

2

A LONG COLLABORATION

Professors Basil Hetzel and Tony McMichael

BASIL S. HETZEL

Abstract

This short essay reflects on the diverse and distinguished career of Tony McMichael from a unique perspective, that of his doctoral supervisor, when I was the Foundation Professor of Social and Preventive Medicine at Monash University (Melbourne) in 1968.

The Foundation: Politics and Preventive Medicine at the Universities of Adelaide and Monash

In the late 1960s, the National Health and Medical Research Council (NH&MRC) was beginning to encourage academic development in the field of epidemiology and public health. In 1968, the NH&MRC awarded me two NH&MRC Fellowships as a newly appointed Foundation Professor of Social and Preventive Medicine at Monash University for this purpose. I was thus able to offer Tony a PhD Fellowship, and in the following year he joined my newly established Department of Social and Preventive Medicine to train in epidemiology and public health. Tony was the first student and was to become the first graduate.

Prior to this, Tony had graduated with distinction in Medicine at the University of Adelaide, where I had taught as Michell Reader and then Michell Professor of Medicine (1956–68), after returning from study in New York (1951–55) as a Fulbright Research Scholar. I also had contact with Tony as a medical student, including arranging a placement for him in India at the Christian Medical College at Vellore (near Madras, now Chennai) in South India. This medical school has been recognised as second only to the All India Institute of Medical Sciences in Delhi.

During his undergraduate course, Tony became interested in politics, serving as President of the National Union of Australian University Students (NUAUS) following his final year. But Tony was then uncertain about his course; a mutual friend – Mark Wahlqvist – suggested he might consult me, which he did. Later, Mark became Professor of Nutrition at Deakin University, Geelong (see Chapter 15, this volume).

Keen to develop the discipline of epidemiology, I was able to recruit Dr Tony Ryan, another Adelaide graduate, who had just completed his Masters of Public Health (MPH) in epidemiology at the Harvard School of Public Health. He had earlier carried out a major pioneering study of traffic accidents in the Department of Pathology at the University of Adelaide, for which he received an MD (Doctor of Medicine).

I had recently supervised a study by Dr Bob Heddle, Director of Student Health at the University of Adelaide, which had led to his MD degree. This was a time of increasing international student turbulence, emanating from centres such as Paris and Berkeley, California. Australian students were part of this upheaval; Monash was no exception. I suggested to Tony that he studied the health of Monash University students. He took up this challenge with enthusiasm – his recent political experience was useful! We also benefited from recently published studies of student health from Harvard and Edinburgh Universities. This led to several papers (McMichael and Hetzel, 1974, 1975), as well as a successful PhD thesis. At that time, I was also developing my interest in the global problem of iodine deficiency (Pharoah et al., 1971; McMichael, 2012a; see Box 2.1).

This experience encouraged me to push for greater attention to be given to the discipline of epidemiology. I was able to become a member of the International Epidemiology Association (IEA), and then a member of the IEA Council at an early stage of its development. This facilitated enjoyable contact with colleagues all over the world, especially from the UK and the USA, and was of considerable value not only to my department at Monash but also to other academic public health departments in Australia.

In Australia, we were able to make good use of the national data sets on coronary heart disease and cancer mortality then becoming available from work by the health economists, John Deeble (later one of Colin Butler's PhD supervisors) and Dick Scotton, in their preparation of the case for National Health Insurance. Their analysis of these data was very useful for our work, including teaching.

Box 2.1 Commentary: Epidemiology, iodine deficiency and the power of multidisciplinary sufficiency¹

Anthony J McMichael

This commentary is based on my recollections during the development of what became a multidisciplinary research-and-intervention odyssey. Around 1970, Basil Hetzel clearly saw the need and opportunity to pursue a programme of research for which this classic article (see Box 2.1) is the prime foundation. The programme sought, via epidemiological research and then animal experimental studies, a fuller understanding of the developmental and health consequences of lifelong iodine deficiency.

Though goitre had been known for many centuries, its usual causation by iodine deficiency was not fully understood; neither was its linkage with a wider range of neurological disabilities. Hence the importance of research to elaborate the full spectrum of iodine deficiency disorders (IDD) and to mobilize international agency support for large-scale population intervention and evaluation.

Following Hetzel's clarification of the syndrome of IDD in the early 1980s (Hetzel 1983), IDD prevention became part of modern global public health architecture. This 'translational' step is where the really hard work often begins. How to actually prevent disorders and diseases for which there is now clear empirical evidence of major risk factors? Hetzel and colleagues saw it was necessary to create an authoritative body to deal with international agencies and national governments. In 1985, they established an international NGO, the International Council for Control of Iodine Deficiency Disorders (ICCIDD), with Hetzel as Executive Director. With help from WHO and UNICEF in particular, the ICCIDD was then able to assist in the development of a global programme of elimination of IDD.

From Cobalt to Lead at the CSIRO Division of Human Nutrition

After graduation in 1971, I was pleased that Tony had five years of further training and experience at the well-known University of North Carolina School of Public Health, before returning to Australia in late 1976. By that time, I had returned to Adelaide as Chief of a newly established CSIRO Division of Human Nutrition. This had been created from a former Division of Animal Nutrition, which had made its name by identifying animal health-harming deficiencies of

¹ Adapted from McMichael, 2012a.

copper and cobalt in the south-eastern desert area of South Australia. This was one of the big CSIRO success stories. It was decided to switch from animal to human nutrition!

I had funds to create three Research Fellowships; these were filled quickly by three epidemiology students, supervised by Tony and myself. All completed doctorates: John Potter (bowel cancer) (see Reprint E and Chapter 13, this volume), Terry Dwyer (heart disease) and Robert Scragg (gallstone disease). Tony also made good use of available data, steadily producing papers on gastrointestinal cancer, smoking and cholesterol. He also collaborated with our biostatistician, Peter Baghurst, in the long-term study of lead exposure in Port Pirie (Reprint D, Part 3, this volume), and then with his student, Dr (now Professor) Shilu Tong (Chapter 7, this volume). This has become a leading global study.

In 1987, Tony and I published a Penguin book, *The LS Factor: Lifestyle and Health*, which summarised the available evidence (excerpted in Reprint F, Part 4, this volume). This book has continued to sell and it has also been translated into Chinese.

From London to the US National Academy of Sciences

After 10 years at CSIRO, Tony moved back to the University of Adelaide, becoming the First Professor of Occupational and Environmental Health. There, he was able to develop his interest in climate change and health. I was then very pleased by Tony's appointment in 1994 to the prestigious Chair of Epidemiology at the London School of Hygiene and Tropical Medicine, where he stayed until late 2000. There, he was able to pursue his interest in climate and environmental change, including by several major joint publications in *The Lancet*. In 2001, he returned to Australia as Director of the National Centre for Epidemiology and Population Health at the Australian National University. Between 1993 and 2006, Tony played a leading role in the health risk assessment of the Intergovernmental Panel on Climate Change, which shared the Nobel Prize in 2007.

I was again gratified when Tony was elected in 2011 to the National Academy of Sciences in the USA. This was indeed a notable event and well deserved. His paper published at the time of his election to the Academy is a major contribution and will become a classical reference (McMichael, 2012b). This is a remarkable achievement for an Australian; we can all be proud of this.

In summary, I was fortunate to have known Tony from his student days, to supervise his doctoral work and then to work with him as a staff member.

He became a global figure in public health, as indicated by the range of papers in this book. This range includes his own studies and extensive collaborative work.

He had a very good sense of humour and we were, and I am still, both passionate about the piano, he as a practitioner and I as a listener!

References

- Hetzel, B.S. 1983. Iodine deficiency disorders (IDD) and their eradication. *The Lancet* 322, 1126–29.
- Hetzel, B.S. & McMichael, A.J. *The LS Factor: Lifestyle and Health*. Penguin, Melbourne, Australia.
- McMichael, A.J. 2012a. Commentary: Epidemiology, iodine deficiency and the power of multidisciplinary sufficiency. *International Journal of Epidemiology* 41, 599–600.
- McMichael, A.J. 2012b. Insights from past millennia into climatic impacts on human health and survival. *Proceedings of the National Academy of Sciences (USA)* 109, 4730–7.
- McMichael, A.J. & Hetzel, B.S. 1974. An epidemiological study of the mental health of Australian university students. *International Journal of Epidemiology* 3, 125–34.
- McMichael, A.J. & Hetzel, B.S. 1975. Mental health problems among university students, and their relationship to academic failure and withdrawal. *The Medical Journal of Australia* 1, 499–504.
- McMichael, A.J., Baghurst, P.A., Wigg, N.R., Vimpani, G.V., Robertson, E.F. & Roberts, R.J., 1988. Port Pirie cohort study: environmental exposure to lead and children's abilities at the age of four years. *New England Journal of Medicine* 319, 468–75.
- Pharoah, P.O.D., Buttfield, I.H. & Hetzel, B.S. 1971. Neurological damage to the fetus resulting from severe iodine deficiency during pregnancy. *The Lancet* 297, 308–10.

This text is taken from *Health of People, Places And Planet: Reflections based on Tony McMichael's four decades of contribution to epidemiological understanding*, edited by Colin D. Butler, Jane Dixon and Anthony G. Capon, published 2015 by ANU Press, The Australian National University, Canberra, Australia.