In Sickness and in Health:

An ecological approach to Australia's health and wellbeing

Nicholas Taylor†

Australia enjoys one of the most advanced and liberal health care systems in the world. However, less than two percent of governmental spending is allocated towards preventing illness – as such, it is estimated 75 percent of premature deaths are lifestyle-related, whilst over half of Australian's are presently living with a chronic illness. This working paper explores the benefit of an ecological approach to Australia's health and wellbeing in which the efforts of individuals and government are supplemented by initiatives throughout every layer of society. We argue that the predominant driving force behind all actors is the mutually beneficial outcomes that may arise from a higher level of health and wellbeing, so long as ultimate responsibility rests with the individual.

"The great source of both the misery and disorders of human life seems to arise from over-rating the difference between one permanent situation and another".

– Adam Smith, Moral Philosopher (1723 – 1790)

INTRODUCTION

Australia enjoys one of the most advanced and liberal health systems in the world. Since 1984 its centrepiece, Medicare, has been among the chief instruments available to the government to achieve *equity*, *efficiency*, and *quality*.

But it could be better. At present, less than 2 percent of governmental spending on health is allocated towards preventing illness – as such, it is estimated 75 percent of premature deaths are lifestyle-related, whilst over half of Australian's are presently living with a chronic illness.

It's time Australia's curative approach to 'health and wellbeing'[1] was challenged. This paper explores the benefit of an ecological approach to Australian's health and wellbeing in which the efforts of individuals and the government are supplemented by initiatives throughout every layer of society. In so doing, we foresee a world where ones health and wellbeing remains the *responsibility* of the individual but the *consideration* of a number of stakeholders – including schools, employers, not-for-profits organisations and research institutes, as well as super funds and insurance providers. Only then, we argue, will Australia's be happy "in sickness and in health".

A preliminary note

The issue of health and wellbeing has attracted spirited and sustained public debate for decades. Two preliminary points therefore need to be made.

Correspondence is welcome: Nicholas Taylor, Taylor McKellar; nicholas.taylor@latrobe.edu.au

[1] We use the phrase "health and wellbeing" since it broadly makes a study that embraces the existing psychology and economics literature amenable. The authors note that whilst the terms 'wellness' and 'preventative care' might also be used, there remains significant and widespread definition confusion surrounding both terms. For instance, preventative care is often used in conjunction with the practices of GPs, whereas to many wellness denotes a spiritual or religious emphasis (see: Miller J.W. (2005), 'Wellness: The History and Development of a Concept', *Spektrum Freizeit*, 1.

Psychological vs. Economical epistemology

Psychology and economics are two of the central disciplines that address health and wellbeing. Much of the literature focuses on the nature and origins of 'subjective wellbeing', understood as a function of ones life satisfaction and happiness.

A commonly held view of psychologists is that chronic happiness stems from circumstances (10 percent), intentional activity (40 percent) and a person's 'set point' (50 percent), which combined with an individual's genetic disposition and personality, determine their subjective wellbeing. Because of this predisposition, it is believed that life events may deviate ones happiness and health only *momentarily* via 'hedonic adaptation'.[2] Many modern economists,[3] on the other hand, see subjective wellbeing as resulting from both ones micro-level situation (e.g. financial wealth, employment status) and macro-level situation (e.g. economic development, democratisation, increasing social tolerance).[4] And so for economists, subjective wellbeing may *permanently* shift over time.

We do not seek to demonstrate the dominance of either view, and rather welcome recent attempts to synthesise them so as to further our understanding of health and wellbeing.[5]

Individualist vs. Collectivist framework

Health and wellbeing are, nominally, deeply individual concerns. Indeed it has been argued elsewhere that it wasn't until President Truman formed the Commission on the Health Needs of the Nation[6] in 1951 that the wider social roots of health greatly influenced public policy.[7]

Hence there have been a number of moral objections to the concept of wellbeing and the primacy it affords to the individual.[8] The individualisation of health and wellbeing escalated from the 1970s when John Travis and Donald Ardell popularised Haplert Dunn's formulation of 'wellness', by giving primacy to the actions of the individual and their personal journey.[9]

We consider the individualist and collectivist frameworks to be mutually reinforcing, so long as the individual retains ultimate responsibility for their general level of health and wellbeing as the central actor within the system.

Before we present an ecological approach to health and wellbeing, let us first examine the mechanics of Australia's existing health care system, before precisely defining what we mean by health and wellbeing.

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[2] See: Headey, B., & Wearing, A. (1989), 'Personality, life events, and subjective well-being: Toward a dynamic equilibrium model', Journal of Personality and Social Psychology, Vol.57 No.4; Larsen, R.J. (2000), Toward a science of mood regulation, *Psychological Inquiry*, Vol.11; Williams D.E. & Thompson J.K. (1993), 'Biology and behaviour: A set point hypothesis of psychological functioning', Behaviour Modification, Vol.17.

[3] Adam Smith had in fact discussed these issues in *The Theory of Moral Sentiments* in 1759, some 17 years before the foundation piece of economic thought, *An Inquiry into the Nature and Causes of the Wealth of Nations.* More recently, utilitarian economists such as John Stuart Mill and Jeremy Bentham devised a theoretical framework where all actions should be directed toward achieving the greatest level of happiness for the greatest number of people.

[4] See: Inglehart R., Foa R., Peterson C., & Welzel C. (2008), 'Development, Freedom and Rising Happiness: A Global Perspective (1981-2007)', *Perspectives on Psychological Science*, Vol.3 No.4; Inglehart, R. (1997), *Modernisation and Postmodernisation*, Princeton University Press.

[5] See: Easterlin R.A. (2003), 'Explaining Happiness', *Working Paper*, 23 May 2003; Easterlin, R.A. (2006), 'Life Cycle Happiness and its Sources: Intersections of Psychology, Economics, and Demography', *Journal of Economic Psychology*, Vol.27 No.4. In sum, Easterlin challenges both disciplines, by arguing that individual preferences are wrongly assumed to be efficient in seeking ones wellbeing.

[6] Commission on the Health Needs of the Nation (1951), *A Report to the President by the President's Commission on the Health Needs of the Nation (1952-53)*, Washington, DC: Government Printing Office.

[7] Miller J.W. (2005), 'Wellness: The History and Development of a Concept', *Spektrum Freizeit*, 1.

[8] For a semantic opposition, see: Moore G.E. (1903), *Principia Ethica*, Cambridge: Cambridge University Press. For an egoism ethical perspective, see: Scanlon T. (1998), *What Do We Owe to Each Other?*, Harvard: Belknap Press.

[9] Miller J.W. (2005), 'Wellness: The History and Development of a Concept', *Spektrum Freizeit*, 1. See also: Conrad P. (1994), 'Wellness as Virtue: Morality and the Pursuit of Health', *Culture, Medicine and Psychiatry*, Vol.18; Gillick M.R. (1984), 'Health Promotion, Jogging, and the Pursuit of the Moral Life', *Journal of Health Politics, Policy and Law*, Vol.9 No.3.

THE MECHANICS OF AUSTRALIA'S HEALTH CARE SYSTEM

A simple taxonomy of health care systems would place the market-driven model of the United States on the right, the public system of the United Kingdom on the left, and Australia's reliance on public-private partnerships somewhere in between.[10]

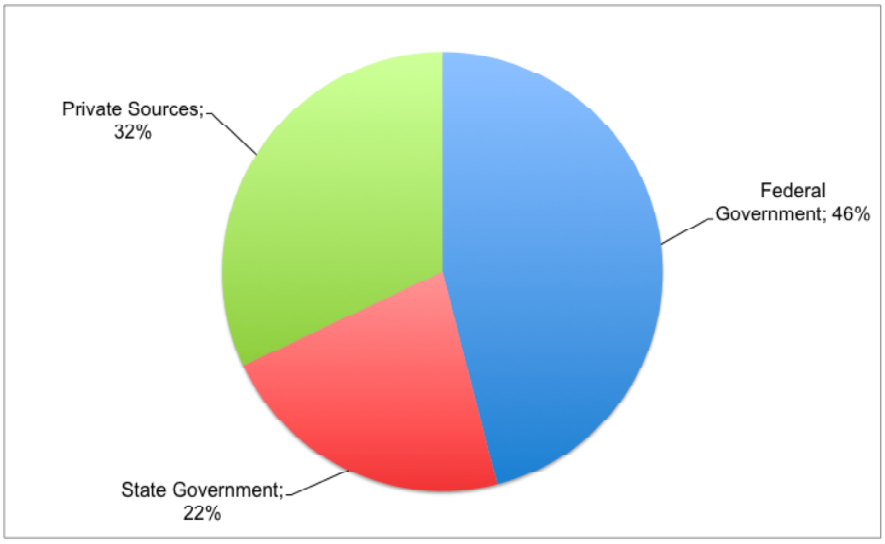
A public system with some private features

In Australia, services are provided and funded by both the public and private sectors, with public sector responsibilities allocated (and sometimes overlapping) between federal, state, and local governments. Although the 1901 Constitution recognised that health care as the province of the States, a 1946 amendment authorised federal benefit payments in several areas including pharmaceutical and medical services.

States remain the primary operators of public hospitals, providing inpatient services for Australians of all income levels, and housing some of the most respected education and research centres in the country. States also have statutory responsibility for delivering community-based services, and engage in public health and health promotion activities.

Whereas "the Australian Government has a national role in health policy-making and possesses the 'power of the purse', (it) funds rather than provides health services" and so in practice "the States are essentially autonomous in administering health services, subject to intergovernmental agreements".[11]

Figure 1: Australian health care funding



[10] Stieber J. (2005), 'Preventative Health Care in Australia: The Shape of the Elephant, Reliance on Evidence, and Comparisons to U.S. Medicare', *2004-05 Packer Policy Fellow*, Department of Health and Ageing, Australian Federal Government.

[11] European Observatory on Health Systems and Policies (2005), 'Australia: Health System Review', *Health Systems in Transition*, Vol.8. No.5.

Source: European Observatory on Health Systems and Policies (2005), 'Australia: Health System Review', *Health Systems in Transition*, Vol.8. No.5.

At the same time, Australia also has an active private health sector, with most physicians and specialists operating in private practice, and about 34 percent of hospitals being privately owned and operated.[12] Whilst not to the extent of the United States, private health insurance is a significant partner in the system, with over 40 percent of Australian's opting for additional private health insurance for which they receive an income tax subsidy.

However like Britain, the system is anchored by a strong principle of equity. Universal access is primarily achieved through Medicare, for which Australians of all ages are eligible. The "three pillars of Medicare" include the:

1. Australian Health Care Agreements (AHCAs), the means by which federal funds are channelled to States and Territories for public hospitals through negotiated budgets;
2. Pharmaceutical Benefits Scheme (PBS), subsidizing the cost of prescription drugs; and
3. Medicare Benefits Scheme (MBS), covering care by general practitioners (GPs) and specialists (plus allied health professionals under very limited circumstances), although considered to be in a way that results in "episodic care, rather than preventative care".[13]

The Australian Government recently moved to inform its policies with preventative health practices by establishing an inter-disciplinary Preventative Health Taskforce.[14] Similar public health intentions have been espoused in the United States as far back as 1979,[15] although despite spending 16 percent of national Gross Domestic Product (GDP) on health services (no other country is in double-digits), the system rates relatively poorly internationally in various rankings by the World Health Organisation.[16]

General Practitioners: gatekeepers of health and wellbeing

As primary health care providers, general practitioners (GPs) treat more than 86 percent of the population each year.[17] They are, therefore, at the frontline of any major public health initiative, and so offer a unique opportunity to ensure preventative measures are delivered as frequently and to as wide a number of people as possible.[18]

In addition, GPs have the potential to deliver outcomes across the three tiers of preventative health:

1. 'primary prevention' (seeking to prevent or delay disease in healthy persons);

[12] Australian Government Department of Health and Ageing (2004), 'The Australian Health Care System', presentation by the *Portfolio Strategies Division/Policy and International Branch*.

[13] Harris M.F. & Mercer P.J.T. (2001), 'Reactive or preventative: the role of general practice in achieving a healthier Australia', *Medical Journal of Australia*, Vol. 175.

[14] Australian Government Preventative Health Taskforce (2008), 'Australia: The healthiest country by 2020', *a discussion paper prepared by the National Preventative Health Taskforce*, October 2008. Similarly, in 2003 the then Minister for Health and Ageing, Senator Kay Patterson announced the Liberal Party's intentions to making prevention "a fundamental pillar of Medicare", see: Australian Government Department of Health and Ageing (website d), *Medicare – for all Australians Senator the Hon Kay Patterson Federal Minister for Health and Ageing*, accessed at http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-budget2003-book.htm on 10 February 2009.

[15] Office of the Surgeon General (1979), 'Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention', Department of Health, Education and Welfare, United States Public Health Service, Document No. 79-55071, accessed at http://profiles.nlm.nih.gov/NN/B/B/G/K/_/nnbbgk.pdf on 1 January 2009.

[16] World Health Organization (2000), The World Health Report 2000: Health Systems: Improving Performance, accessed at http://www.who.int/whr/2000/en/index.html on 1 January 2009.

[17] Commonwealth Department of Health and Aged Care (2000), *General practice in Australia: 2000*, Canberra: Commonwealth Department of Health and Aged Care.

[18] Sanson-Fisher R.W. & Chamberlain A. (1992), 'Prevention in clinical practice', Medical Journal of Australia.

2. 'secondary prevention' (seeking early detection of disease); and
3. 'tertiary prevention' (seeking to reduce disability caused by existing disease, including chronic disease management strategies).[19]

Despite systematic efforts to promote preventative practices to GPs in Australia for more than a decade,[20] many argue they are often led by the demand of patients and are less interested in prevention and patient education.[21] Others suggest it is difficult for GPs to communicate preventative measures in a manner that doesn't merely "blame the victim".[22] Hence, whilst the prevention and promotion of health and wellbeing remains one of the core functions of the GP,[23] their role might be best viewed within a much larger network – an ecological approach.

DEFINING HEALTH AND WELLBEING

"Not everything that counts can be counted. And not everything that can be counted, counts."
– Albert Einstein, Physicist (1879-1955)

As far back as 1948 the Constitution of the World Health Organisation has promoted, "positive health… a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity".[24] This mission was unique since it firmly placed the individual within a broader social context, thereby emphasising the interrelationship between the different layers of society.[25]

And yet one of the most studied empirical data sets – the United States General Social Survey – has focused single-mindedly on only an individual's health and wellbeing, having asked the same question since 1972: "Taken all together, how would you say things are these days – would you say that you are very happy, pretty happy, or not too happy?" Ethnographic issues aside,[26] whether the survey captures the value of health and wellbeing and/or the factors behind any changes over time is doubtful.

Changes in health and wellbeing

Any number of factors might lead to changes in health and wellbeing, some of the more common are:

(a) Lifestyle influences

In Australia, 32 percent of illness is as a result of smoking, obesity, physical inactivity, alcohol misuse, high blood pressure and cholesterol.[27] Collectively, these core lifestyle-related illness of obesity, alcohol misuse and tobacco cost the Australian health system $6 billion and result in

[19] Royal Australian College of General Practitioners (2006), 'Putting Prevention into Practice: Guidelines for the implementation of prevention in the general practice setting', 2nd edition, referred to as the 'Green Book'.

[20] Royal Australian College of General Practitioners (2005), 'Guidelines for preventive activities in general practice', 6th edition.

[21] Morrell D.C. (1991), 'Role of research in development of organization and structure of general practice', *British Medical Journal*, Vol.302.

[22] Garret L. (2001), *Betrayal of Trust: The Collapse of Global Public Health*, NY: Hyperion.

[23] Joint Advisory Group on General Practice and Population Health (2000), *A Mapping Exercise*, Consultation Paper, Canberra: Commonwealth of Australia.

[24] World Health Organisation (1948), *Constitution of the World Health Organisation*, 7 April 1948, accessed at http://whqlibdoc.who.int/hist/official_records/constitution.pdf on 1 January 2009.

[25] For instance, the variation in health and wellbeing of individuals from different parts of suburban Melbourne illustrates how socio-economic and environmental factors may affect an individual's health and wellbeing, see: Department of Human Services (2007), 'Life expectancy at birth: Victoria 2001-2005'. Department of Human Services, Victoria, accessed at http://www.health.vic.gov.au/healthstatus/le-01-05.htm on 1 January 2009.

[26] Increasingly, many have questioned the validity of such 'remembered utility' and instead favour 'experienced utility' as is favoured by sociologists and an increasing number of economists, See: Kahneman D., Kreuger A.B., Schkade, D.A., Schwarz N. & Stone A.A. (2004), 'A survey method for characterizing daily life experience: the day reconstruction method', *Science*, Vol.306; Kahneman D. & Riss J. (2005), 'Living, and thinking about it: two perspectives on life', in *The Science of Well-being*, Huppert H.A., Kaverne B. & Baylis N. (eds.), London: Oxford University Press; Kahneman D., Wakker P.P. & Sarrin R. (1997), 'Back to Bentham? Explorations of experienced utility', *Quarterly Journal of Economics*, Vol.112 Is.2.

[27] Australian Institute of Health and Welfare (2008), 'Australia's Health 2008', Cat No. AUS 99, Australian Institute of Health and Welfare, 2008, accessed at http://www.aihw.gov.au/publications/index.cfm/title/10585 on 12 January 2009.

$13 billion in lost productivity.[28] The World Health Organisation asserts that better management of these illnesses would add an extra five years in population life expectancy.[29]

The social impact of lifestyle illnesses is extraordinarily huge; alcohol misuse alone involves a commensurate $1.6 billion increase in crime, $1.9 billion in health expenditure, $3.5 billion in lost productivity, and $2.2 billion in road trauma.[30] Similarly, as the prevalence of obesity has risen by 2.8 million Australians between 1990 and 2005,[31] cardiovascular disease has taken up 40 percent of national health spending, and yet remains untargeted through preventable strategies. In 2008, obesity cost Australia $58 billion in 2008,[32] with 39 percent borne by government, some 29 percent by the individual themselves, and a further 12 and one percent by society and employers.

(b) Occupational stress

Occupation stress rose throughout the industrialised world from the 1980s and 1990s,[33] where the number of people working 60 hours per week or more has increased 206 percent between 1978 and 1995.[34] Total cost of occupational stress was $6 billion in 1995, and estimated at $9 billion in 2001.[35]

For instance, a study of managers and professionals in Western Australia found the average full-time working week had rose from 37 hours in 1990 to 47 hours in 2001, with 36 percent reporting that they routinely worked more than 50 hours per week.[36] Unsurprisingly, 58 percent reported working long hours as a significant stress in their lives, whilst 48 and 45 percent believe their work was having adverse negative affects on their relationships with their children and social involvement respectively.[37]

(c) Chronic disease

The predominant cause of premature death and ill health in Australia are chronic illness whose onset may be avoided or delayed by preventive measures.[38] Chronic illnesses are extraordinarily crippling, both socially and economically. The issue is greatest when ill health is avoidable, involves considerable care, or occurs particularly early in ones natural life.

The growing incidence of chronic illnesses – such as cancer and neurodegenerative disease – is predicted to drive costs of maintaining the nations spending on health from $60.8 billion in 2000-01, or 9 percent of GDP to 17 percent by 2040 as the dependency ratio (those aged 60 and over) will rise from 12 to 25 percent.[39]

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[28] Collins D. & Lapsley H. (2008), 'The costs of tobacco, alcohol and illicit drug abuse to Australian society in 2004/05', P3 2625, Department of Health and Ageing, accessed at http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/mono64/$File/mono64.pdf on 12 January 2009; Access Economics (2008), 'The growing cost of obesity in 2008: three years on'. Report prepared for Diabetes Australia, accessed at http://www.diabetesaustralia.com.au/PageFiles/7832/FULLREPORTGrowingCostOfObesity2008.pdf on 12 January 2009.

[29] World Health Organization (2008). 'Prevention and control of noncommunicable diseases: implementation of the global strategy', World Health Organization, accessed at http://www.who.int/gb/ebwha/pdf_files/A61/A61_8-en.pdf on 12 January 2009.

[30] Collins D. & Lapsley H. (2008), 'The costs of tobacco, alcohol and illicit drug abuse to Australian society in 2004/05', P3 2625, Department of Health and Ageing, accessed at http://www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/mono64/$File/mono64.pdf on 12 January 2009.

In the United State, 59 economists, three of whom are winners of the Nobel Prize for Economics, sent a petition to Congress calling for higher taxes on alcoholic beverages to "both help close the federal deficit and discourage the continued epidemic of alcohol abuse", see: Coalition for the Prevention of Alcohol Problems (2005), 'Economists' Declaration on Federal Alcohol Excise Taxes', letter to Congress of United States, dated 16 May 2005.

[31] Australian Government (2009), 'Australia: The healthiest country by 2020', discussion paper prepared by the *National Preventative Health Taskforce*, October 2008.

[32] Access Economics (2008), 'The Growing Cost of Obesity in 2008: Three years on', commissioned by *Diabetes Australia*, October 2006.

[33] Cooper C. (1997), *Managing Workplace Stress*, London: Sage; Cooper C. (1999), 'Hard Decade at the Office', *Director*, Vol.53 Is.1.

[34] Dunlop Y. & Sheehan P. (1998), 'Technology, Skills and the Changing Nature of Work', in Sheehan P. & Tegart G. (eds.), Working for the Future, Melbourne: Victoria University Press.

[35] Australian Centre for Industrial Relations Research and Training (1999), *Australia at work: Just Managing?*, Melbourne: Prentice-Hall.

[36] Hosie P. (2001), 'A Study of Managers' Job Relational Affective Well-being, Job Satisfaction and Work Performance', Unpublished doctoral thesis, graduate School of Management, University of Western Australia, as cited in Forester N. & Still L.V. (2002), 'All work and no play the effects of occupational stress on managers and professionals in Western Australia', March 2002, Centre for Women and Business, Graduate School of Management, University of Western Australia.

[37] Forester N. & Still L.V. (2002), 'All work and no play the effects of occupational stress on managers and professionals in Western Australia', March 2002, Centre for Women and Business, Graduate School of Management, University of Western Australia.

[38] Australian Department of Health and Ageing (2003), *Annual Report 2002-03*, Australian Federal Government.

[39] Access Economics (2003), 'Exceptional returns: The value of investing in health R&D in Australia', prepared for the *Australian Society for Medical Research*, September 2003.

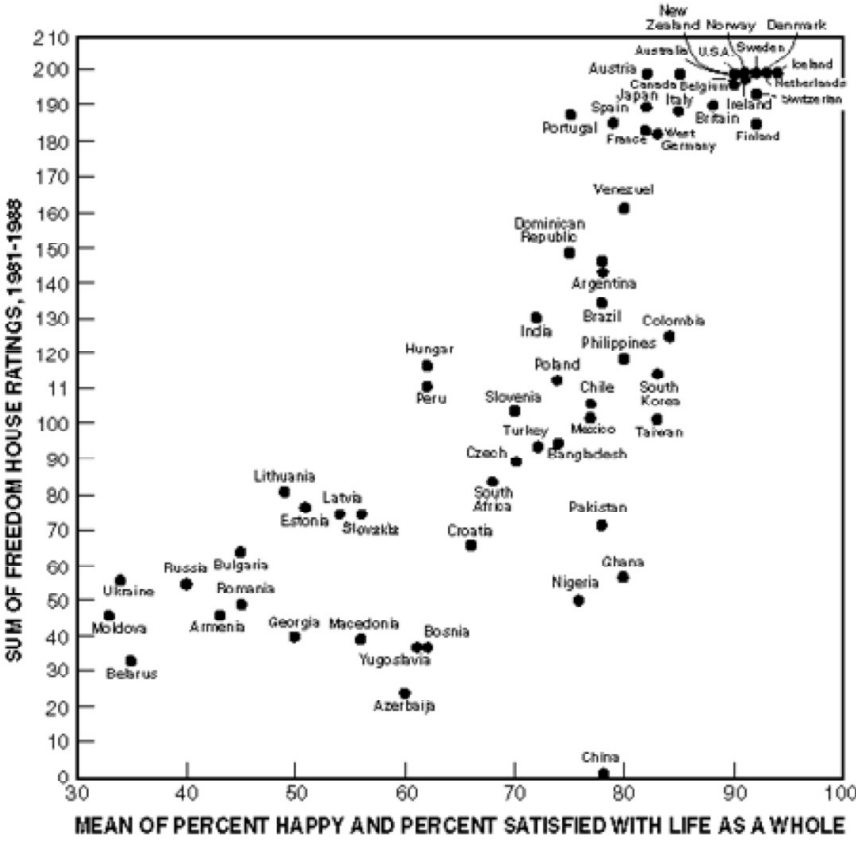
(d) Environmental

Environmental factors can impact health and wellbeing on both the micro- and macro-level.

For instance, lifestyle illnesses can extremely environmental. In survey of 12,067 people between 1971 and 2003, the rate of obesity rose by 57 percent with the advent of an obese friend, 40 percent with an adult sibling, and 37 percent with a spouse, although no correlation existed between neighbours.[40] The researchers replicated the study for smokers, finding that smoking cessation led to a 67 percent reduction between spouses, 25 percent between siblings and 36 percent between friends.[41]

In the same way, the economic and political situation can have a marked affect on ones health and wellbeing. Seminal work by the political scientist Ronald Inglehart and his colleagues has found a correlation between a nation's degree of freedom and its generally reported level of subject wellbeing.

Figure 2: A nations subjective wellbeing relative to their degree of freedom



Source: Inglehart, R. & Klingemann, H-D. (2000), *Genes, Culture and Happiness*, MIT Press.

[40] Christakis N.A. & Fowler, J.H. (2007), 'The Spread of Obesity in a Large Social Network over 32 Years', *The New England Journal of Medicine*, Vol.357 No.4, July 2007.

[41] Christakis N.A. & Fowler, J.H. (2008), 'The Collective Dynamics of Smoking in a Large Social Network', *The New England Journal of Medicine*, Is.358 No.4, May 2008.

An Ecological approach to Australia's health and wellbeing

"If the only tool you have is a hammer, you tend to see every problem as a nail".
– Abraham Maslow, Psychologist (1908 – 1970)

The pursuit of personal health and wellbeing is often presumed to involve an individualistic, egotistical disposition, often at odds with broader societal concerns. Natural ecosystems do in fact positively contribute to human health and wellbeing, especially in providing the basic conditions for both making life possible and worth living.[42] In fact, care for ones environment has been shown to mutually reinforce the pursuit of health and wellbeing, not conflict with it.[43] And so viewing health and wellbeing within the context of systems theory, and in particular, the ecological system, has intuitive merit[44] after nearly half a century of academic discourse.[45]

We now turn to developing the ecological framework of health and wellbeing further, by illustrating how the individual is housed within a self-reinforcing system: beginning with the personal network, organisations, community and greater society.[46]

[42] See: Boyd J & Banzhaf S. (2006), 'What are ecosystem services? The need for standardized environmental accounting units', *Resources for the future*, DC: Washington; Diaz S., Fargione J., Chapin III F.S. & Tilman D. (2006), 'Biodiversity Loss Threatens Human Well-being', *Plos Biology*, Vol.4 Is. 8; Millennium Ecosystem Assessment (2005), 'Ecosystems and human well-being': Biodiversity synthesis', *World Resources Institute*, DC: Washington. Some studies have suggested a deep care for the environment leads to a higher and more sustained state of happiness, see: Brown K.W. & Kasser T. (2005), 'Are psychological and ecological well-being compatible? The role of values, mindfulness, and lifestyle', *Social Indicators Research, Vol.74*; De Young R. (1996), 'Some psychological aspects of reduced consumption behaviour: The role of intrinsic satisfaction and competence motivation', *Environment and Behaviour*, Vol.28; De Young (2000), 'Expanding and evaluating motives for environmentally responsible behaviour', *Journal of Social Issues*, Vol.56; Eigner S. (2001), 'The relationship between "protecting the environment" as a dominant life goal and subjective well-being', in *Life Goals and Well-being: Towards a Positive Psychology of Human Striving*, Schmuck P. & Sheldon K.M. (eds.), Seattle WA: Hogrefe and Huber; Myers D. & Dyner E. (1995), 'Who is happy?', *Psychological Science*, Vol.6; Sohr S. (2001), 'Eco-activism and well-being: Between flow and burnout', in *Life Goals and Well-being: Towards a Positive Psychology of Human Striving*, Schmuck P. & Sheldon K.M. (eds.), Seattle WA: Hogrefe and Huber. One of the few examples of implementation is from Canada, see: First Nation (2008), 'Healthy Children, Healthy Families, Healthy Communities: The Road to Wellness', *BC First Nations Regional Longitudinal Health Survey 2002/03*, the survey is being updated as of May 2008.

[43] It has been argued that this relationship is complementary, see: Brown K.W. & Kasser T. (2005), 'Are psychological and ecological well-being compatible? The role of values, mindfulness, and lifestyle', *Social Indicators Research, Vol.74*. See also: De Young R. (1996), 'Some psychological aspects of reduced consumption behaviour: The role of intrinsic satisfaction and competence motivation', *Environment and Behaviour*, Vol.28; De Young (2000), 'Expanding and evaluating motives for environmentally responsible behaviour', *Journal of Social Issues*, Vol.56; Eigner S. (2001), 'The relationship between "protecting the environment" as a dominant life goal and subjective well-being', in *Life Goals and Well-being: Towards a Positive Psychology of Human Striving*, Schmuck P. & Sheldon K.M. (eds.), Seattle WA: Hogrefe and Huber; Myers D. & Dyner E. (1995), 'Who is happy?', *Psychological Science*, Vol.6; Sohr S. (2001), 'Eco-activism and well-being: Between flow and burnout', in *Life Goals and Well-being: Towards a Positive Psychology of Human Striving*, Schmuck P. & Sheldon K.M. (eds.), Seattle WA: Hogrefe and Huber. One of the few examples of implementation is from Canada, see: First Nation (2008), 'Healthy Children, Healthy Families, Healthy Communities: The Road to Wellness', *BC First Nations Regional Longitudinal Health Survey 2002/03*, the survey is being updated as of May 2008.

[44] A recent report by the National Preventative Health Taskforce for instance stated that, "The solutions are not only about individual choice and personal responsibility but also about the role of governments, business and industry, and non-government organisations", see: Australian Government (2009), 'Australia: The healthiest country by 2020', discussion paper prepared by the *National Preventative Health Taskforce*, October 2008.

[45] See: Rogers E.S. (1960), *Human Ecology and Public Health: An Introduction for Administrators*, NY: MacMillan. See also: McLeroy K., Bibeau D. & Rootman I. (1988), 'An ecological perspective on health promotion programs', *Health Education Quarterly*, Vol.15; Stokols D. (1992), 'Establishing and maintaining healthy environments: toward a social ecology of health promotion', *American Journal of Psychology*, Vol.47.

[46] Simpson J.M., Oldenburg B., Owen N., Harris D., Dobbins T., Salmon A., Vita P., Wilson J. & Saunders J.B. (2000), 'The Australian National Workplace Health Project: Design and Baseline Findings', *Preventative Medicine*, Vol.31. No.3

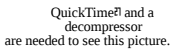


Figure 3: A self-reinforcing ecological framework

Source: McLeroy K.R., Gottlieb N.H. & Heaney C.A. (2004), 'Chapter 17: Social Health in the Workplace', in *Health Promotion in the Workplace*, O'Donnell M. (ed.), NY: Delmar Thomson Learning.

Network: Schools

Children's health and wellbeing is particularly environmental and is heavily influenced by relationships with peers. For instance, a recent meta-analytical study of 123 research articles found that television advertising strongly influences the eating habits, preference and levels of obesity in children.[47]

Due in part to personal development and adolescence, children's health and wellbeing changes markedly with age. Evidence from a study in Nottingham, England found that 65 percent of primary school children rate their school experience as positive compared to 27 per cent of children in secondary school.[48]

Following evidence that positive psychology[49] may reduce the incidence of depression by 50 percent and externalised behavioural problems by 30 percent over two to three year periods,[50] the Geelong Grammar School in Victoria has begun implementing Professor Martin Seligman's wellbeing programme.[51] Seligman and his colleagues believe that the heightened level of anxiety and peer pressures faced by youth today – such as drugs, alcohol, fast food and so on – is resulting in a greater incidence of poor health and wellbeing among children.

Lord Layard of the London School of Economics, broadly supports this view, and has advocated for programs such as Seligman's to be rolled out across all British state schools to

[47] USDHHS (2005), 'National Survey on Drug Use and Health: National Findings 2005', *Substance Abuse and Mental Health Services Administration*.

[48] NEF (2004), 'The power and potential of well-being indicators: Measuring young people's well-being in Nottingham', a project of the *New Economics Foundation* and *Nottingham City Council*.

[49] Seligman M. & Csikszentmihalyi M. (2000), 'Positive Psychology: An Introduction', *American Psychologist*, Vol.55 Is.1.

[50] Reivich K., Gillham J., Shatte A. & Seligman M. (2005), 'A Resilience Initiative and Depression prevention Program for Youth and their Parents', Penn Resiliency Project. See also: Gillham J.E., Brunwasser S.M. & Freres D.R. (2007), 'Preventing depression in early adolescence', In. Abela J.R.Z. & Hankin B.L. eds., *Handbook of depression in children and adolescents*, New York: Guilford Press; Reivich K., Gillham J., Shatte A. & Seligman M. (2005), 'A Resilience Initiative and Depression prevention Program for Youth and their Parents', Penn Resiliency Project.

[51] Geelong Grammar School (2008), Positive Psychology at Geelong Grammar School, accessed at http://www.ggs.vic.edu.au/index.asp?menuid=200.020 on 20 December 2008. See also: Penn Positive Psychology Centre (2008), 'Resilience Research in Children', University of Pennsylvania, accessed at http://www.ppc.sas.upenn.edu/prpsum.htm on 20 December 2008.

enact "the reversal of a major cultural trend towards increased consumerism, increased inter-personal competition, and increased interest in celebrity and money".[52]

Organisation: Employers

Since the 1970s, workplace health and wellbeing programs have evolved from rehabilitative 'Employee Assistance Programs' centred on drug and alcohol recovery,[53] to programs that seek to proactively promote health preventative health practices.[54] At the same time, management began to assess the total value of health programs as opposed to the total cost – health and wellbeing was being viewed as a value driver.

As a result, the management of health risks in the workplace – such as obesity, smoking, excessive alcohol consumption etc) – is considered to have a direct impact on health costs,[55] and an indirect impact on ancillary costs such as productivity, absenteeism and presenteeism (where employees work but with untreated lifestyle illnesses which negatively impact on-the-job performance, and harm profitability).[56]

Research of more than 2 million employees over more than two decades by the University of Michigan concluded that workers at risk of more than one lifestyle illness tend to be less productive than their (relatively) healthier colleagues.[57] Similarly, an Australia study found those that did not participate in a wellbeing program took 36 percent more sick and absent days than those that did, increasing to 57 percent in the two months following.[58]

Given health and wellbeing programs have the potential to affect the profitability of the business, they are most effective when direction comes from executive management,[59] and when programs explicitly support the mission, objectives and goals of the business.[60] And so common reasons cited for managers instigating health and wellbeing programs include the: improvement of employees' health, reduction in health care costs such as absenteeism and injuries, to increase of productivity, morale and communication, and reduction in staff turnover.[61] This invariably means demonstrated financial reward, which is very difficult to assess and benchmark over time and is not built into many programs.

Community: Not-for-profits and Research institutes

Australia enjoys a vibrant not-for-profit community sector reliant in part on the skills, time and funding of the ordinary Australians. Many seek to educate and advocate for the advancement our medical understanding of specific health issues such as the Michael J Fox Foundation for

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[52] Layard, R. (2007), 'The Teaching of Values', *2007 Ashby Lecture, University of Cambridge*, 2 May 2007, accessed at http://cep.lse.ac.uk/textonly/about/news/ashby_lecture.pdf on 20 December 2008.

[53] DeGroot T. & Kiker S.D. (2003), 'A meta-analysis of the non-monetary effects of employee health management', programs' in *Human Resource Management*, Vol.42 No.1.

[54] McGillivray D. (2002), 'Health promotion in the workplace: a missed opportunity?', *Health Education*, Vol.102 No. 2.

[55] See: Edington D.W. (2001), 'Emerging research: a view from one research center', *American Journal of Health Promotion*, Vol.15 Is.5; University of Michigan Health Management Research of risk status transitions among active employees in a comprehensive worksite health promotion program, *Journal of Occupational & Environmental Medicine*, Vol.45 Is.4.

[56] See: Edington D.W., Burton W.N. (2003), 'Health and productivity', *A Practical Approach to Occupational and Environmental Medicine*, McCunney R.J. (ed.), Philadelphia: Lippincott Williams & Wilkins; Burton W.N., Pransky G., Conti DJ., Chen C.Y., Edington D.W. (2004), 'The association of medical conditions and presenteeism', *Journal of Occupational & Environmental Medicine*, Vol.46 Is.6; Pelletier B., Boles M., Lynch W. (2004), Change in health risks and work productivity over time. *Journal of Occupational & Environmental Medicine*, Vol.46 Is.7; Goetzel R.Z., Long S.R., Ozminkowski R.J., Hawkins K., Wang S., Lynch W. (2004), 'Health, absence, disability, and presenteeism cost estimates of certain physical and mental health conditions affecting U.S. Employers, *Journal of Occupational & Environmental Medicine*, Vol.46 Is.4; Kessler R.C., Greenburg P.E., Michaelson K., Meneades L.M., & Wang P.S. (2001), 'The effects of chronic medical conditions on work loss and work cutback', *Journal of Occupational & Environmental Medicine*, Vol.43 Is.3; Loeppke R., Hymel P.A., Lofland J.H., Pizzi L.T., Konicki D.L., Anstadt G.W., Basse C., Fortuna J., Scharf T. (2003), 'Health related workplace productivity measurement: general and migraine-specific recommendations from the ACOEM expert panel', Journal of Occupational & Environmental Medicine, Vol.45 Is. 4.

[57] Health Management Research Center (2000), 'The Ultimate 20th Century Cost Benefit Analysis and Report', University of Michigan.

[58] Smith D.C. (2007), 'The effect on absenteeism and cost savings from a workplace pedometer-based intervention: Australian Model', Working Paper, Heart Disease & Diabetes Prevention Centre, Australia.

[59] O'Donnell M. (2002), 'Chapter 2: Employer's Financial Perspective on Workplace Health Promotion' in *Health Promotion in the Workplace*, O'Donnell, M. (ed.), Delmar Thomson Learning: NY.

[60] O'Donnell M. (2002), 'Chapter 2: Employer's Financial Perspective on Workplace Health Promotion' in *Health Promotion in the Workplace*, O'Donnell, M. (ed.), Delmar Thomson Learning: NY. See also: Harris J & Fries J. (2002), 'Chapter 1: The Health Effects of Health Promotion', in *Health Promotion in the Workplace*, O'Donnell M. (ed.) NY: Delmar Thomson Learning. DeGroot T. & Kiker S.D. (2003), 'A meta-analysis of the non-monetary effects of employee health management', programs' in *Human Resource Management*, Vol.42 No.1.

[61] National Health Public Partnership (2001), *Getting Australia Active: Towards better practice for the promotion of physical activity*, accessed (via linked pages) at http://fulltext.ausport.gov.au/fulltext/2002/nphp/synopsis.asp on 1 January 2009.

Parkinson's Research in the United States. Funding typically goes to specialist medical research institutes linked to hospitals (e.g. Princes of Wales Medical Research Institute) or leading universities (e.g. Mental Health Research Institute of Victoria and Melbourne University), which then carry out the research using a combination of public and private funding sources.

Medical research is typically difficult to fund since its financial returns are highly volatile, its reliance on intellectual property rights stymies collaboration and collective learning, there are exceptionally long timeframes and costs in getting an advancement to market, and to commercialisation is difficult.

That said, a number of institutional investors such as superannuation (pension) funds have invested in the Medical Research Commercialisation Fund in order to diversify their portfolio of assets and potentially tap into a lucrative return stream. The potential gain is huge; "investment in health R&D surpasses every other source of rising living standards in our time",[62] with eight-year gains in life expectancy and wellness between 1960 and 1999 resulting in a $5.4 trillion gain to Australians – some eight times greater than GDP. Of that, $2.9 trillion resulted from longevity gains and a further $2.5 trillion from wellness (improved labour productivity, reduced absenteeism, more years of employment, lower welfare payments and reduced burden on carers).

Nevertheless, since 1990 Australia's spending on health R&D has steadily declined. Whilst the OECD average is 0.15 to 1.1 percent of GDP, the $1.7 billion Australia spent in 2000-01 was only 0.25 percent.[63]

Society: Super funds and insurance firms

Over recent years, the threat of climate change has resulted in a far-reaching paradigm shift within the investment industry in which the financial impact of environmental and social factors are 'coming into view' in their own right.[64] Some argue up to 75 percent of a company's value is bound-up in 'intangibles' such as human capital, quality of leadership, risk management and reputation.[65] By considering a broader range of factors over a longer timeframe than has traditionally been the case, it is argued institutional investors such as superannuation (pension) funds will ultimately serve the 'best interests' of their members for whom the funds are held in trust.[66]

Super funds are therefore becoming more aware of the financial relevance of health and wellbeing programs in companies and assets in which they invest. So too might they reasonably expect synergies to derive from measures that prolong the onset of illness and death of their members. For instance, the Industry Funds Forum Mental Health Initiative recently launched 'Super Friend' in partnership with many leading not-for-profit organisations and medical research institutes.[67] Super Friend is a campaign that provides useful information on common mental illness such as depression and anxiety to super fund members, as they face such challenges during the course of their working lives.

Similarly, complementary incentives to ensure the health and wellbeing of member's may also drive the behaviour of health insurance firms. According to Professor Brian Oldenburg of Monash University, a one percent prevention investment by health funds would generate a hundred million dollars in spending, improving health and reducing costs for the insured and so boosting their financial bottom line.[68]

[62] Access Economics (2003), 'Exceptional returns: The value of investing in health R&D in Australia', prepared for the *Australian Society for Medical Research*, September 2003.

[63] GAP (2007), 'Breaking the barriers: the role of Government, Industry, providers and consumers', *GAP Congress on Wellness and Ageing*, Melbourne Australia, 15-16 February 2007.

[64] See: Magill F. & Taylor N. (2009), 'Coming Into View: Environmental, Social and Governance Sustainability for Institutional Investors', in *Opportunities Beyond Carbon*, forthcoming book chapter June 2009, Melbourne University Press.

[65] AMP Capital Investors (2006), 'SRI Managers continue to beat the benchmark', *AMP Socially Responsible Investing Research Update*, June 2006.

[66] See: Taylor N. & Donald M.S. (2007), 'Sustainable Investing: Marrying sustainability concerns with the quest for financial return for superannuation trustees', *Russell Research*, August 2007; Donald M.S. & Taylor N. (2008), 'Does "sustainable" investing compromise the obligations owed by superannuation trustees?', *Australian Business Law Review*, Vol.36.Is.47.

[67] See: Industry Funds Forum (2009), 'Super Friend' microsite, accessed at http://www.superfriend.com.au on 10 January 2009.

[68] GAP (2007), 'Breaking the barriers: the role of Government, Industry, providers and consumers', *GAP Congress on Wellness and Ageing*, Melbourne Australia, 15-16 February 2007.

We have taken a small step toward exploring how an ecological approach offers significant opportunities for improvements in health and wellbeing that are mutually beneficial to the individual and participants. Such a development would require a considerable degree of leadership and engagement as well as an advancement in the socially value placed on economic wealth over higher aspirations of health and wellbeing.

REFOCUSING THE ECONOMIC LENS

"The welfare of a nation [can] scarcely be inferred from a measure of national income".
– Simon Kuznets, Economist (1901 – 1985)

National income – measured by Gross Domestic Product (GDP) – is often recognised as having a myopic view of a nation's health and wellbeing. There have been a number of attempts to devise alternate approaches to GDP, although the most common are:

1. Human Development Index (HDI) measures a nation's: standard of living (i.e. GDP per capita), life expectancy at birth, and knowledge (i.e. literacy and enrolment). The HDI is favoured by the United Nations.
2. Genuine Progress Indicator (GPI) assesses whether growth in the industrial production of nations has actually increased welfare. The GPI is widely espoused by ecological economists.
3. Gross National Happiness (GNH) accounts for the promotion of equitable and sustainable socio-economic development, preservation and promotion of cultural values, conservation of the natural environmental and establishment of good governance. The King of Bhutan devised GNP in 1972.

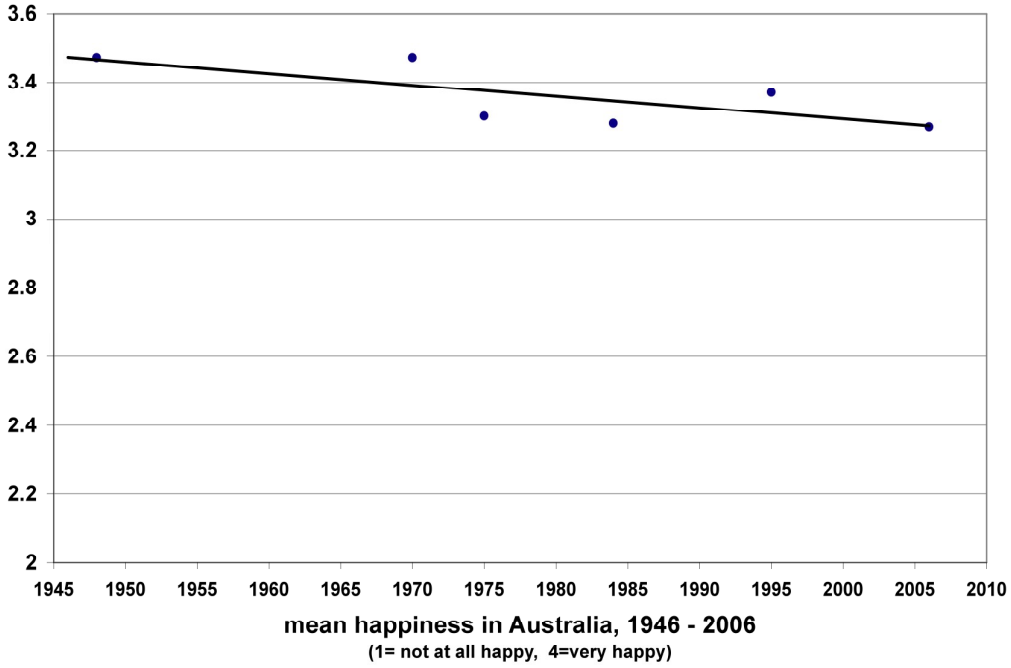
The underlying motivation behind all three measures is the belief that income growth does not cause wellbeing to rise, either for higher or lower income persons. This occurs since income generates a commensurate growth in material aspirations, and on balance, the demands of the latter outweigh the benefits of the former.[69] In addition, wellbeing is generally greatest where this is stability; countries are generally happier if there is less unemployment and inflation, and higher welfare benefits – fear stifles happiness.[70]

As illustrated in Figure 3, evidence from Australia between 1946 and 2006 indicates a noticeable decline in happiness despite decades of exceptionally strong economic growth. Indeed that Australia isn't as happy as it is wealthy – where income is viewed as a 'focusing illusion'[71] – remains an ongoing concern of many political scientists and economists.[72] The introduction of an alternate measure to GDP is fraught with political issues, and so it remains unlikely that a refocusing of the economic lens will lead to more widespread changes in our approach to health and wellbeing – the case for an ecological approach is compelling, as is the need.

[69] Easterlin (2001), 'Income and Happiness: Towards a unified theory', *The Economic Journal*, Vol.111 July 2001.
[70] Di Tella R., MacCulloch R.J., & Oswald A.J. (2001), 'Preferences over inflation and unemployment: Evidence from surveys of happiness', *American Economic Review*, 91.
[71] Kahneman D., Krueger A.B., Schkade D., Schwartz N., & Stone A.A. (2006), 'Would You Be Happier If Your Were Richer? A Focusing Illusion', Science, Vol.312.
[72] See: Blanchflower D.G. & Oswald A.J. (2005) 'Happiness and the Human Development Index: the paradox of Australia', *Australian Economic Review*, Vol.38 No.3, September 2005; Blanchflower D.G. & Oswald A.J. (2005) 'On Leigh-Wolfers and Wellbeing in Australia', Working Paper, November 2005; Leigh A. & Wolfers J. (2005), 'Happiness and the Human Development Index: Australia Is Not a Paradox', *Australian Economic Review*, Vol.39 No.2.

Figure 3: Australia's level of happiness over time

Source: Appendix to Inglehart et al (2008), 'Development, Freedom, and Rising Happiness: A Global Perspective (1981–2007)', *Journal of Personality and Social Psychology*, Vol.3 No. 4, accessed at http://margaux.grandvinum.se/SebTest/wvs/articles/folder_published/article_base_106 on 1 December 2008.



Conclusion

"Over the last half century, economic welfare from health care expenditures appears to have contributed as much to economic welfare as the rest of consumption expenditures. If this is anywhere near the case, it would suggest that the image of a stupendously wasteful health-care system is far off the mark".

– William D. Nordhaus, Economist (1941-)

The ecological approach necessitates a certain degree of coordination among actors. For instance, it is often suggested that there is a correlation between exposure to advertising and consumption of fast food in children, due in part to the $40 billion a year the industry spends on marketing its products.[73] Thus from an ecological perspective, it is easy to consider how the efforts of one actor may easily be undone by the behaviour of another.

However, coordination is not a prerequisite for the success of the ecological approach; the predominate driving force behind all actors is the mutually beneficial outcomes that may arise from a higher level of health and wellbeing. For example, workplaces might benefit from lower rates of absenteeism, governments will enjoy a lower health care burden, and insurance firms would incur a lower rate of claims. To the extent to which the different actors may benefit from their initiatives, they should all be incentivised. The ecological approach to health and wellbeing, therefore, is a cause for hope; the government is only one actor, and all may contribute to an improved state of health and wellbeing.

There is, however, one considerable elephant in the room: individuals. All programs and initiatives require involvement of the individual, and so it is with them that ultimate responsibility for health and wellbeing must rest.

[73] Hastings G., Forsyth A. & Godfrey C. (2003), Food Standards Agency (2003), 'Review of research on the effects of food promotion to children', *prepared for Food Standards Agency*, September 2003.

About the author

Nicholas Taylor

Nicholas Taylor is principal of Taylor McKellar, and a lecturer at La Trobe University. As an expert in the field for over eight years, his contribution was recognised with the inaugural Australasian award for research in 2007.

Nicholas is an active member of various networks and associations, including Oxford Analytica and the United Nations Expert Group on Business and Investment in Conflict-Affected and High-Risk Areas.

Nicholas holds both a Bachelor of Economics and Master of International Studies with honours from the University of Sydney, and is completing a doctorate on Middle East security at La Trobe University.

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Ithaca Wellness Pty Ltd

Ithaca is a health and wellbeing program that incorporates professionals from the fields of medicine, finance and psychology. Ithaca is unique in that it benchmarks an individual's physical, financial and personal health and wellbeing over time in one process.

We recognise the benefits of the ecological approach to health and wellbeing developed in this report, and have structured the Ithaca process for a variety of different settings – for the individual, workplace, community, membership base or government initiative.

Ithaca Wellness Pty Ltd was founded by Robin Roth. Robin is a Senior Associate of the Financial Planning Association (FPA) and a Certified Financial Planner (CFP) with over 40 years financial industry experience.

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