A "Man-Made" Environment? A Century of Health in Tropical Australia. Historical Perspectives as Frameworks for Future Strategies

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6th National Rural Health Conference

Canberra, Australian Capital Territory, 4-7 March 2001

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> History is about the process of translating evidence into facts.[1]

INTRODUCTION

This paper has emerged from the intersection of a number of disparate research interests. First, from my involvement in the broad sociological project focusing on the Australian sugar industry as one component of research and development being undertaken by the Co-operative Research Centre for Sustainable Sugar Production (CRC Sugar)[2]. Second, my feminist perspective in the social sciences — that is, that my frameworks for understanding social issues foreground difference from within a broader project of what could be understood as Foucault’s “history of the present”[3] (see Baert 1998). Finally, from recent readings and attendance at national health conferences — such as this one — where debates about public health are largely presented epidemiologically or sociologically, but rarely historically. All too often such “history” tends to be a concentration of so-called “truths” of a powerful progressive future, where oppressed and dispossessed voices are rarely heard. One exciting exception to this was a paper given at a recent national conference[4], which developed an historical perspective on the social determinants of health, and which started me reflecting about my own research intersections[5].

This paper begins with a brief outline of the Australian sugar industry and its place in tropical Australia today from a health perspective. Taking up the idea developed by Michel Foucault of a “history of the present”, the paper then develops the framework by which an exploration of health issues in the sugar industry in tropical Australia in the 1920s can assist in developing a more full appreciation of today’s issues. The paper concludes with a summary of these issues and the need for future research into them.

THE SUGAR INDUSTRY IN A HEALTH CONTEXT

The Australian sugar industry is the fourth-largest agricultural industry in value terms, with a gross value of production approaching $2 b annually. Sugar cane is grown on nearly 400 000 ha along the eastern seaboard from Grafton in northern New South Wales to Mossman in far north Queensland. The industry is a major employer and a mainstay of many coastal towns and rural regions. It is estimated that there are 7200 cane growers in Australia, including about 6500 in Queensland, more than 700 in New South Wales and approximately 20 in Western Australia. Most of these farmers manage

family-owned farms and the average size of their property is around 75 ha Queensland's raw sugar industry directly employs about 17 000 people in the growing, milling, storage, marketing, and refining of raw sugar. Indirectly, it is estimated that a further 24 000 jobs are generated.

It is already clear that this century will be one that will herald a new dynamic in communities that are reliant on natural resources or agriculture. This dynamic can be identified as a tension — between the demands of communities for jobs, and the demand of industry for production — while at the same time there is a pressure for a maintenance of quality of life and personal health as well as a more ethical and sensitive approach to environmental degradation. Nowhere does this broad health dynamic become more obvious or relevant than within tropical Australia's sugar industry. Over the past five years, the industry has experienced a down turn in world prices, increasing competition from Brazil (which is able to produce sugar more cheaply than Australia); climatic crises — including floods and cyclones — as well as overall pressure on production from increased legislative constraints. Most recently, both the Federal and Queensland governments provided economic "rescue packages" for the industry. These were designed to provide low interest loans to growers, to enable them to manage during these difficult times, and to continue to build their properties until prices return to a more economic level.

TOWARDS A HISTORY OF THE PRESENT

In his fascinating text *Deconstructing History* (1997), Alan Munslow argues convincingly for history as a "literary artefact" — a narrative attempt to "understand" the past — which involves those of us writing it, as much as those of us reading it, to develop the narrative flow. "Written history" he suggests "is always more than merely innocent story-telling, precisely because it is the primary vehicle for the distribution and use of power"[6].

To enable a better comprehension of the here and now, says Foucault, an understanding of "historical conditions which motivate our conceptualisation … [and] a historical awareness of our present circumstance" needs to be developed[7]. When we consider the present day health status of Australians, we are drawing on the process Munslow describes as "translation" — that is, we are turning evidence into "facts" through our own narrative interpretations[8]. In addition, and as Munslow argues cogently, those of us involved in the building of such narratives conduct what he terms "emplotment" — the "positioning or organising of the evidence in relation to other examples" — that is, contextualising the evidence in order to build our narrative. This is done very deliberately, very consciously, as the narrative does not just "arrive" fully formed. Munslow suggests instead that it "emerges as we organise, configure and emplot the data"[9]. Hence, my earlier statement about the intersection of my research ideas and knowledges.

The building of a narrative history, from evidences and emplotment, about the health of Australians who live in the tropics is evident in the work of Dr Raphael Cilento, who was Director-General of Health and Medical Services for Queensland, and Director of the Australian Institute of Tropical Medicine in Townsville in the late 1920s and early 1930s. Dr Cilento was a member of a team of scientists who were working in the

forefront of public health in tropical Australia at this time. Their overall public health project was to ensure that the continued settlement of the tropics by Europeans was supported. Cilento put it this way:

> It was the traditional and empirical opinion that a white race could not live permanently in the tropics — an opinion modified later by the proviso that, while individuals might so live, they could not work and they could not bring up healthy children — and still more recently modified to the effect that, while they might live and could possibly work, and could perhaps have children, the effect upon themselves and their offspring must be disastrous[10].

Why did so much of the energy of the Australian Institute for Tropical Medicine get directed into this public health argument about the fitness of the white man for the tropical environment? My research suggests that the argument for the capacity of Europeans to settle in the tropics was integrated within a broader eugenics discourse through the development of a medico/scientific foundation for the extension of the White Australia policy.

SUGAR AND THE TROPICS

It was largely through the growth of the Australian sugar industry, that settlement of the tropics began in the mid 19th century. The introduction of cheap inducted South Sea Islander labour enabled the industry to grow. However, in the years prior to Federation a powerful lobby group developed which argued that sugarcane could be and should be grown by white men, that the industry needed European cane farmers to survive, and that the continued use of indentured labour advantaged the larger plantations, but undercut the earning potential of small growers. The expansion of the sugar industry following the First World War meant that by 1922 Australia began exporting raw sugar. The following year, the Commonwealth Government handed control of the sugar industry to the Queensland Government and the Sugar Board was established under the *Sugar Acquisition Act*. In 1923, Australian raw sugar first exported to New Zealand and the UK and in the following year, to Canada.

This "white man in the tropics farming sugar" group intersected with other growing ideologies of the time, particularly, the White Australia policy and the eugenics movement. The eugenics discourse in Australia (as in other countries) was initially largely centred within the medical and scientific profession[11] and only later within governments. A few examples here will suffice — for example, in 1910, the President of the Australasian Association for the Advancement of Science suggested that "We are breeding to the lower types among us"[12] and by 1911 when the Australasian Medical Congress was lectured on the Binet-Simon Scale of Intelligence testing and told that a policy of "lifetime segregation" was the answer to the social problem of racial decay, Congress members understood the implied implication, that is, that "the elimination of feeble-mindedness was to be welcomed"[13]. Congress responded by appointing a committee to examine the "prevalence of feeble-mindedness in Australasia"[14] and, as early as 1916, the Queensland Inspector of Asylums (a doctor), taking his lead from the United States, was calling for the "sterilisation of the feeble-minded, the insane, the epileptic and inebriate"[15]. The 1923 New South Wales Royal Commission on Lunacy Law warned of the danger presented by the tainted heredity of the retarded to the

nation's "virile stock"[16] and the Racial Hygiene Association of New South Wales held an all states congress in 1929 with eugenics as the keynote theme. Discussion topics included, among others, the "teaching of the community on eugenic lines [and] health problems, particularly the care of the mentally deficient"[17]. Thus the pseudo-science of eugenics formed the basis of the practice of "racial hygiene" — strongly supported in Australia in the 1920s and 1930s — and which underpinned the powerful preventative medicine message Cilento himself promulgated from the Australian Institute of Tropical Medicine.

THE "DISTINCTIVE TROPICAL TYPE": FINDINGS FROM AN EARLY HEALTH SURVEY

In 1924,what has to be one of the earliest sociological investigations of the Australian population was conducted by the Division of Tropical Hygiene, Commonwealth Department of Health. The purpose of the survey was to "obtain actual first-hand information as to the effects and results of tropical residence in north Queensland"[18]. Cilento was keen to put to rest what he considered "myths" about European men and women not being able to live and work comfortably and bear healthy, intelligent children in a tropical environment.

My summary here is drawn from an analysis of this survey by Cilento, and included both in his ground breaking text: *The White Man in the Tropics* (1925) and followed up in a later article in *Health* (1926) entitled: *Observations on the White Working Population of Tropical Queensland*. These were both written with the express purpose of arguing that the settlement of "white man (sic) in tropical countries … is infinitely more largely a question of *preventive medicine* than a question of climate"[19]. Here I take preventive medicine to be what we would now call public health. Importantly, while Cilento's work focused on the health and well being of the white man, the survey was actually conducted with women[20] — focusing on the relationships between them, their families and their health and using the evidence of these findings to

> … indicate certain common fallacies relating to residence within selected areas of the "geographical tropics", and to record the results of experience insofar as they indicate, in a general way, the precautions to be taken in preparing such areas for the nurture of a resident white race.[21]

The survey identified two distinct groups of Europeans in the tropics. First, those first generation "colonists" who had been born in non-tropical countries other than Australia — usually in Europe. Second, those people who were second or third generation Australians. The study was unique and provides a fascinating insight to life in the tropics at that time. It was conducted using a multi-method approach, including interviews, participant observation and survey questionnaire. Three geographical sites were chosen. First, the hot moist coastal towns of (Townsville and Cairns = 423 households); second, the coastal plateau (what we now more commonly refer to as the "hinterland") represented by Atherton, Chillagoe and Charters Towers (213 households) and finally, the hot dry interior represented by Julia Creek and Cloncurry (104 households).

While the broad sociological interpretations associated with this unique insight into the lives of the early colonists of far north Queensland are fascinating (and would provide any number of papers), here I will concentrate on two aspects of health: food safety and personal hygiene. This analysis focuses on the Townsville area, which, with over 300 households was the most representative group within the overall study. The first part of my description focuses on the broad context, and the second on the analysis of the survey in relation to its findings.

Of the 300 homes visited in Townsville during the survey, over 48% were rented, and 33% of these included a sub-let, either room or half a house to another family. The survey identified that in some homes there were as many as four adults and eight to ten children. The average rent was around 17 shillings and 6 pence (the basic wage at this time was 3 pounds 16 shillings a week). Of the 300 women interviewed, just over 51% were born within the tropics, with over 75% of the total interviewed having lived in the tropics for over ten years. A small percentage had lived in the tropics between 40 and 50 years. The average number of children born to the women who were themselves born in the tropics was 3.8; while those of women born elsewhere was 4.1. The average age at marriage for those women born in the tropics was 21 years and 5 months, and their average age overall was 36 years and 10 months.

Food and food safety

Over 30% of the households surveyed had no ice-chests, instead choosing to use canvas to cool food. Over 40% had no meat safes, instead hanging their meat outside in the open air. There were “few labour saving devices”; with 37% having no dressers in which to keep food, instead using shelving, which in 9% of cases was exposed to “flies and cockroaches”. In “many cases” fowls and goats had free range under the houses. The majority cooked with wood stoves and the survey found that over 50% of the utensils used in the homes were in a “broken or cracked condition”. The milk supply in Townsville was less than reliable and condensed and powdered milk was used almost “universally”. While tinned fruits were used in the summer, tinned food generally was far too expensive for most household budgets[22].

Personal and family hygiene

About 7% of those surveyed did not have a bathroom, while around 16% of those who did have one, would have to walk sometimes up to 12–16 feet away from the house to access it. While the survey does not report this — all homes would have been connected to the “night soil” system[23]. Laundries were also not common, with many women using “shaded benches immediately outside the kitchen door” and most not having any boiler or “set-in tubs”. Water was accessed from town supplies, with the rest using rain water tanks. Drainage of water was an issue. Over 98% of all households did not have proper drainage systems, and some 5% “had stale water lying about in pools and drains”[24].

“A MAN-MADE ENVIRONMENT”?

Cilento suggests that “the housewife’s domestic knowledge of economy varies with the amount of her intelligence and common sense, and with the home training she has had”[25]. Thus the women’s responses to the conditions discussed above are analysed as a

measure of their capacity to manage the home economy. For example, on the issue of food preparation and food safety, the survey identified that 33% of women "could be said to have a good knowledge of economy", while some 20% "appear to have very little knowledge of economy in any form whatsoever"[26].

The household survey became an important plank in the framework towards a European settlement of tropical Australia. Cilento and others argued that the relationship between people's knowledge of domestic science and the impact of preventative medicine, has a direct relationship on their capacity to maintain quality of life in tropical environments. In other words, it had nothing to do with race — they argued — Europeans could live comfortably in the tropics if they would adjust their diets, their exercise patterns, their clothing, their work patterns and take public health advice about their lifestyle.

Cilento was also certain that children born in the tropics, could live there comfortably, and were no worse off, either in their health, their growth or their intelligence, than children in other parts of Australia. There was "no sign of mental deterioration in the school children" he reported from the survey and "no appreciable difference in the[ir] mental and physical development"[27]. The only aspect of public health that needed more resources was in baby clinics. "Medical advice of any description" regarding small babies was not available to the women who lived outside of Cairns and Townsville. Even in those cities, Cilento felt that the prejudice towards practitioners prevented mothers from seeking professional advice[28]. He saw education as the key here, a public health education which began in schools and which was made available to all the population. He argued for such health education on the grounds that the potential of population growth in tropical Australia would enable a white settlement, increased production (including in sugar cane) and he concludes that

> First generation, second generation, and third generation Queenslanders are performing their life work and following their ordinary avocations as they would in temperate climates, and there is as present no indication that the strain of tropical life is an actual one, or that the outlook for these people is anything but hopeful.[29]

FRAMEWORKS FOR FUTURE STRATEGIES

As described above, the present day Australian sugar industry is largely located on the eastern seaboard of Australia — with the majority of cane produced and milled (18 mills) — above the Tropic of Capricorn, from Mackay to Mossman. The relationship between cane and the tropics is a complex one, historically, spatially, culturally and economically. As this brief historical review shows, this complex relationship does impact on the health of the population and on institutional responses to that health.

While cane grows well under tropical conditions, it is precisely these conditions that also cause limitations: climatic conditions (floods, cyclones); environmental conditions (proximity to the Great Barrier Reef and pristine rainforests) and economic conditions (many of the sugar towns continue to rely on a single industry, rather than diversification). In addition, and importantly, the growth of tropical tourism also places pressure on the industry, through the demands of national and international tourists for eco-tourism experiences in the same environments.

To date, there has **not** been any significant research of the health of those individuals who work within the sugar industry in Australia. In 1997, a social health analysis of 1991 ABS data by Statistical Local Areas (SLAs) included cane production as an industry. It broadly identified the following health indicators: high male suicide; high motor vehicle and other injury death rates and high myocardial infarct for males[30]. However, and unfortunately, as this data also included the population in SLAs that did not farm sugar cane or were not involved in the sugar industry — it therefore needs to be treated with some caution as any kind of trend predictor. In this paper I have focused on an historical account of the health relationships of households and families and their tropical environment, through an historical analysis drawing on an earlier study undertaken in 1924. The historical narrative developed by Cilento in the 1920s and 1930s that of the "white man" in the "tropics" still remains an important framework to understanding the relationship between the Australian sugar industry and its tropical environment. To what extent the historical narratives of racial hygiene, eugenics and preventative medicine are still entwined in community health practices today are yet to be explored in more detail.

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14. By 1912 the *Australasian Medical Gazette* was calling for "legislation permitting compulsory detention of the retarded" (Lewis, p.146). However as Milton Lewis (1988) points out, not all local doctors co-operated with the Committee and its conclusions (based on apparently minimal empirical evidence) was that "the percentage of mentally retarded children in Australia was much the same as that in England" (p.146).

15. Lewis, 1988, p.146.

16. Lewis, 1988, p.148.

17. Siedlecky, S. & Wyndham, D. (1990) *Populate or Perish:Australian Women's Fight for Birth Control.* Sydney:Allen & Unwin. p. 111.

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20. Elsewhere I discuss the fact that women in the sugar industry (and in the tropics generally) were historically made invisible (see Stehlik, D. 2000 *Living with Sugar: Place, Gender and Identity in the Australian Sugar Industry.* Paper presented to the Australian Sociological Association National Conference, Adelaide. December).

21. Cilento, 1925, p.13.

22. Cilento, 1926, p. 77.

23. In 1924 the first home in Brisbane was connected to a sewerage system.

24. 1926:77–78

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