

author. Barrett tells about Hirsch's huge intention to draw from his mountain of details laws which, Barrett says, would provide 'a complete theory of historical and geographical pathology and nosology'. Nineteenth-century European statecraft and technology had opened the world's climates, topography and societies to investigation and 'improvement'. But Hirsch's great work ultimately revealed that close causal connections of latitudes with fevers, for example, were not straightforward. This perhaps is the reason, together with his dogged accuracy of citation, why he is still a starting point, while most of his predecessors and contemporaries, some of whom are helpfully discussed in this volume, are forgotten.

Anderson's paper neatly dissects the changing and conflicting debates among landtakers, politicians, anthropologists, medical researchers, and bureaucrats about white Australians' chances in the North. Was it inevitable, as European experience showed in other torrid zones, that whites deteriorated physically and morally in such places, and could they labour efficiently in a future mining and plantation economy, which excluded socially divisive but climatically attuned Asian and Pacific Islander workers? The debate was important; 'tropical' Australia was believed to cover a third of the continent. Geographic determinism worsened an already muddled controversy. As usual, climatic and physiological facts were scarce. Boosters and sceptics could not even agree on which diseases were endemic or which should be tackled first.

Buttimer and Numbers offer expert reflections on the attractions and weaknesses in medical geography. They also rightly praise the editor and his contributors for providing this widely informed survey of a once-powerful doctrine.

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A Global Scientist: Douglas H. K. Lee. By Malcolm Whyte (Brolga Press, Gundaroo, Qld, 1995) xii, 199pp.

A SURPRISINGLY LARGE NUMBER OF ARTICLES AND BOOKS HAVE BEEN WRITTEN on the history of disease and medicine in Australia—in comparison, say, to California. But these valuable studies can be found mostly in the back numbers of specialist or professional journals; or else they derive from small publishers with poor access to distribution networks. In writing a general history of medical science in Australia, I was recently reminded of the remarkable contribution of Bryan Gandevia to our understanding of disease and health care in this country. But

most of his essays are encased in old issues of the *Medical Journal of Australia*, dating back to the early 1950s, and thus have almost disappeared from view. Another example of undeserved and lamentable obscurity is Malcolm Whyte's revealing portrait of Douglas H. K. Lee, a pioneering Australian physiologist. This is a book that illuminates the beginnings of a research culture at the University of Queensland; and it demonstrates, better than any other study I can think of, just what it meant for an Australian to build an international research career in the middle of the twentieth century. It deserves much wider circulation than it has hitherto received.

'Dougie' Lee was born in England in 1905 but grew up in Mackay and Brisbane, developing a life-long interest in the effects of tropical residence, especially as they were manifested in transplanted Britons. After studying Science at the new University of Queensland and Medicine at Sydney, Lee worked for a time in the Commonwealth Laboratory Service in Western Australia and New South Wales. His interest in research was evident early on: during the summer vacation in 1926 he left Sydney to visit the ailing Tropical Institute at Townsville, where he undertook a study of the blood groups of Aboriginal people on Palm Island. Tiring of the routines of the Laboratory Service, Lee later sought out C. J. Martin, the great orchestrator of Australian research careers, who advised him to enrol in a Ph.D degree at University College, London, under Charles Lovett Evans. There, Lee studied physiological reactions to heat in the hot room—an ideal refuge from a London winter for the Queenslander—and he later went on to work with Constantin Yoglou, the inventor of an 'effective temperature scale', at the Harvard School of Public Health. Eager to return to the tropics, Lee took up the Chair of Physiology at Singapore, but left after a mere six months to return to Brisbane. At what now seems the frighteningly young age of thirty-one, Lee had been appointed the first Professor of Physiology at the University of Queensland's fledgling medical school. Within a few years he was the second dean of the school. It seems that Lee performed his administrative and teaching duties with skill and maturity: more remarkable, he was the only person in the school of medicine to develop a strong research program.

Lee concentrated on physiological studies of the effect of tropical heat on the 'white man', a field of inquiry already well established in northern Australia but one which never seemed to yield definitive results. In Townsville, Anton Breinl, J. W. Young, Henry Priestley, and E. S. Sundstroem had investigated the physiological adaptation of the 'white organism' to local conditions, and their successor, the research-averse R. W. Cilento, had already proclaimed a white triumph in the tropics. But Lee wanted to carry out a more rigorous study on a larger

scale. In doing so, he became one of the leading experts on heat regulation. It struck me, in reading Malcolm Whyte's book, that during the 1940s Lee was able to give generic form to a research project that had once seemed specific to North Queensland. Wisely, he soon dropped reference to the 'white man' in the tropics, and by the end of the 1940s he claimed to be doing 'human climatology'. The shift in focus gave his work meaning beyond white Australia.

By the late 1940s, Lee had decided to move to the Johns Hopkins University to pursue his investigations of human climatology and 'tropical fatigue'. He wanted to take a chance rather than stay behind and build himself a 'mausoleum'—he never fancied the view from inside a mausoleum. But his research career seemed to have sputtered almost to a stop in Baltimore. Before long he was working with the US government, undertaking studies of occupational health, especially in relation to asbestosis. Here again is an example of how a medical career can link fields of endeavour that otherwise, to the historian, seem quite distinct. The logic of Lee's career integrated work in tropical medicine with later studies of environmental health, just as Victor Heiser's career, a generation earlier, had led 'naturally' from tropical public health to industrial hygiene. Such career patterns should make those historians who limit their studies to one specialty think more seriously about the permeability of disciplinary and institutional boundaries.

It is salutary to compare Lee's career in physiology with the life story of his more famous contemporary, R. D. Wright. Both were clever boys from the country who received the support necessary to fashion academic careers. Both became involved early on in administration and building institutions. Wright excelled in the creation of structures in which others could conduct research; but Lee went on and did his own research. The biography of Lee thus tells us about constructing a research career in twentieth-century Australia; Wright's biography reveals the distractions from research and the perils of becoming an institutional 'character'. Lee, according to Whyte, was quiet and unassuming, a logical thinker renowned for his clear exposition of complex ideas. I know of no one who has ever described Wright in those terms.

In 1990, Dougie Lee returned to Brisbane and resumed teaching in the medical school. When this book was written, Lee was still conducting seminars on ageing, in which he claimed to be 'exhibit A'. But I feel sure that the students would soon have realised that their sprightly teacher, whose presence connected them to the foundations of their medical school some sixty years ago, was not in any way a typical exhibit of the ageing process.

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