health promotion as politics of uncertainty*. *Australian and New Zealand Journal of Sociology* 32 (1) 44-57.
- Plant, A., J. Condon, and G. Durling
1995 *Northern Territory Health Outcomes Morbidity and Mortality 1979-1991*. Northern Territory Department of Health and Community Services, Darwin.
- Queensland Health Department
1976 *Annual Report 1975/76*. Brisbane: Queensland Government Printer.
- Reid, J. and C. Kerr
1983 *Trends in Aboriginal Mortality*. *Medical Journal of Australia* April 16, 348-350.
- Ridolfo, B. and J. Codde eds.
1998 *The Health of Western Australians: An overview of the health of the Western Australian population*. Perth: Health Department of Western Australia.
- Ring, I. and J. Elston
1999 *Health, history and reconciliation*. *Australian and New Zealand Journal of Public Health* 23(3) 228-231.
- Rose, N.
1996 *The death of the social? Re-figuring the territory of government*. *Economy and Society* 25(3) 327-356.
- Rowley, C.
1978 *A Matter of Justice*. Canberra: ANU Press.
- Runciman, C. and I. Ring
1994 *The health of indigenous people in Queensland: some background information*. Brisbane: Queensland Health.
- Shanasy, J.
1983 *Letter to the Editor*. *Medical Journal of Australia* September 3, P.211.
- Singer, M. and H. Baer
1995 *Critical Medical Anthropology*. New York: Baywood publishing company.

- Strahan, L.
1994 An Oriental Scourge: Australia and the Asian flu epidemic of 1957. *Australian Historical Studies* 103: 182-201.
- Thomson, N.
1986 Current status and priorities in Aboriginal health. *In* Better Health Commission, *Looking Forward to Better Health V.3*. Pp. 3-15 Canberra: AGPS.
- Treichler, P.
1987 AIDS, Homophobia, and Biomedical Discourse: An Epidemic of Signification. *Cultural Studies* 1(3) 263-305.
- Treichler, P.
1992 AIDS, HIV, and the cultural construction of reality. *In* *The Time of AIDS: Social Analysis, Theory and Method*. G. Herdt and S. Lindenbaum, eds. Pp. 65-98 Newbury Park: Sage
- Trigger, D., C. Anderson., R. Lincoln, and C. Matis
1983 Mortality rates in 14 Queensland Aboriginal reserve communities: Association with 10 socioenvironmental variables. *Medical Journal of Australia* April 16, 361-365.
- Waldby, C.
1996 *AIDS and the Body Politic: Biomedicine and sexual difference*. London: Routledge.
- Weeramanthri, T. and C. Plummer
1994 Land, body and spirit - talking about adult mortality in an Aboriginal community. *Australian Journal of Public Health* 18(2) 197-200.
- Weir, L.
1996 Recent Developments in the Government of Pregnancy. *Economy and Society* 25 (3) 372-392.
- Wilson, P.
1982 *Black Death White Hands*. Sydney: George Allen & Unwin.