Contents

| 1 | President's Report | | |
|----|--|--|--|
| | Barry McGaw | | |
| | Retain? Sustain? Disdain? | | |
| | Some Natural Resource Challenges | | |
| 2 | Australian Population and Immigration Policy: An Opportunity Graeme Hugo | | |
| 5 | A Sustainable Energy Future for Australia Mark Diesendorf | | |
| 13 | 13 Vision 2040: A Future for Mining and Australia | | |
| | Damien Giurco | | |
| 19 | 19 Natural Resource Exploitation and Regional Development: A View from the West | | |
| | Matthew Tonts and Paul Plummer | | |
| 26 | S Environmentalism and Science: Inextricably Linked or Uneasy Bedfellows? Ian Lowe | | |
| 33 | Have We Changed Our Cultures of Urban Water? Lesley Head | | |
| 39 | Academy News | | |
| 43 | Workshop Reports | | |
| 64 | | | |
| 04 | Roundtable Reports | | |

Volume 31 1/2012

The Academy of the Social Sciences in Australia was established in 1971. Previously some of its functions were carried out through the Social Science Research Council of Australia, established in 1942. Elected to the Academy for distinguished contributions to the social sciences, the 507 Fellows of the Academy offer expertise in the fields of accounting, anthropology, demography, economics, economic history, education, geography, history, law, linguistics, management, philosophy, political science, psychology, social medicine, sociology, and statistics.

The Academy's objectives are:

- to promote excellence and encourage the advancement of the social sciences in Australia;
- to act as a coordinating group for the promotion of research and teaching in the social sciences;
- to foster excellence in research and subsidise the publication of studies in the social sciences;
- to encourage and assist in the formation of other national associations or institutions for the promotion of the social sciences or any branch of them;
- to promote international scholarly cooperation and act as an Australian national member of international organisations concerned with the social sciences;
- to act as a consultant and advisor in regard to the social sciences; and
- to comment where appropriate on national needs and priorities in the area of the social sciences.

These objectives are fulfilled through a program of activities, research projects, independent advice to government and the community, publication and cooperation with fellow institutions both within Australia and internationally.

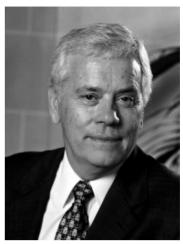
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President's Report

New role for academies in national policy development

On 20 January 2012, the Prime Minister, the Hon. Julia Gillard, Minister for Tertiary Education, Skills, Science and Research, the Hon. Christopher Evans, and the Chief Scientist, Professor Ian Chubb, announced an important set of reforms for the role of research in national policy development. One key feature is a reformed Prime Minister's Science, Engineering and Innovation Council (PMSEIC). The revised membership of PMSEIC includes an ASSA Fellow, Professor Fiona Stanley. The second key feature is an explicit role for the



Academies, described in the press statement in the following terms:

The Council will be able to refer long-term issues, five to 30 years ahead, requiring a scientific response to the Australian Council of Learned Academies to undertake in-depth, interdisciplinary research and report to Government through the Chief Scientist.

The Prime Minister announced the allocation of \$1.95m over four years to 2014-15 to 'support the work of the Learned Academies'.

The Chief Scientist met with the four Academy presidents late in 2011 as he was developing the ideas that reached fruition in the Prime Minister's announcement. I reported on the developments at the Annual General Meeting of Fellows on Wednesday 9 November 2011. The Academies' Executive Directors/Chief Executive Officers and the General Manager of the office of the Australian Academies of the Learned Academies (ACOLA) are working on details in collaboration with the presidents in preparation for further meetings with the Chief Scientist. The plan is to have the initial project shaped sufficiently for there to be provision for it in the Commonwealth budget for 2012-13.

The Academy of the Social Sciences in Australia will continue with its other activities but we should welcome this new role. It provides a very important opportunity for the Academies to contribute to national policy development and to work cooperatively in doing so.

The Prime Minister's Press Statement is available at: www.pm.gov.au/press-office/revitalised-prime-ministers-science-council

Information is also provided on the Chief Scientist's website at:

www.chiefscientist.gov.au/2012/01/new-pmseic-structure/

Barry McGaw

Please note: The last issue of *Dialogue* was incorrectly numbered Vol 31, 2/2011. It should have been numbered Vol 30, 2/2011. We apologise for any inconvenience this error might cause.

Retain? Sustain? Disdain? Some Natural Resource Challenges

Australian Population and Immigration Policy: An Opportunity *Graeme Hugo*

The creation of a new ministry of population by the Federal Government is most opportune. Australia stands at a turning point in its demographic development and it is crucial that a vision of our future population is developed which takes full account of the best scientific and policy thinking and knowledge but which is also inclusive of the wishes and opinions of all Australians. The population and immigration debates in Australia have too often been dominated by interest groups and focused on extreme positions. On the one hand are those who believe Australia should increase its population as rapidly as possible and strive to attain a population of more than double current size. On the other are some extreme environmentalists who argue for an immediate cessation of population growth. Both of these extreme positions would have negative consequences for Australia and most Australians. What is needed is a midway position, which involves growth as well as sustainability.

In fact, Australia faces a population dilemma. On the one hand there is a manifest need for some population growth over the next few decades. This is a function firstly of an increase in the net demand for workers. A recent Access Economics study for Skills Australia projected that employment growth over the next 15 years to 2025 will vary between 0.9 per cent per annum and 2.1 per cent per annum¹. Even under the study's low growth scenario, a net growth of employment of almost one per cent is anticipated. However, it is not this growth alone that needs to be considered. Currently over 41 per cent of Australian workers are baby boomers and the majority of them will leave the workforce in the next two decades. This means that Australia also faces a significant replacement task in making up its labour force needs. A number of strategies will be required if the net increase in the number of jobs and the jobs vacated by the baby boomers are to be filled. There are insufficient numbers of young Australians, born in the low-fertility 1990s and now moving into the school leaver age groups, to meet this demand. Accordingly, it is necessary for Australia to put in place a number of mechanisms. These include:

- Increasing the age at retirement. Such a policy needs to be implemented carefully because it can lead to increased inequality where persons in manual jobs are physically less able to continue working compared with white collar workers.
- Increasing participation rates. There are low levels of workforce participation among many groups, including Aborigines, women, some migrant groups, especially refugees, disabled persons, older workers, younger workers, etc. This increase in demand for workers is an unprecedented opportunity to increase social inclusion through breaking down barriers to workforce participation.
- Increasing efforts to provide education and training to increase the skill level of the Australian workforce.

However, even with success in all these areas, the demand for workers means that significant migration will be needed. Too often there is debate about one or other of these policies being the solution. There is no single 'silver bullet'. All are needed.

At the same time as we are faced with this clear demand to grow the population to meet the demands of the workforce, replace retiring baby boomers and maintain a balance between our working and non-working populations², we are experiencing the effects of the constraints which environment places on population growth. The introduction of water restrictions in Australia's major cities during the last few years has vividly brought home two things: the water resources of the continent are limited and our use of them has been profligate. The pressures which rapid population growth has placed on infrastructure and environment and resources in hot spot areas such as southeast Queensland, coastal New South Wales, Sydney and Melbourne are well known. Moreover, climate change will exacerbate these pressures. The Australian Bureau of Meteorology and the CSIRO³ have recently demonstrated conclusively that there is a long-term trend of rainfall decline in south-eastern Australia, which is currently home to over 80 per cent of Australia's population. There is a substantial mismatch between the distribution of runoff and that of population, with less than 15 per cent of Australians living in areas experiencing an increase in rainfall.

Too often the solution to environmental challenges, such as water shortages in the Murray-Darling Basin, is seen to be stopping population growth. In fact, population numbers are only one of the elements creating pressure on the environment. Levels of consumption per capita and the way in which the resources are exploited are also very important elements in creating environmental degradation. Australia suffered massive environmental degradation in the nineteenth century when its population was only a fraction of the present size. Clearly there is a need for us to change the way in which we harness, store and utilise our water resources. Certainly population growth places pressure on such resources but there is a need for us to capture, store and use our water better. Development of a sustainable pattern of exploitation and use of these resources is crucial. Stopping population growth alone is unlikely to be sufficient. Indeed some would argue the impact of such a policy on the economy would have undesirable environmental outcomes because of the lack of resources that would be available to move toward more sustainable processes.

It is not only issues of population size that are important but also those of population distribution. Population growth is likely to remain mainly in capital cities. However, in considering the development of Australia's population, policy issues of potential change in Australia's settlement system need to be fully considered. This doesn't mean major shifts of existing population but it could have significant implications for where future investment is best directed. Issues which need to be considered include:

- several of the fastest developing sectors in the Australian economy have a strong non-metropolitan orientation – e.g. mining and tourism;
- already there is net outmigration of the Australia-born from some of our largest cities such as Sydney;
- the retirement of baby boomers is likely to lead to an increase in the numbers of retirees living outside cities, creating demand for services;
- the costs of continued growth of major metropolitan areas are escalating;
- environmental constraints and the effects of climate change in southeast Australia.

It may be that there is some scope for encouragement of growth outside capital cities but this must be the subject of detailed study. It is not enough to say that such efforts failed in the 1950s and 1970s. The world is very different in the 2010s, especially in relation to the structure of the economy and networks of transport and communication. So what is needed? On the one hand we have the manifest need articulated in the Intergenerational Report of Treasury to grow the population⁴. On the other are environmental constraints which are likely to be exacerbated by climate change. Too often the policy alternatives that have been discussed emphasise one of these issues to the detriment of the other. What Australia needs is a population (and immigration) policy which takes full account of both these elements. It will require trade-offs and compromises but it would be informed by the best science and not the lobbying of interest groups. It requires a coming together of physical and social sciences to chart a range of potential population futures. No single academic discipline has hegemony here. This should be the task of the new ministry of population.

Population policy should not be seen as a stand-alone policy. Good population policy should support and facilitate beneficial outcomes in the key areas of national interest – economic development and growth, environmental sustainability, social inclusion and being a responsible global and regional citizen. Population policy needs to consider the best science and research available across all relevant disciplines, but it should also take into account the views of all Australians about a vision for our future. Migration and population growth will continue to be significant over the next few decades in all realistic scenarios for the future. However, that growth must be environmentally sustainable. Population growth and distribution policy must be informed, not only by labour force demand but also by environmental considerations. Growth with sustainability needs to be the objective, at least over the next two decades.

One of the hallmarks of Australian immigration policy over the period since World War II has been the bipartisan approach towards it of both the major Australian political parties over most of that period. This has served Australia well in many ways. If the new initiative to develop an Australian population policy could also be bipartisan, that would be an ideal outcome. There doesn't appear to be a great deal of difference between the two major parties on this issue. It is surely an issue of fundamental significance to the future of the nation and deserving of all possible energy focused on developing the most informed and inclusive vision of the nation's future.



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Pacific and Australia: Empirical, Theoretical and Policy Dimensions'.

¹ Access Economics (2009) *Economic Modelling of Skills Demand*, Report by Access Economics Pty Ltd for Skills Australia, 22 October.

² Swan, W (2010) *Australia to 2050: Future Challenges*, Intergenerational Report circulated by the Treasurer of the Commonwealth of Australia, January.

³ Bureau of Meteorology and CSIRO (2010) *State of the Climate*, Australian Government.

⁴ Swan, W (2010) op cit.

A Sustainable Energy Future for Australia Mark Diesendorf

"Your task is not to foresee the future, but to enable it." Antoine de Saint-Exupéry, French aviator and writer.

Human civilisation is faced with a great threat of its own making: climate change resulting primarily from the combustion of vast quantities of fossil fuels. There is a large and growing body of scientific evidence that anthropogenic climate change is already occurring, causing loss of biodiversity, rising sea levels and acidification of the oceans, together with increased frequencies and severities of extreme events such as heat-waves, droughts, wildfires and floods¹.

According to leading climate scientist James Hansen, the key goals in addressing this threat must be to phase out greenhouse gas emissions from burning coal by 2030 and to stop the development of greenhouse intensive alternatives to conventional oil, such as oil from tar sands, coal and shale. If we can do this, Hansen argues, there is hope of avoiding some severe and irreversible impacts of climate change².

This paper presents a case that natural resources and human invention together have already offered us the technologies and other measures needed to enable the transition from fossil fuelled energy systems to ones that are ecologically sustainable. Today the principal barriers are neither technological nor economic, but rather are the power structures, industries, institutions and cultures associated with the old polluting energy system. Analysing these barriers is a task for social scientists. However, the first step in enabling the transition is to set out a vision of a sustainable energy system, while dispelling some of the myths designed to obscure it.

Energy options

In the energy sector, five kinds of measures have been put forward for cutting greenhouse gas emissions:

- energy conservation, that is, reducing the demand for energy services;
- efficient use of energy, that is, providing the same energy services while using less energy;
- renewable sources of energy, especially those already commercially available from wind, direct sunlight, biomass (organic materials) and hydro-electricity;
- fossil fuelled power with carbon capture and storage (CCS); and
- nuclear power.

All except the first of these are technological measures. However, technologies do not simply implement themselves. They need effective policies from government and industry, backed up by relevant analysis by social scientists. Even the multitude of energy conservation and efficiency measures that could save consumers a lot of money are not being implemented on a large scale in most countries. This is partly the result of market failures, such as the split incentives between landlords and tenants, and the unwillingness of consumers to pay a higher initial price for greater energy efficiency, despite rapid financial returns.

Coal power with CCS is a technologically unproven system. The initial enthusiasm by governments for this technological pathway has been tempered by growing awareness

that its development to commercial scale will take much longer and will be much more expensive than originally believed³. Major projects have been cancelled or placed on the back burner in the USA, Scotland, the Netherlands and Australia⁴. CCS is unlikely to be commercially available on a large scale before 2030, if ever, and by then may be more expensive than most renewable energy sources. Even the modeling by Australian Treasury shows CCS commencing to contribute globally around 2027 and catching up with renewable energy in 2045 (medium renewable energy scenario) or failing to catch up by 2050 (ambitious renewable energy scenario)⁵.

Nuclear power is opposed by many on the following grounds⁶:

- it facilitates the discreet development and proliferation of nuclear weapons.
- it carries the risk of rare but potentially catastrophic releases of vast quantities of radioisotopes by accidents and sabotage.
- there is no facility for the safe management of high-level nuclear wastes for the necessary timescale of 100,000 years or more and it is unlikely that one could ever exist on such a timescale.
- capital costs have escalated rapidly through the 2000s, to the extent that nuclear energy is now more expensive than some renewable energy sources⁷.
- although life-cycle carbon dioxide emissions from nuclear power are relatively low, they are likely to increase substantially over the next several decades as high-grade uranium ore is used up and low-grade ore is mined and milled using fossil fuels.
- it is a very slow technology to build and could not make a significant contribution to Australia's electricity generation before 2030.

In theory, several of these serious concerns could be alleviated to some degree by developing new types of nuclear power system. However, none of the proposed new nuclear technologies is close to a commercial state. Furthermore, despite claims that some of these systems could be made proliferation-proof, elementary nuclear physics shows that any fissile element can be used either to power a reactor or as the explosive in a bomb. This applies, for example to uranium-233 from the thorium fuel cycle and plutonium from the integral fast reactor, which are sometimes presented misleadingly as the solutions to concerns about nuclear weapons proliferation.

Nuclear power is contributing to the proliferation of nuclear weapons and hence to the risk of nuclear war⁸. The spread of nuclear power to more countries increases that risk. Even a 'small' local nuclear war, for example between India and Pakistan, could precipitate a 'nuclear winter', with soot screening sunlight to the extent of severely damaging agriculture on a global scale for several years and leading to mass starvation⁹. It does not seem sustainable to attempt to counter one major threat to civilisation, climate change, by increasing the risk of another major threat.

Thus, the only genuinely safe and ecologically sustainable energy solutions are energy conservation, efficient energy use and some renewable energy technologies. Because of the urgency of the problem and because some bioenergy production processes, hydro-electricity and tidal power based on large dams, can have large environmental and social impacts, this paper focuses on the low-impact renewable energy technologies that are commercially available or very close to being so, namely wind, solar thermal, solar photovoltaics (PV), small-scale hydro and bioenergy from agricultural and plantation forest residues. Australia is well endowed with all of these, except additional hydro¹⁰.

At present, most of Australia's electricity generation, which is responsible for about 35 per cent of emissions, comes from coal. As discussed below, all electricity could be supplied by commercially available renewable energy sources within a few decades.

Most of Australia's transport energy, which is responsible for about 14 per cent of emissions, comes from oil. In future most urban transport, both public and private, could become electrically driven, while most private rural transport could be based on biofuels produced sustainably.

At present almost all of Australia's non-electrical heating, which is responsible for about 17 per cent of emissions, comes from natural gas. In the future it could be provided by a mix of direct solar heating for low temperature uses and electrical heating for high temperatures, with backup from biofuels.

Possibly the most difficult challenge is substituting for non-energy emissions from industries such as steel, cement and agriculture. This would involve changing industrial processes and usage patterns. Demand reduction could be applied to both energy and non-energy emissions.

Generic objections to the sustainable energy pathway are widely disseminated via the media, especially by proponents of fossil fuels and nuclear power, who state that:

- energy efficiency and conservation are ineffective, because of the 'rebound effect' discussed below;
- · renewable sources cannot supply sufficient energy to power an industrial society;
- · renewable energy is too unreliable to power an industrial society;
- renewable energy is too expensive.

These are addressed in the next section.

Sustainable energy properties and scenarios

In the energy sector, the only low-cost low-carbon measures are energy conservation and efficiency. These measures could be implemented very quickly, given appropriate policies. Another advantage of demand reduction is that it often saves money. This is presented as a disadvantage by some economists, who argue that the savings are then spent on increasing energy consumption, thus defeating the original purpose of energy conservation/efficiency. While this 'rebound' is certainly observed, it is generally much smaller than the original energy saving. It can be further reduced by regulations and standards to foster energy efficiency in buildings, appliances, equipment and vehicles. It can be removed altogether by offering households and businesses packages of energy efficiency and renewable energy such that the economic savings from the former are automatically used to fund the latter. Thus there is no net cost saving and hence no 'rebound'¹¹.

Nature can supply far more renewable energy than industrial society uses. For instance, a square of side 50 km filled with solar power stations could supply all of Australia's current electricity consumption. Of course in practice there would be a mix of different renewable energy sources. To replace a 1000 megawatt (MW) coal-fired power station with wind power, about 900 turbines, each rated at 3 MW, would be required. The land area they would span is equivalent to a square of side 30 km. However, wind farms are generally erected on agricultural land and only occupy about two per cent of the land area spanned, which would amount to a square of side about 600 square metres or an area of 0.36 square km. In general wind power uses less land than coal power with its associated coal mine.

Like fossil fuels, renewable energies are not distributed equitably over the earth's surface. Some regions, such as Australia, south-west USA and North Africa, have huge excesses of renewable energy potential, while others, such as Malaysia and Japan, have deficiencies. Therefore, as with fossil fuels, international trade in renewable energy would be established¹². Depending upon distances and type of land/water conditions, this could be done either by high-voltage transmission lines or by transporting hydrogen in ships similar to today's liquefied natural gas tankers¹³.

Over the past decade scenario studies have been published that model the potential for countries, regions, and the entire world, to meet 80-100 per cent of end-use energy demand from renewable energy by some future date, typically mid-century. National scenarios exist for Australia¹⁴, Ireland¹⁵, New Zealand¹⁶, Japan¹⁷, the UK¹⁸, Germany¹⁹ and Denmark²⁰. Regional studies exist for northern Europe²¹ and the European Union²². Several global studies have been published²³. These studies differ in the industry sectors covered, the degree of disaggregation of the sectors and the size of the time steps taken.

Of particular interest are computer simulation models of electricity demand, in hourly or half-hourly time steps spanning one or more years, with electricity supplied mostly or completely by renewable sources. Such studies are particularly valuable for investigating criticisms of renewable energy supply systems on the alleged grounds that they are intermittent, unreliable and cannot provide base-load (24-hour) power. For Australia two such studies have been published to date. The first was performed by Jack Actuarial Consulting for the Zero Carbon Australia (ZCA) report²⁴. It found that, subject to a number of assumptions listed in Table 1, all electricity demand in 2008 and 2009 could have been supplied reliably with renewable energy, mostly concentrated solar thermal (CST) power with 17 hours of thermal storage and wind power. The ZCA model has a little backup for CST in winter by means of heating the thermal storages with biomass.

A year later an independent set of simulations was published by a research group at the University of New South Wales (UNSW)²⁵. This refereed study was able to remove several of the expensive and/or constraining assumptions of the ZCA report, as shown in Table 1, and still meet electricity demand with the same reliability as the existing fossil-fuelled system. In addition the UNSW study performed several sensitivity analyses to investigate the effects of varying some of the system parameters.

The UNSW study found that the principal challenge of 100 per cent renewable electricity is to meet demand on winter evenings following overcast days. On such evenings the CST's thermal storage tanks are partially empty and sometimes wind speeds are low. The UNSW model handles these circumstances in two ways. It has an increased number of gas turbines in the grid and assumes they are fuelled on liquid or gaseous fuels produced sustainably from biomass. These gas turbines are similar to jet engines, have much lower capital costs than coal and nuclear power stations, and are only operated infrequently. The model can also reduce peak demands on winter evenings by means of energy efficiency and other demand reduction programs.

By contrast, the ZCA model handles winter evenings by installing a very large generating capacity of CST, currently the most expensive energy supply technology modelled. It also transports biomass out to the CST power stations, where it is burned when required in boilers to keep the thermal storages hot.

| ZCA assumptionsUNSW assumptionsTransmission links built between WA and eastern states at great expenseNo link to WA. Only existing National Electricity Market (NEM) region of linked eastern and southern states modelledDaily average solar dataHourly solar data (more accurate than daily)Supplementary heating of CST's molten salt thermal storages with biomass during winterInstead, biofuelled gas turbines to maintain reliability on winter eveningsCST from power towers with molten salt storage - still a demonstration systemCST from parabolic trough collectors with molten salt storage - a commercial systemNarrow renewable electricity mix: mostly CST + wind + existing hydro, but no gas turbinesBroader renewable mix: CST + wind + PV + biofuelled gas turbines + existing hydroA single scenario with no sensitivity analysesExtensive sensitivity analysesNo transmission constraints across AustraliaNo transmission constraints across NEM | ••••••••••••••••••••••••••••••••••••••• | |
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Table 1: Comparison of assumptions in ZCA and UNSW simulation models

On the basis of simulations conducted overseas and by the UNSW team, the notion of 'base-load power' is being questioned. Is it simply making a virtue of the limited operational flexibility of coal and nuclear power? Isn't the key indicator the reliability of the whole supply-demand system, not the reliability of any single component of that system? In an electricity supply system that is predominantly renewable, the concepts of base-load and peak-load supply are no longer useful. Instead, the operational flexibility of some of the power stations becomes the key to providing reliability.²⁶

Furthermore, with the arrival of 'smart meters', that enable consumers to monitor and reduce their electricity demand at certain times and also facilitate electricity utilities to cut supply to specific users at certain times, the opportunities for managing a renewable energy supply system are greatly increased.

Economic analysis of 100 per cent renewable energy systems is still in its early stages and depends upon assumptions about the way costs will decline as the scale of manufacture increases. Present trends are encouraging. Despite fragile economies in Europe and North America in the wake of the Global Financial Crisis, global sales of renewable energy systems are increasing and by 2020 are expected by Bloomberg New Energy Finance to double from the 2010 level of about US\$200 billion²⁷. Bloomberg also finds that 'the best wind farms in the world already produce power as economically as coal, gas and nuclear generators; the average wind farm will be fully competitive by 2016⁻²⁸. Global capacity additions for solar PV grew from 7.2 gigawatts (GW = 1000 MW) installed in 2009 to 16.6 GW in 2010, bringing total global installed capacity to around 40 GW, producing some 50 terawatt-hours of electrical power every year²⁹. Meanwhile, retail electricity prices are increasing in many places and so it is expected that residential solar PV without feed-in tariffs will be economically competitive with retail electricity prices in some locations within a few years. At present the most expensive, commercially available, renewable electricity technology is CST, priced at about 22.5 cents per kilowatt-hour. Recent detailed studies suggest that this could be almost halved in less than a decade by the expanding market and improved technologies and manufacturing processes³⁰.

Should the rapid expansion of renewable energy systems be delayed until their unsubsidised prices are competitive with those of fossil fuels? In the absence of a carbon price reflecting the environmental, health and economic damage done by burning fossil fuels, it can be argued that fossil fuels are heavily subsidised³¹. We are already paying for the damage they cause. Internalising the costs of this damage in fossil fuel prices is justified by elementary economic theory. Another way of looking at this is to recognise that the cost of continuing with business-as-usual fossil fuel scenarios is greater than the cost of changing to a sustainable energy scenario³².

Enabling a sustainable energy future

I have discussed elsewhere³³ the government policies needed to facilitate the transition to a sustainable energy future and more generally a low-carbon future. Here there is only space for a few key points.

A price on carbon emissions is necessary for enabling the transition. Even a low carbon price, such as Australia's initial \$23 per tonne, sends a message to investors that it would be very risky to invest in new dirty coal-fired power stations and in major refurbishments of existing coal stations. Other benefits include the internalisation of environmental and other costs mentioned above; the message it sends to consumers that is consistent with messages from education and information, regulations and standards, and institutional change; and the revenue that can be hypothecated to compensating low-income households and disadvantaged workers and to new infrastructure such as railways and transmission lines³⁴.

However, a carbon price is not sufficient for driving the new clean technologies. One limitation is that in most places the initial price is too low and will only at best promote the next cheapest energy technology to coal, which is gas. Gas is highly efficient when fuelling cogeneration and trigeneration, and as an interim back-up for solar hot water and fluctuating renewable energy sources such as wind and solar PV. But it would be disastrous in greenhouse terms if gas were used in vast quantities to replace coal-fired power stations and if the further dissemination of renewable energy sources were held back for decades until gas became scarce and expensive. This is just one of several market failures that limit the effectiveness of relying on a carbon price alone³⁵.

Strategies and policies are needed now to enable a sustainable energy future for the long-term. This suggests that the Australian government's Renewable Energy Target should be expanded from about 20 per cent of electricity by 2020 to 30 per cent and that feed-in tariffs be restored temporarily, especially for large-scale solar power stations, both PV and CST. New and upgraded transmission links are needed, especially between South Australia (SA) and Victoria and between SA and NSW. This would enable wind, large-scale solar and, possibly in the future, hot rock geothermal power, to be fed from their huge resources in SA, central Australia and western NSW to consumers on the eastern seaboard. Regulations and standards are needed to expand energy efficiency programs to all existing occupied buildings and all energy-using appliances, equipment and vehicles.

Such policies will be vigorously opposed by vested interests dominating government energy and greenhouse policies in Australia³⁶ and elsewhere. In addition to the well-

funded campaign of climate change denial³⁷ there is an active campaign of renewable energy denial³⁸. Despite this campaign, news of the continuing technical and economic improvements in sustainable energy continues to disseminate and public support is high. The principal barriers to converting this support into effective policies are political, institutional and cultural. The social sciences could play a valuable role in analysing and overcoming these barriers.



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¹ Climate Commission 2011, *The Critical Decade.*

- ² Hansen, J (2009) Storms of my Grandchildren, Bloomsbury, London.
 ³ Australian Broadcasting Commission Lateline 4/8/2011 (CCS fails to deliver)
- ³ Australian Broadcasting Commission, Lateline, 4/8/2011, 'CCS fails to deliver on promise', http://www.abc.net.au/lateline/content/2011/s3285864.htm Accessed 18/8/2011.
- ⁴ Hamilton, C (2011) 'Ethical anxieties about geoengineering: moral hazard, slippery slope and playing God', Paper presented to a conference of the Australian Academy of Science, Canberra, 27 Sept: 8-10.
- ⁵ Australian Treasury (2011) Strong Growth, Low Pollution: Modelling a carbon price, Chart 3.13, http://www.treasury.gov.au/carbonpricemodelling/content/report/07chapter3.asp Accessed 20/11/2011.
- ⁶ Diesendorf, M (2007) Greenhouse Solutions with Sustainable Energy, UNSW Press, Sydney, chap. 12; Sovacool, BK (2011) Contesting the Future of Nuclear Power: A critical global assessment of atomic energy, World Scientific, New Jersey.
- ⁷ Diesendorf, M (2012) (in press) 'Economics of nuclear electricity', in M Cabellero-Anthony, RM Basrur and C Koh (eds) *Nuclear Energy and Human Security: Critical Debates,* Routledge.
- ⁸ Fox, RW (1976) Ranger Uranium Environmental Inquiry, 1st report, AGPS, Canberra.
- ⁹ Robock, A and Toon, B (2010) 'South Asian threat? Local nuclear war = global suffering', *Scientific American* 302(1): 74-81, January.
- ¹⁰ Geoscience Australia and ABARE (2010) *Australian Energy Resource Assessment*, Canberra.
- ¹¹ Diesendorf (2007) *op cit:* 93-94.
- ¹² Sørensen, B and Meibom, P (2000) 'A global renewable energy scenario', *International Journal of Global Energy Issues*, 13(1-3): 196-276.
- ¹³ Desertec, http://www.desertec.org Accessed 19/11/2011.
- ¹⁴ Wright, M Hearps, P (2010) *Zero Carbon Australia Stationary Energy Plan*, University of Melbourne Energy Research Institute and Beyond Zero Emissions, Melbourne.
- ¹⁵ Connolly, D, Lund, H, Mathiesen, B and Leahy, M (2011) 'The first step towards a 100% renewable energy-system for Ireland', *Applied Energy*, 88(2): 502-507.

- ¹⁶ Mason, IG, Page, SC and Williamson, AG (2010) 'A 100% renewable electricity generation system for New Zealand utilising hydro, wind, geothermal and biomass resources', *Energy Policy*, 38(8): 3973–3984.
- ¹⁷ Lehmann, H (2003) *Energy Rich Japan*, Institute for Sustainable Solutions and Innovations.
- ¹⁸ Kemp, M and Wexler, J (2010) *Zero Carbon Britain 2030: A New Energy Strategy*, technical report, Centre for Alternative Technology.
- ¹⁹ Klaus, T, et al (2010) *Energieziel 2050: 100% Strom aus erneuerbaren Quellen* (100% renewable electricity supply by 2050), German Federal Environment Agency.
- ²⁰ Lund, H and Mathiesen, B (2009) 'Energy system analysis of 100% renewable energy systems the case of Denmark in years 2030 and 2050', *Energy* 34(5): 524-531.
- ²¹ Sørensen, B (2008) 'A renewable energy and hydrogen scenario for northern Europe', International Journal of Energy Research, 32(5): 471-500.
- ²² Zervos, A, et al (2010) *RE-thinking 2050: A 100% Renewable Energy Vision for the European Union*, Technical report, European Renewable Energy Council.
- ²³ Sørensen, B and Meibom, P (2000) op cit; Ecofys (2011) The Energy Report: 100% Renewable Energy by 2050; Jacobson, MZ and Delucchi, MA (2011) 'Providing all global energy with wind, water, and solar power, Part I: Technologies, energy resources, quantities and areas of infrastructure, and materials', Energy Policy, 39: 1154-1169; Delucchi, MA and Jacobson, MZ (2011) 'Providing all global energy with wind, water, and solar power, Part II: Reliability, system and transmission costs, and policies', Energy Policy, 39: 1170-1190.
- ²⁴ Wright and Hearps (2010) *op cit:* part 4.
- ²⁵ Elliston, B, Diesendorf, M and MacGill, I (2011) 'Simulations of scenarios with 100% renewable electricity in the Australian National Electricity Market', Solar 2011 Conference, Australian Solar Energy Society, Sydney, 30 Nov-2 Dec.
- ²⁶ Mills, D (2010) 'Busting the baseload myth', ABC Science, http://www.abc.net.au/science/articles/2010/12/02/3081889.htm Accessed 19/11/2011.
- ²⁷ Bloomberg New Energy Finance, http://www.bnef.com/PressReleases/view/173 Accessed 19/11/2011.
- ²⁸ Bloomberg New Energy Finance, http://bnef.com/PressReleases/view/172 Accessed 19/11/2011.
- ²⁹ European Photovoltaic Association 2011, *Global Market Outlook for Photovoltaics until 2015*, http://www.epia.org/publications/photovoltaic-publications-global-market-outlook.html Accessed 19/11/2011.
- ³⁰ Hinkley, J, et al (2011) Concentrating Solar Power: Drivers and opportunities for costcompetitive electricity, CSIRO, Canberra.
- ³¹ Muller, NZ, Mendelsohn, R and Nordhaus, W (2011) 'Environmental accounting for pollution in the United States economy', *American Economic Review* 101: 1649-1675.
- ³² Stern, N (2007) *The Economics of Climate Change*, Cambridge Uni Press, Cambridge UK.
- ³³ Diesendorf, M (2009) *Climate Action: A campaign manual for greenhouse solutions*, UNSW Press, Sydney: chap. 4.
- ³⁴ Diesendorf, M (2011) 'Can a carbon price cut greenhouse gas emissions?' *Australian Options* 65: 4-7.
- ³⁵ Diesendorf (2011) *op cit.*
- ³⁶ Pearse, G (2007) *High and Dry: John Howard, climate change and the selling of Australia's future*, Viking (Penguin), Melbourne.
- ³⁷ Oreskes, N and Conway, E (2010) *Merchants of Doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming,* Bloomsbury.
- ³⁸ Diesendorf, M (2010) 'Time to bust some myths about renewable energy', Crikey.com, http://www.crikey.com.au/2010/04/21/time-to-bust-some-myths-about-renewable-energy Accessed 19/11/2011.

Vision 2040: A Future for Mining and Australia

Damien Giurco

Mining features large in Australia, yet contradictions remain buried in the landscape. Australia is a major global supplier of resources and almost 60 per cent of our export earnings derive from mineral exports, dominated by iron ore and coal¹. More modestly, mining contributes around eight per cent to Gross Domestic Product and directly employs only two per cent of the Australian workforce.

Changes to the structure of the minerals industry in Australia have altered the sources of benefit from mining. Australian-owned companies no longer dominate, with more than 80 per cent of mining companies in Australia now foreign owned². Increasing mineral production acts to decrease the quality of remaining resources. This gives rise to higher environmental and social impacts from production across Indigenous and non-Indigenous communities.

The industry's social licence to operate is becoming harder to secure and maintain. While mining companies have increasingly done a good job of protecting worker safety, community health can suffer from cumulative impacts of pollution deriving from multiple mines operating over many years. In addition, 30,000 legacy sites remain to be remediated³ and examples demonstrating outstanding restorations are lacking. Mining and farming are now in conflict over land use. In this midst of this, Australia is without a national minerals policy.

The complexity of these issues is reflected in competing narratives. Industry and royalty-dependent state governments pursue the line that 'we mustn't kill the golden goose' which keeps economic benefit flowing – in other words, it's necessary to protect Australia's natural resource industries. By contrast, farmers and environmentalists argue it's necessary to protect Australia's natural resources, including productive land, for future generations.

Readers may be familiar with the 'Australian Mining. *This is our story*' advertising that has been promoted by the Minerals Council of Australia (representing the major miners) since the proposed Resource Super Profits Tax (RSPT). However, the implications of the amended tax now known as the Mineral Resource Rent Tax (MRRT), which was passed in the House of Representatives in November and awaits passage through the Senate, have received less attention.

Treasury modelling estimated the MRRT would collect \$38 billion over 10 years whereas the RSPT was projected to collect more than double that (\$99 billion)⁴. Divided and distributed between Australia's 22 million people, the MRRT equates to less than four dollars a week, for the next decade, to each Australian – not enough to buy a healthy lunch each week and certainly not enough to ensure a once-in-a-generation-boom underpins our nation's future prosperity.

Ensuring long-term benefit from mineral resources is not a simple task and the present situation is missing several key ingredients – vision, innovation and far-sighted policy.

*Vision 2040 mining, minerals and innovation: a vision for Australia's mineral future*⁵ is the result of collaboration between five universities and the CSIRO Minerals Down Under Flagship. The aim has been to develop a clear view of what governments, communities and industry would need to do, to have mining and mineral production contribute positively to a sustainable Australia in 2040.

A harder grind

As mineral production rises to meet demand, the going is getting tougher below the surface. Energy consumption per unit of mined product in Australia has gone up by 50 per cent over the last decade⁶, as all the higher quality, easy-to-mine ores become exhausted. In the absence of significant improvements to technologies or new discoveries, this trend seems likely to continue with remaining ores being deeper, more remote and more complex - thus requiring more energy to mine and process. Similarly, the productivity of the industry has declined over the last decade, largely as a result of ore grade decline, but also due to capital investment which is yet to be translated into production⁷. Iron ore production in the Pilbara could increase from several hundred million tonnes per annum towards projections of a billion tonnes per annum by the end of the decade. If this occurs, energy-intensive grinding plants will then be required to improve the quality of the mineral being shipped overseas. Higher fuel costs are also likely to decrease the profitability of production as mine sites become more remote. Strong commodity prices have also encouraged further exploration and development in other countries and the next decade could see global supply from areas such as Brazil, Mongolia and West Africa become more competitive.

Less discovery and more social challenges

The response to these challenges has largely been to explore new ways of increasing production by digging deeper holes, faster, in an effort to keep up. Technologies such as automation and remote tele-operation – which sees driverless trucks in the Pilbara being driven from a computer console in Perth – are increasing efficiency and safety, whilst at the same time reducing labour costs. Will this be enough to ensure Australia remains competitive in the decades ahead? Rates of discovery for world-class ore bodies are declining. For example, the super-giant Olympic Dam deposit in South Australia will become the biggest open cut mine in the world after expansion. However, it was discovered in the 1970s and discoveries on a similar scale have not been made since. What else beyond digging and selling is needed to ensure long term benefit for communities and our nation?

Social and environmental impacts from mining are now identified as future constraints on ultimate production⁸. Today, it is not enough to geologically identify a resource to exploit. Gaining land access and an ongoing social licence to operate will also influence the viability of mining activities. Consider, for example the land use conflict arising between coal and farming in the Liverpool Plains (NSW) or the case of coal seam gas in Queensland and New South Wales.

Bridge to a sustainable economy

A new approach is needed to bridge the conflict between mining and other economic activities. The debate must be reframed around transitioning to a sustainable economy where natural resources are not traded off against resource dependent industries. Sustainability requires more than collective consideration of social, environmental and economic impacts – it requires recognition that long-term economic health depends on trust and stability in society, and that prosperity in society depends on the health and resources of our finite planet. Society shouldn't use resources faster than they can be replenished, nor can we flourish in a poisoned environment.

Thinking forward to the characteristics of an economy supporting sustainability, what services will metals provide to society, the environment and the economy? Where will Australia increase stocks of value? The positive and negative value that mining brings

to Australia must be better understood to ensure it makes a positive contribution to a globally competitive economy in a greener world. A sustainable economy will require innovation beyond using less water or energy toward transformational technologies that deliver positive benefit – cleaner air and water, healthier communities and land.

Australia needs a national minerals policy to deliver on a vision that ensures our finite resources underpin longer-term prosperity. Demand for Australian resources is expected to remain strong in the medium term despite the instability that could result from the European debt crisis, though lower prices from slowing demand would test our competitiveness.

Notwithstanding their imperfections, Australia has brought together state governments to create a national policy on water and a National Waste Policy. In addition an energy white paper and National Food Policy are in development. How is it then that Australia is not considering a National Minerals Policy? India has one, Europe is proposing a Sustainable Minerals Policy but Australia gets by using policy and regulation in labour, company taxation, transport, foreign investment, international trade and environmental protection instead. Internationally too, Australia stands out by its absence on the United Nations Economic Program sponsored International Resource Panel set up in 2007 to develop holistic approaches to the management of global resources.

A direction: vision and policies for the long term

Developed as part of the Mineral Futures Collaboration Cluster⁹, *Vision 2040* seeks to provide direction for a national minerals strategy and policy that supports long term national and community benefit. It draws on consultation with more than 150 stakeholders over two years and has four components:

- 1. a National Minerals Policy supported by a comprehensive system of national mineral accounts;
- 2. investment in transformational technology and remediation;
- 3. pursuing value within ethical supply chains, 'Brand Australia: responsible minerals';
- 4. sovereign wealth funds to support innovation within and beyond mining.

Each is explored in further detail below.

National Minerals Policy

A comprehensive system of National Mineral Accounts is required to inform national policy on minerals – current gaps in data are too extensive. The accounts would collect data and analyse the economic, social and environmental performance of the mineral industry in Australia. More detail is needed around resource stocks (both above and below ground) and the impacts of mining activities – including those of private companies which aren't required to report. This data is critical to assessing who benefits and who bears the cost of mineral extraction across economic, social and environmental dimensions.

The development of a National Minerals Policy would establish and review a national strategy that delivers long term benefit from non-renewable mineral resources. This is not a trivial task, given that ownership of resources is vested in the states, but community pressure is rising to ensure these resources and the revenues they generate are well managed. Furthermore, despite having significant deposits of resources, Australia still faces the challenge of attracting foreign investment capital, the costs of transporting goods long distances and a small labour force. These issues demand a more strategic approach – Australia without a minerals policy is like Saudi

Arabia without an oil policy. Australia's prosperity to date is also little guarantee against the challenges of Dutch Disease and the two-speed economy.

Transformational technology and remediation

Vision 2040 sees Australia use its recognised voice in mining to promote excellence in mining practice across the globe. As minerals and metals will continue to underpin the prosperity of global civilisation, the way such resources are gained and used must be transformed consistent with sustainable practices. Australia can lead this challenge.

Figure 1 (below) shows the stages in planning, operating and closing a mine together with the value chain of metal use and reuse in the economy. Best practice for sustainable mine planning is illustrated alongside the arrow going down the page. It extends from exploration through design/construction and mining to closure and restoration. Yet, to date, the principal focus in Australia has been on mining and preceding stages, whilst under-delivering on rehabilitation and restoration. This vision sees future obligations become opportunities by developing expertise and best practice in transformational remediation. Australia is already a leader in services to mining, such as the development of software and automation technology. In fact, in 2008/2009 more revenue was generated from mining software sales by Australian companies than from combined sales of uranium and zinc ores.

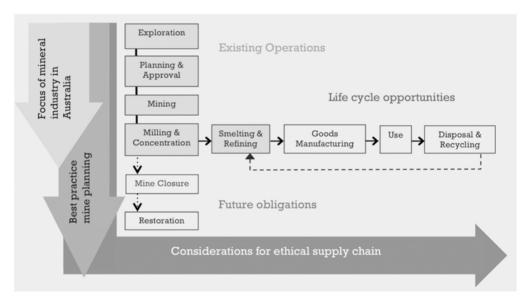


Figure 1: Linking mining stages to value opportunities in the production consumption cycle

Developing governance processes as well as practical knowledge in transformational mine remediation would enable industry to be a welcome guest in communities, rather than a bad tenant. It would leave mining sites in better condition than when mining began by increasing ecological services, increasing biodiversity, improving water quality and land management and leaving more fertile soils. Such innovation requires collaboration between research and industry for commercialisation as highlighted in a recent report by the Australian Academy of Technological Sciences and Engineering¹⁰ on increasing the innovation dividend from emerging technologies. Its other

recommendations were to make innovation more attractive to small to medium enterprises and to improve institutional innovation skills.

Brand Australia: responsible minerals

Globally, moves towards ethical supply chains (shown in the arrow going across the page in Figure 1) are gaining momentum. These range from the stewardship policy of the International Council on Mining Metals Materials and the Kimberley Process Certification for control of conflict diamonds to Australia's Steel Stewardship Forum and finally to chain of custody standards being developed by the Responsible Jewellery Council (a global organisation led from Australia). As investors and consumers come to demand that products be made with ethically sourced metals, Australian policy makers and companies can cement a competitive advantage by leading the development of standards and practice. This could be a useful addition to the remit of the recently announced International Mining for Development Centre funded through AusAID. There are also synergies to be realised in green minerals made using renewable energy, by linking mining to Australia's Clean Energy Future. The value chain focus recognises that in cities of the future, controlling the recycling of above ground stocks of metals in used equipment, buildings and infrastructure will be as valuable in meeting supply as below ground stocks are currently.

Sovereign Wealth Funds supporting innovation

Vision 2040 is a strategy for Australia's mineral future. It combines the need for ethical production and consumption with extraction and processing technologies that deliver positive environmental and social outcomes. It champions the development of a National Minerals Policy supported by a comprehensive system of national resource accounts. It highlights the need for ensuring the revenue from mineral extraction contributes to the long-term prosperity of Australia.

The MRRT currently proposes an increase in the superannuation guarantee from nine per cent to 12 per cent which is worthwhile, but should be happening in any case. Rather, a Sovereign Wealth Fund could be established to not only save for the future, but to direct part of the proceeds to investments in innovation within and beyond mining. Much of Melbourne's infrastructure and architecture is a legacy to the gold booms in Ballarat and Bendigo more than a century ago. California saw its gold boom followed by investment in research and innovation at Stanford University, now giving rise to the high-tech super powers of Silicon Valley. Whilst there is strong support in business and the community for a Sovereign Wealth Fund, political support to examine the best model and pursue it is lacking.

Rising to the challenge

Australians must face up to the challenges associated with depleting our high quality mineral resources and demand decisive responses which capitalise on opportunities whilst they are available and able to be financed. The research that supports the proposition in this article has been extensive and participatory. Australian political parties are now challenged to engage meaningfully with the debate and pledge support for a National Minerals Policy ahead of the next election. May Australia lead as she is able, in a world needing vision that delivers lasting prosperity.

Acknowledgements

Thank you to Dr Tim Prior and Leah Mason from the Institute for Sustainable Futures at UTS for their constructive comments and ideas. This research has been undertaken

as part of the Minerals Futures Collaboration Cluster, a collaborative program between the Australian CSIRO (Commonwealth Scientific Industrial Research Organisation); The University of Queensland; The University of Technology, Sydney; Curtin University of Technology; CQ University; and The Australian National University. The authors gratefully acknowledge the contribution of each partner and the CSIRO Flagship Collaboration Fund. The Minerals Futures Cluster is a part of the Minerals Down Under National Research Flagship.



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- ¹ ABARES, (2011) *Australian Mineral Statistics*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.
- ² Richardson, D and Denniss, R (2011) *Mining the truth: The rhetoric and the reality of the commodities boom*, The Australia Institute, Canberra.
- ³ Worrall, R, Neil, D, Brereton, D and Mulligan, D (2009) 'Towards a sustainability criteria and indicators framework for legacy mine land', *Journal of Cleaner Production*, 17, 16: 1426-34.
- ⁴ Australian Government (2011) 'RSPT and MRRT Revenue Estimates', http://www.treasury.gov.au/documents/1962/PDF/MRRT_Model.pdf.
- ⁵ Mason, L, Lederwasch, A, Daly, J, Prior, T, Buckley, A, Hoath, A and Giurco, D (2011) Vision 2040: Mining, minerals and innovation – A vision for Australia's mineral future, Institute for Sustainable Futures, UTS (Sydney) and Curtin University (Perth).
- ⁶ Sandu, S and Syed, A (2008) *Trends in Energy Intensity in Australian Industry*, ABARE Report 08.15, Canberra.
- ⁷ Topp, V, Soames, L, Parham, D and Bloch, H (2008) Productivity in the Mining Industry: Measurement and Interpretation, Productivity Commission Staff Working Paper, December.
- ⁸ Mason, L, Prior, T, Mudd, G and Giurco, D (2011) 'Availability, addiction and alternatives: Three criteria for assessing the impact of peak minerals on society', *Journal of Cleaner Production*, 19, 9-10: 958-66; Prior, T, Giurco, D, Mudd, G, Mason, L and Behrisch, J (2012) 'Resource depletion, peak minerals and the implications for sustainable resource management', *Global Environmental Change*, (in press).
- ⁹ Mineral Futures Collaboration Cluster viewed 28 November 2011, http://150.229.98.44/en/Organisation-Structure/Flagships/Minerals-Down-Under-Flagship/mineral-futures-collaboration-cluster.aspx
- ¹⁰ ATSE (2011) Increasing the innovation dividend from emerging technologies workshop report: Issues, findings and recommendations, Melbourne.

Natural Resource Exploitation and Regional Development: A View from the West *Matthew Tonts and Paul Plummer*

Introduction

ustralia's recent resources boom has promoted much popular discussion and debate about the economic, social and environmental consequences for those regions in which mining occurs. Perhaps nowhere are the outcomes of the resources boom more evident than in Western Australia, where the diversity and scale of projects is fundamentally reshaping many regions. Similarly, parts of regional Queensland, South Australia, New South Wales and the Northern Territory have experienced major transformations as a result of mining. Yet, perhaps surprisingly, understanding the complex links between natural resources and regional economies, communities and environments has been of relatively marginal scholarly interest amongst social scientists in Australia. This sits in sharp contrast to the more extensive body of research that has been conducted in North America, where a longstanding tradition of 'resource town' studies has focused on issues associated with social structure. cultural change, and economic development¹. Much of this work pointed to the problematic relationships between resource dependence, socio-economic wellbeing and environmental conditions in these towns. Indeed, resource dependence was often found to be coupled with high levels of poverty, economic volatility, unemployment, social dislocation and low levels of environmental quality.

The interest in resource dependent communities in North America deepened in the 1970s when the Arab oil embargo led to an increasing number of 'energy boomtowns', particularly in the western United States². A dominant theme in these studies was the 'social disruption thesis', whereby rapid economic and demographic change associated with large-scale resource development was understood to lead inevitably to social and psychological dislocation and a breakdown of established community social structures. This research pointed to a range of social problems, including high rates of crime and violence, mental health issues, drug and alcohol abuse, marital breakdown and a reduced sense of local social connectivity. Later, of course, the natural corollary of the boomtown studies was to examine the impacts of economic bust, as resource depletion and commodity price changes undermined the viability of local economies, services and social institutions³. More recent research has paid less attention to alarmist accounts of growth and decline, and has explored the considerable heterogeneity apparent in the economic, social and environmental experiences of resource communities⁴.

While resource communities have received far less attention in Australia than North America, a number of studies have pointed to both similar experiences and some marked differences. The area of inquiry that has received most attention over recent decades is the interaction between resource development and Indigenous peoples. Much of the evidence suggests that despite a considerable expansion of resource activity in Australia, and numerous attempts to incorporate aspects of Indigenous development into resource projects, improvements in levels of employment, socio-economic wellbeing, health and education have been marginal⁵. Indeed, as Langton and Mazell have pointed out, the problem of 'poverty in the midst of plenty' remains acute where resource development and Indigenous peoples are concerned⁶.

Other Australian studies have also contemplated some of the challenges associated with resource development, particularly in those places dominated by rapid growth. Some of the core concerns include infrastructure, housing and services⁷, demographic change⁸, labour force attraction and retention⁹, and socio-economic wellbeing¹⁰. While elements of the social dislocation thesis are certainly evident in this body of work, collectively the evidence points to a diverse set of experiences that are dependent on a combination of macro-economic conditions, the resource itself, and locational context. This paper reflects on the implications of resource dependence for regional development, largely through a focus on the experience of mining in Western Australia, but also by synthesising the findings of research conducted elsewhere in Australia.

The Western Australian resource economy

For more than four decades Western Australia has led the nation's resource exports. The state's resource base is highly diversified, and includes iron ore, gold, oil and gas, nickel, bauxite, mineral sands, rare earths, diamonds, timber and fisheries. In terms of mining, the state produces some 50 different minerals across 513 commercial mineral projects and nearly 900 mine sites¹¹. It is also host to 64 operating oil and gas fields, located predominantly off the north west coast¹².

Since the early to mid 2000s, the state has recorded a significant increase in the value of resource production, largely as a result of increasing global prices for commodities (Figure 1). Between 2001 and 2010, the value of metals production increased from a little over \$17,036 million to \$52,130 million; a rise of some 206 per cent. In the petroleum resources sector, the value of production increased from \$10,511 million in 2001 to \$21,275 million in 2009 (an increase of 102.4 per cent) before dropping to \$18,776 million in the wake of the global economic downturn. Despite the global recession, considerable optimism and new investment have been evident in the resources sector. In late 2010 more than \$130 billion had been committed to new resources projects within Western Australia.

One of the key characteristics of the resource industry in Western Australia is its distribution across the more remote parts of the state. Often resource extraction forms the bulk of the regional economic base, and the sole justification for settlement. This has led to the development of a large number of project towns where development is centred on a single company or commodity. Even where other economic activities are present, the economic and social fortunes of many towns rest on the performance of the resources industry. The vast majority of the state's resource dependent towns have residential populations of less than 6,000, though there are some exceptions such as Kalgoorlie (29,000), Karratha (12,000) and Port Hedland (13,000)¹³. The relatively small size of these communities tends to make them vulnerable to numerous exogenous forces, such as shifting exchange rates, commodity prices and trade policy. In many respects, Western Australia's resource economy and regional configuration bears a resemblance to the type of staples development described by Canadian economic historian Harold Innis¹⁴. According to Innis, regions with an abundant supply of high guality, easily accessible natural resources often experience a truncated form of economic development that favours raw exports from peripheral regions to the 'urban core'. This leads to regional economies that are dependent solely on the extraction of the raw materials, in which value adding is largely non-existent. He goes further to suggest that governments, which become increasingly financially dependent on the staple, tend to reinforce this form of development through various regulatory

and other policy instruments. The outcome is a staples trap in which regions are beholden to a particular form of economic production, and are unable to move beyond resources dependence. In the context of Australia, recent debates about state royalties from mining and the introduction of the Mineral Resource Rent Tax reflect the cumulative dependence on resources as a source of state revenue.

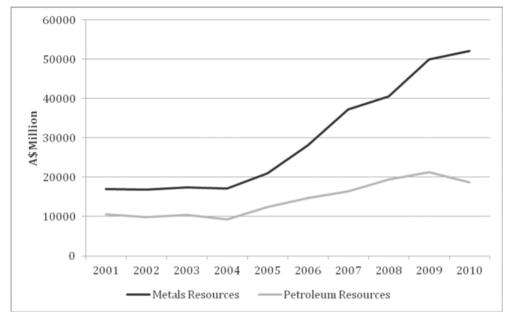


Figure 1: Value of Production for Metals and Petroleum Resources in Western Australia, 2001-2010. Source: Department of Mines and Petroleum (2010).

In terms of Western Australia's resource regions, staples theory suggests that local resource abundance might lock in resource dependence, rather than foster economic diversification, making resource communities more susceptible to economic and social vulnerability. In the Canadian context, geographers Barnes and Hayter have suggested that while resource dependence can lead to periods of rapid growth and/or stability, 'destruction and bedlam are always waiting in the wings¹⁵. Of course, how highly remote resource towns can realistically diversify their economies and shield themselves from exogenous economic and political processes remains a significant challenge for regional policymakers. Nevertheless, all of this begins to raise questions about not only the nature of economic development in resource dependent regions, but also the socio-economic vulnerability and wellbeing of residents.

Social change and resource communities

The recent rapid expansion of resource activity in both Western Australia and other parts of Australia has begun to capture the attention of social scientists. Three core themes are readily apparent within this work: i) the impact on housing, services and social infrastructure; ii) socio-cultural and employment dynamics; iii) socio-economic wellbeing. The most voluminous body of research has emerged on the first of these themes, particularly through the work of Haslam-McKenzie and colleagues working on issues associated with housing availability and affordability¹⁶. Drawing on work in a number of resource settings, though predominantly the Pilbara, this work shows that

the rapid expansion of economic activity associated with the iron ore and natural gas industries has led to a rapid increase in housing costs, both in the rental and owneroccupier markets. While companies are able to access such housing for employees, other segments of the labour force and economy struggle to afford to remain in the market and therefore region. Indeed, Haslam-McKenzie's research suggests that housing stress contributes to a range of other socio-economic problems, particularly for low-income earners. This includes financial stress, homelessness, and a decrease in social capital. Moreover, housing stress is a major barrier for businesses and government organisations attempting to attract and retain employees, and therefore has the potential to constrain other parts of the economy and service base.

One of the means of overcoming these issues has been through Fly-In/Fly-Out (FIFO) employment. Indeed, across much of the resource industry this has become the dominant model of employment, with employees spending extended periods on site and often living in a camp, before returning to (usually) a major metropolitan area as their permanent residence. A typical shift might involve two weeks on site, and one week at home. In terms of regional development, the emergence of FIFO has been highly contentious. For companies it offers labour flexibility, and reduces the need to provide remote housing or build towns. For employees, it provides employment choice, and the ability to retain a family or residence in the city. Yet, for those regions in which mining occurs, there is an argument that FIFO undermines community interaction, local economic development, and local services; in essence, it sees both people and economic activity bypass local communities. There are also concerns about the impact of FIFO on families, particularly where family members are separated for long periods of time. In response, the Commonwealth Government's Parliamentary Committee on Regional Australia is currently conducting an inquiry into FIFO.

For those people who do live in resource communities, and particularly those communities that are growing rapidly, attention has also been drawn to the inability of these places to provide adequate services and social infrastructure for residents. Such is the pace of growth that both the government and public sector are unable to construct and operate essential infrastructure, including health facilities, schools and community facilities. There are strong resonances here with the social dislocation thesis that emerged in North America during the 1970s. However, more recent analyses suggest that many of these issues are transitory. Indeed, Smith et al resurveyed four 1970s United States' boomtowns during the 1980s and 1990s and found that most of the negative impact of rapid growth became less evident or disappeared entirely over time¹⁷.

Research in a number of Western Australian towns suggests that rapid growth does not necessarily imply social dysfunction, and that the expansion of resources activity has often been coupled with improvements in levels of wellbeing. A recent study of social wellbeing in 33 small mining towns across the state found that on three key measures – welfare expenditure per capita, percentage of low-income households, and unemployment rate – these places were not necessarily as problematic as has sometimes been suggested¹⁸. Similar studies of larger centres¹⁹ and local government areas²⁰ yielded similar results, and even suggested substantial improvements in aspects of social wellbeing.

Yet much of this work also reinforces Greive and Haslam-McKenzie's findings that the combination of cost of living and housing affordability remain a serious issue for many people²¹. It is also clear that on most measures of wellbeing, people living in regional

areas, including those communities impacted on by the mining boom, lag their metropolitan counterparts. On a range of indicators, including access to services, social welfare, health, and educational performance significant improvements are needed. Perhaps nowhere is this need more evident than for Indigenous peoples. While the benefits of the mining boom are being spread unevenly, in the case of Indigenous peoples the reality is stark, with large-scale mining projects often juxtaposed against extreme deprivation²².

Contested development

The rapid expansion of mining activity has generated considerable controversy, particularly in relation to environmental values. Indeed, when compared to an industry such as agriculture, which has had a pervasive impact on natural environments, mining operates under a far more stringent set of guidelines and conditions. Yet, it attracts a great deal more attention. There are a number of apparent reasons for this, including the highly visual changes that mining brings to rural landscapes, together with the particular form of corporate capitalism that dominates the industry. By contrast, agricultural landscapes that are dominated by family farms are still often regarded as symbolic of national identity and struggle.

In the case of Western Australia, much of the socio-political conflict associated with resource development is concentrated in remote areas. Perhaps the most prominent in recent years has been the proposed gas processing facility on James Price Point near Broome, where the intersection of corporate interests, a government focused on state development, environmentalists, and Indigenous groups have contributed to one of the most contested of recent resource developments. While the state government is determined to push ahead with the development, which is argued to be 'in the public interest', other stakeholders point to not only the environmental damage associated with such a project, but also the possible social and cultural impacts. While considerable compensation payments and employment guarantees were proposed as part of an agreement between the state and developer, at the local level complex socio-cultural dynamics appear to be fracturing the Indigenous community. In the nearby town of Broome a different set of dynamics are at play, with local residents highly divided over the potential impacts; some argue the benefits of more jobs and economic growth, while others point to the potential erosion of amenity values and social cohesion.

One of the important characteristics of resource development in Western Australia is that it most commonly occurs on Crown land. This means that most of the land is held under leasehold, is under control of traditional Indigenous landowners, or is vacant and under government control (and generally subject to Native Title claim). Relatively rarely do resource developments emerge in areas of freehold land. As such, the type of land use conflict that has emerged in parts of eastern Australia over coal seam gas is uncommon, though not unheard of²³. The emergence of the coal seam gas industry has seen issues associated with private property rights, exploration rights, environmental values, and food security coalesce into a complex set of social, political and planning problems. At present, the often incongruous planning and regulatory frameworks surrounding natural resource management are contributing to a lack of certainty for all stakeholders, underscoring considerable social and political conflict. As international and domestic demand for energy, food and water further increases, there seems little doubt that managing this conflict will become one of the major political challenges of the next decade.

Conclusion

Australia's resource economy shows few signs of slowing, and with major new investments on the horizon it seems likely that the regional communities that underpin the industry will continue to experience pressures associated with growth. This raises important questions about how these communities will cope with growth, the sociocultural dynamics of resource communities, the nature of work, governance issues and the environmental impacts. All of this suggests an ongoing need for social scientists to engage with these communities as they attempt to manage what are likely to be highly complex and contested futures.

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- ¹ See, for example: Landis, P (1938) *Three Iron Mining Towns: A Study in Cultural Change*. Social Ecology Press, Middleton; Lucas, R (1971) *Minetown, Milltown, Railtown: Life in Canadian Communities of Single Industry*. University of Toronto Press, Toronto; Freudenburg, W (1992) Addictive economies: Extractive industries and vulnerable localities in a changing world economy, *Rural Sociology*, 57: 305-332.
- ² See, for example: Gilmore, J and Duff, M (1976) *Boomtown Growth Management*. Westview, Boulder; Weber, B and Howell, R (1982) *Coping with Rapid Growth in Rural Communities*. Westview, Boulder.
- ³ See, for example: Randall, J and Ironside, G (1996) Communities on the edge: An economic geography of resource dependence communities in Canada, *The Canadian Geographer*, 40, 17-35.
- ⁴ See, for example: Nord, M and Luloff, A (1993) Socioeconomic heterogeneity of mining dependent communities, *Rural Sociology*, 58, 492-500.
- ⁵ See, for example: Howitt, R (2001) *Rethinking Resource Management*. Routledge, London; Lawrence, R (2005) Governing Walpiri subjects: Indigenous employment and training programs in the central Australian mining industry, *Geographical Research* 43: 40-48.
- ⁶ Langton, M and Mazel, O (2008) Poverty in the midst of plenty: Aboriginal people, the resource curse and Australia's mining boom, *Journal of Energy and Natural Resources Law*, 26: 31-41.
- ⁷ Rolfe, J, Miles, B, Lockie, S, Ivanova, G (2007) Lessons from the social and economic impacts of the mining boom in the Bowen Basin, 2004-2006, *Australasian Journal of Regional Studies*, 13: 134-153.
- ⁸ Petkova, V, Lockie, S, Rolfe, J, and Ivanova, G (2009) Mining developments and social impacts on communities: Bowen Basin case studies, *Rural Society*, 19: 211-228.
- ⁹ Tonts, M (2010) Labour market dynamics in resource dependent regions: An examination of the Western Australian Goldfields, *Geographical Research*, 48: 148-165.
- ¹⁰ Hajkowicz, S, Heyenga, S and Moffatt, K (2011) The relationship between mining and socioeconomic wellbeing in Australia's regions, *Resources Policy*, 36: 30-38.
- ¹¹ Department of Mines and Petroleum (2010) *Western Australian Mineral and Petroleum Statistics Digest 2009*. Department of Mines and Petroleum, Perth.

¹² Ibid.

- ¹³ Tonts, M, Plummer, P, Lawrie, M (2011) Socio-economic wellbeing in Australian mining towns: A comparative analysis, *Journal of Rural Studies* (in press, doi:10.1016/j.jrurstud.2011.10.006).
- ¹⁴ Innis, H (1930) The Fur Trade in Canada: An Introduction to Canadian Economic History. University of Toronto Press, Toronto.
- ¹⁵ Barnes, T, Hayter, R, Hay, E, (2001) Stormy weather: cyclones, Harold Innis and Port Alberni, BC, *Environment and Planning A*, 33: 2132.
- ¹⁶ See, for example: Haslam-McKenzie, F, Brereton, D, Bridsall-Jones, C, Phillips, R and Rowley, S (2008) A Review of the Contextual Issues Regarding Housing Market Dynamics in Resource Boom Towns. Australian Housing and Urban Research Institute, Melbourne.
- ¹⁷ Smith, M, Krannich, R and Hunter, L (2001) Growth, decline, stability and disruption: A longitudinal analysis of socio wellbeing in four western rural communities, *Rural Sociology*, 66: 425-50.
- ¹⁸ Tonts et al (2011) Op cit.
- ¹⁹ Lawrie, M, Tonts, M and Plummer, P (2011) Boomtowns, resource dependence and socioeconomic wellbeing, *Australian Geographer*, 42: 139-164.
- ²⁰ Hajkowicz et al (2011) *Op cit.*
- ²¹ Greive, S and Haslam-McKenzie, F (2010) Local housing strategies: Responding to the affordability crisis, in Alexander, I, Greive, S and Hedgcock, D. (eds) *Planning Perspectives from Western Australia*, Fremantle Press, Fremantle: 66-84.
- ²² Langton, M (2010) The resource curse, *Griffith Review 28: Still the Lucky Country*? Griffith University, Brisbane.
- ²³ For example, recent exploration activity by coal miners in the Margaret River in the south west of the state has been the subject of considerable controversy, with miners claiming the right to explore and residents pointing to the potential negative impact of mining on environmental amenity, food and wine production and tourism.



Environmentalism and Science: Inextricably Linked or Uneasy Bedfellows? *Ian Lowe*

Introduction

This paper analyses the use of science in recent public issues: climate change, the state of the Murray River, nuclear power and genetic engineering.

Just as truth is traditionally the first casualty of war, public debates encourage selective perception of complex issues. While many scientists are environmentalists and many environmentalists use science responsibly, the relationship between science and environmentalism is often complicated.

The 2011 Australian climate change legislation and the draft plan for the Murray-Darling Basin were both described as compromises between what was wanted by 'scientists and environmentalists', on the one hand, and the wishes of businesses or communities on the other. In both instances, what environmentalists are asking for is based on the science, so there is a perception of a close link between environmental activists and scientists.

The essential principle of science is scepticism, being prepared to be led by the evidence even if it conflicts with your beliefs. This approach goes beyond the natural sciences. It was extended by Keynes to economics with his aphorism, 'When the facts change, I change my mind'. By contrast, there is an old joke that politicians use statistics or scientific evidence as a drunk uses a lamp-post: for support, rather than for illumination. A conclusion is pre-determined, based on ideology or a pragmatic assessment of electoral politics, then any science that appears to support the conclusion is used as justification.

The real world is more complicated than a simple binary divide between objective, rational scientists and ideologues or pragmatic politicians. Scientists and public health experts have their own values which influence their interpretation of complex data and uncertain outcomes. The values of individual scientists and broad professional groups clearly influence the advice they provide. Some environmentalists are just as guilty as politicians and industrialists of using evidence selectively to advance their cause.

Climate change

I have been discussing the issue of global climate change with elected politicians since the 1980s. Some asked perceptive questions about the science before deciding to accept the case for action, while some others simply went with the science in the same way as they go with the advice of the medical profession on health issues, of the engineering profession about construction projects and economists about the economy. While very few politicians query the advice of health or engineering professionals on ideological grounds, a significant minority of conservatively inclined MPs refuse to accept the science. They cast around for evidence, however flimsy, and 'experts', however dubious their qualifications, to offer advice on the subject, to justify their public stance opposing concerted action to slow climate change.

By contrast, most climate scientists were openly sceptical in the 1970s about the claims that human activity was changing the global climate. By the 1980s, most agreed that human activity was increasing the atmospheric concentrations of the main greenhouse gases and that climate change was happening, but felt that the evidence for a causal link between fossil fuel use and climate change was not convincing¹. By

the mid-1990s, the debate was essentially over inside the scientific community, with there remaining only a small number of climate scientists unconvinced of the link. Today, there is literally a handful, a group that can be counted on the fingers of one hand, who remain sceptical about the connection between human activity and global climate change². The weight of evidence has convinced most professionals in the field of the link. There remains some uncertainty about the scale and rate of future change that will result from current activity, because projections are based on models which require some subjective choices. However, learned scientific academies around the world, including the Australian Academy of Science³ have warned that global production of carbon dioxide and other greenhouse gases needs to be curbed urgently to avoid dangerous interference in the climate system. So politicians and the public see scientists and environmentalists saying similar things about the problem, standing shoulder-to-shoulder on the public stage.

That does not mean that scientists are inevitably environmentalists or, by extension, that environmentalists inevitably approach science from a rational objective perspective. Other examples discussed in this paper demonstrate the complexity of the link between science and environmental advocacy. Individual scientists and their professional bodies are influenced by their values, which colour their interpretations of complex and uncertain situations. Politicians almost characteristically use science selectively to advance their values and ideological agenda, as do business figures, industrialists and mining executives. Some environmentalists are equally prepared to use evidence when it is convenient and ignore what AI Gore called 'inconvenient truth'.

Although the scientific evidence is now overwhelming, there remain politicians and lobby groups ideologically opposed to the concept of government action to restrain those businesses which are causing the problem of climate change. Within the Liberal-National coalition, there are clearly thoughtful politicians who understand the science, but there are also ideologues who willfully refuse to accept it. Frontbench spokesmen like Senator Eric Abetz and former senator Nick Minchin ignore the gualified local scientists and consult those who will tell them what they want to hear, while the Leader of the Opposition offers carefully coded observations that appear designed to reassure those still denying climate change that he is secretly in their camp. Some backbench MPs are guite overt in their support for the denialists, with one saving in a Four Corners interview that he was 'exposing the lies' of climate scientists who he claimed to be distorting the evidence to secure funding support⁴. The Institute of Public Affairs, a right-wing lobby group, has a web site devoted to spreading doubt about the science. as well as employing a full-time advocate for the denialist case, designating one prominent denialist as their 'Science Policy Advisor' and having another soliciting donations to help the IPA spread misinformation about climate change⁵.

These forces have undoubtedly had some success in their campaign to muddy the waters. As Oreskes and Conway⁶ show, this is a concerted strategy. The science can't be refuted, but it is possible to manufacture doubt. It is not surprising that fossil fuel interests and the ideologues who support them are using the same approach as the tobacco industry used successfully for decades to slow legislative action to curb promotion of its product. I have reported elsewhere that a scientific colleague overheard a former Coalition MP colluding with senior editorial staff of our national daily newspaper about strategies to spread doubt about climate science⁷. While that newspaper's campaign failed to prevent the passing of legislation to begin action on climate change, it has altered the politics by building support for the Opposition

argument that the measures are 'a big new tax' rather than a timid initial response to a critical environmental threat⁸.

Other instances of science supporting activism

Those whose ideology or political values make them opposed to government intervention in the economy have used a similar approach to such problems as the state of the Murray River and some public health issues, like the impacts of tobacco or leaded petrol.

The first independent national report on the state of the environment was produced in 1996 by an advisory council which I chaired⁹. One of its conclusions was that the Murray-Darling system was in serious decline as a result of over-generous allocation of river water for irrigation, with the total amount licensed for extraction about 80 per cent of the average annual flow to the sea, meaning that the mouth was closing in dry years. The Wentworth Group of Concerned Scientists was formed to try to collate the scientific evidence and use it to encourage a more responsible policy. It concluded that the total amount of water extracted needs to be reduced from the figure of about 11,000 gigalitres to somewhere in the region of 6000 to 7000 gigalitres¹⁰. Local environmental groups and such national bodies as the Australian Conservation Foundation took up the cause and argued for a reduction in the water allocation by 4000-5000 gigalitres.

The draft Murray-Darling Basin Plan was released late in 2010 and its proposals based on the science met a storm of protest, with angry irrigators attracting media attention by burning copies of the draft report. The government brought in a fixer, Craig Knowles, to revise the plan to give a compromise between what 'the scientists and environmentalists' were proposing and the 'interests of local communities', seen as being synonymous with the commercial desires of irrigators who would like the past generosity to continue. The Institute of Public Affairs (IPA), which is ideologically opposed to government intervention, denies that the health of the river is a problem and advocates the strategy termed by Sir Humphrey Appleby as 'masterly inaction'¹¹.

Another controversial natural resource issue in recent years has been the dramatic increase in the number of proposals to extract coal seam gas. Removing methane from coal seams was originally introduced as a safety measure to reduce the risk of explosions in gassy mines, but the quality of the gas and the increasing support for moving away from coal has seen a rapid increase in the commercial attractiveness of extracting gas from coal seams deep underground. In many cases, local farmers are worried about the possible impacts on groundwater and on the productivity of their land. The available science supports their concerns, but there has been limited capacity to evaluate all the proposals. Late in 2011, the Commonwealth government agreed to allocate \$150 million to set up an expert scientific body to evaluate impacts on groundwater of coal seam gas extraction¹². As in the cases of the Murray-Darling Basin and climate change, the science broadly supports the arguments of environmentalists or, to put it the other way around, the case being mounted by environmental activists is based on solid science.

When a pulp mill was proposed for Wesley Vale in northern Tasmania in the late 1980s, the Commonwealth government set up a research program to consider the likely impacts on Bass Strait water quality and fisheries. The science showed that the environmentalists objecting to the proposal had a solid case: the proposed mill would have released large quantities of dioxins into the sea and harmed the fisheries¹³.

Science has also been enlisted in disputes about logging of native forests. The Fitzgerald Inquiry into forestry operations on Fraser Island recommended the cessation of logging of one species of tree, the satinay, on the grounds that it risked the survival of that species; the loggers decided that their operation was not commercially viable if they were prohibited from including those trees¹⁴. Senator Graham Richardson, as Commonwealth environment minister, decided to halt logging of Queensland's tropical rainforest on the basis of scientific advice that the operation was not sustainable¹⁵. At the time of writing, a scientific inquiry was investigating the contentious issue of logging old-growth forests in Tasmania to determine the conditions of implementing the 2011 forest agreement¹⁶. In all of these cases, the environmental arguments had science on their side. The scientists in every case would say that they have pursued objective inquiry, with their assessment of the situation leading inevitably to their agreeing with the environmentalists, who in turn would say that their campaigns were simply responding to what the science was saying.

In the public health area, there are several cases of science being used by activists to show negative health impacts; the most extreme being smoking tobacco, mining asbestos and adding tetra-ethyl lead to petrol. In each case, those opposed to government intervention sought to cast doubt on the science. Even in as extreme a case as tobacco, now recognised to shorten the lives of about half its users, political figures such as former senator Nick Minchin and right-wing lobby groups like the IPA have still been trying to cast doubt on the science in recent years¹⁷.

The other side of the coin: nuclear power and genetic engineering

Two issues where there is a fundamental disagreement between most scientists and most environmentalists are nuclear power and genetic modification of food crops. When I was a young scientist, nuclear power appeared to be a clean and technically sophisticated way to replace coal-fired electricity, with its human cost of deaths and injuries and its pollution of the local air. At the time, nuclear power was seen as cheap, clean and safe, with enthusiasts even talking of it being so cheap that there would be no need to meter use. Then the industry was plagued by cost over-runs and unreliable performance. At various times in the late 1960s and early 1970s, several states had serious plans to build nuclear power stations, but all the proposals foundered on a combination of economics and public opposition¹⁸.

The last proposal for a reactor on Commonwealth land at Jervis Bay was scrapped by the Whitlam government, which then set up the Fox Inquiry into Australia's role in the nuclear industry in the context of the proposed Ranger mine in the Northern Territory. The report concluded that the environmental risks of the mine itself were potentially manageable, but warned that exporting uranium contributed to unsolved problems such as the long-term storage of radioactive waste and the risk of weapons proliferation¹⁹. Successive Australian governments have been happy to see exports approved without being concerned about the waste issue. While each export agreement contains conditions intended to prevent Australian uranium being used for nuclear weapons, there is widespread scepticism about the rigour of these arrangements. More than thirty years ago, Milliken argued that the safeguards had always been eroded if they looked like obstructing a commercial sale²⁰.

After the 1979 Three Mile Island incident, orders for nuclear power stations in the USA dried up. Then the much worse 1986 Chernobyl accident appeared to be a fatal blow to nuclear power in Europe. It looked like a dying industry until climate change became

an issue and ironically, given that nuclear advocates had traditionally been violent opponents of environmentalists, the nuclear power lobby suddenly embraced climate change and sought to position its technology as low-carbon energy²¹. The Howard government tried to defuse criticism of its studied inaction on climate change by commissioning a report on uranium mining, export and nuclear energy. The Switkowski report argued that nuclear energy could play a role in reducing the greenhouse gas contribution of Australia's power industry, albeit at some cost and over an extended time frame²². Other studies have concluded that renewable energy technologies could provide a much quicker transition to low-carbon electricity. Brook and others have argued that a new generation of nuclear reactors could supply power cost-effectively without the problems that have beset the industry while others doubt this optimistic view²³. In similar terms, where Wright and Diesendorf in separate studies have shown how renewable energy systems could supply all or most of our needs²⁴, some critics are not convinced.

In both cases, the values of observers influence their responses to these competing claims. Many scientists are more comfortable with nuclear power than what they see as the unreliable natural flows of sunlight, wind, waves and tidal flows, with learned bodies like the Australian Academy of Technological Sciences and Engineering strongly supporting nuclear energy²⁵. Equally predictably, most environmentalists are uncomfortable with the environmental risks of nuclear power and so lean toward renewables generally, although a sub-set are hostile to wind power because they feel it could threaten some bird species.

Similar comments could be made about genetic modification of food crops. Many of the scientists working in the area believe that plant species can be safely modified to give improved characteristics, such as pest resistance or nutritional benefits. Learned bodies like the Australian Academy of Science support the approach, arguing that it is the key to providing food for a growing population²⁶. Environmentalists worry that there are serious risks involved in tampering with the genetic code, with the prospect that pest resistance could spread to weeds, while some are openly suspicious of the motives of the corporations sponsoring the changes²⁷. Since most of the genetically modified crops that are in production provide benefits to growers or corporations without any discernible advantage for consumers, the suspicion is understandable.

The extreme form of hostility was demonstrated by a recent incident when Greenpeace activists destroyed a Canberra field trial of genetically modified wheat. Most scientists were outraged, arguing that we will only know if genetically modified crops are safe if field trials are conducted. It is not clear whether the activists thought the field trials were themselves a risk or were simply making a pre-emptive strike to ensure that the crops cannot be shown to be safe. Either way, there is a clear division between the scientists and the environmentalists arising from different values. To simplify, scientists working on genetic modification are confident they understand the processes sufficiently well to manage the risks and ensure that there are benefits to the community, whereas many environmentalists are sceptical about those assurances and worry that the benefits have been exaggerated. In both cases, individuals' values are clearly influencing their interpretation of the uncertain science.

Conclusion

As we have expanded our scientific understanding of the natural world and the impacts on it of human activity, that scientific knowledge has been used by environmentalists to campaign for more sensitive approaches. In many of those cases, the science gave a clear message justifying government intervention to curb harmful activities. Those opposed to intervention on ideological grounds have often sought to belittle the science or cast doubt on its findings. In several recent debates 'scientists and environmentalists' have been allied on one side against economic interests resisting government action.

There is, however, no simple link between science and environmentalism. Science has been enlisted in many recent environmental campaigns, but environmentalists are as prone as other humans to see the world through the lenses of their values. In cases such as nuclear power and genetic modification of food crops, scientists and environmentalists interpret the complex and uncertain data in different ways as a consequence of their different values.



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- ³ Australian Academy of Science (2010) *The science of climate change*, AAS Canberra.
- ⁴ Bernadi, C (2011) in The Carbon War Four Corners, www.abc.net.au/4corners/stories/2011/09/15/3318364.htm
- ⁵ Institute of Public Affairs (2011) www.ipa.org.au/

- ⁷ Lowe, I (2011) Bad News Correspondence, Quarterly Essay 44, Black Inc. Melbourne.
- ⁸ Manne, R (2011) Bad News, *Quarterly Essay 43*, Black Inc. Melbourne

¹ Lowe, I (1989) *Living in the Greenhouse*, Scribe Books, Newham Vic.

Lowe, I (2005) *Living in the Hothouse*, Scribe Books, Carlton.

⁶ Oreskes, N and Conway, EM (2010) *Merchants of Doubt*, Bloomsbury Press, New York.

⁹ State of the Environment Advisory Council 1996, State of the Environment Australia 1996, CSIRO Publishing, Collingwood.

¹⁰ Wentworth Group of Concerned Scientists 2004, *Sustainable Diversions in the Murray-Darling Basin*, http://www.wentworthgroup.org/blueprints/sustainable-diversions-in-the-murray-darling-basin

¹¹ Institute of Public Affairs (2011) www.ipa.org.au/

¹² North-West Star (2011) Panel to research coal seam gas impacts, 23 November, http://www.northweststar.com.au/news/local/news/general/panel-to-research-coal-seam-gasimpacts/2372252.aspx

- ¹³ Fandry, CB, Walker, SJ and Andrewartha, JR (1996) *Modelling effluent dispersion in Australian coastal waters*, National Pulp Mill Research Program Technical Paper no. 16, CSIRO Canberra.
- ¹⁴ Queensland Government 1991, *Report of Commission of Inquiry into the Conservation, Management and Use of Fraser Island and the Great Sandy Region*, Brisbane.
- ¹⁵ Doyle, T (2000) The Campaign to Save the Wet Tropics in G McDonald and M Lane (eds) Securing the Wet Tropics. The Federation Press, Sydney: 103-116.
- ¹⁶ Australian Government 2011, Tasmanian Forests Intergovernmental Agreement, http://www.environment.gov.au/land/forests/tasmanian-forests-agreement.html
- ¹⁷ Minchin, N (1995) *Minority Report*, in Australian Senate Community Affairs Reference Committee, *The Tobacco Industry and the Costs of Tobacco-Related Illness*, Australian Government Publishing Service.
- ¹⁸ Lowe, I (1984) The history of the Australian nuclear industry, Australian Studies Centre, University of Queensland, St Lucia.
- ¹⁹ Fox, RW, Kelleher, G and Kerr, C (1976) *Ranger Uranium Environmental Inquiry report*, Australian Government Publishing Service Canberra.
- ²⁰ Harding, R (1983) Nuclear Energy and the Destiny of Mankind Some Criminological Perspectives, Australian and New Zealand J. Criminology 16, 2: 81-92.
- ²¹ Lowe, I (2007) Reaction Time, Quarterly Essay 27, Black Inc. Melbourne.
- ²² Australian Government (2006) *Uranium Mining, Processing and Nuclear Energy Review, Opportunities for Australia?*, Department of Prime Minister and Cabinet, Canberra.
- ²³ Brook, B and Lowe, I (2009) *Why vs Why Nuclear Power*, Pantera Press, Sydney.
- ²⁴ Beyond Zero Emissions (2010) *Zero Carbon Australia*, BZE Melbourne; Elliston, B, Diesendorf, M and MacGill, I (2011) Simulations of Scenarios with 100% Renewable Energy in the Australian National Electricity Market, Proceedings of Solar 2011 Conference, https://mail02.domino.griffith.edu.au/replicas/s20875.nsf/0/0CDCFCD32F8905D5EFD115958 378CC97/\$File/Solar2011-100_rev.pdf?O
- ²⁵ Australian Academy of Technological Sciences and Engineering (2009) Submission on Maximising the Value of Technology in the Energy Sector, ATSE Melbourne, http://www.ret.gov.au/energy/Documents/ewp/pdf/EWP%200011%20DP%20Submission%20
 -%20ATSE.pdf
- ²⁶ Australian Academy of Science (2000) Symposium: Australia's science future, AAS Canberra http://www.science.org.au/events/agm/future/theme6.html
- ²⁷ Australian GeneEthics Network (2011) www.geneethics.org/



Have We Changed Our Cultures of Urban Water? Lesley Head

There were times during the drought when I caught myself trading a couple of extra minutes in the shower against the water tank out the window. There was no material connection – the tank was not connected to the shower – but there was a subconscious exchange of guilt with smugness. So I was not surprised when, after substantial initial savings, the water bill started to creep up again.

After a decade of drought and a couple of wet years, urban Australians are emerging from the strictures of a diet into a maintenance regime. Now as we shower it is often raining out the window, so it is a good time to reflect on whether we have shifted our cultures of urban water into a more sustainable mode of operation. Can we maintain our portion control, or are we headed for a junk food blowout? Is the controversial toilet etiquette 'if it's yellow let it mellow' just an affectation of affluent urbanites who have never had to live with unhygienic sanitary conditions? And even if not, should it be maintained in wetter times? What is the role and responsibility of the household in driving or maintaining change, given an underlying infrastructure developed around what Zoë Sofoulis has dubbed 'Big Water'¹ – the fantasy of endless supply? To what extent can behavioural and technical changes translate into real and sustained water savings, given the infrastructure of supply?²

A body of cultural research on urban water practices allows us to step back and examine the extent to which we have shifted under the power of drought. The drought threw light on and de-routinised many of our water practices, but have they regrouped into more sustainable long-term configurations? The practice-based research that informs this piece challenges the dominant management model built on a cognitive approach to behavioural change. This model is linear in its approach, assuming that if you change attitudes you can change behaviours, and that people have a high degree of choice in these things. The research I review here draws on diverse social science methods, but has in common a focus on everyday practice, or 'inconspicuous consumption'³, indicating a much more complex set of pathways and configurations. Technology, cultural meaning and social practice converge in a variety of ways that are both resistant and amenable to change; that is, the convergences offer insights into both barriers and opportunities for ongoing cultural change.

Research shows that people do not experience their everyday use of water as the use of a measureable amount of a resource. Rather their experience is tied up in 'habitual enjoyment of the *services, technologies* and *experiences* that water makes possible'⁴. That is, people are trying to achieve clean clothes, green gardens, unsmelly bodies, restful surroundings and so on.

In what follows I identify themes from recent research – most of it in the Sydney-Newcastle-Wollongong conurbation – that are useful to reflect on in the current interdrought context. Of course, we do not have to experience drought to experience water shortages in areas where high population growth or particularly intensive uses are putting pressure on supply. We can use the experience of drought, which prompted widespread community discussion, to help us address these broader issues.

Diversity in cultures of water

The first point to emphasise is the great diversity in attitudes, behaviours and practices, both within individuals and between different groups of people. This diversity potentially

takes us in different directions, both towards and away from water saving. In many if not most Australians, desires for water co-exist with a respect for water conservation as an important issue. We love water – for swimming, washing, relaxation – but recognise that we live on a dry continent. Arguably, this apparent contradiction is the basis for our widespread enthusiasms for saving water; we do not have 'electric' or 'petrol' desires in the same way.

A variety of informal water saving practices were documented during the drought years, encapsulated in my research with Pat Muir by the motif of 'the bucket in the shower'⁵, whereby soapy shower water was collected for use on the garden. These practices (not letting taps run, reducing length of showers, informally capturing grey water in kitchen, bathroom and laundry) occurred both inside and outside the home, influenced by intensive media campaigns and increasingly severe restrictions on outdoor water use. Notable in several studies⁶ was the intensive labour people were prepared to invest in saving their gardens. This capture of indoor water for use outside helps explain why, contrary to expectations, per capita water consumption around that time in Sydney showed little difference between separate houses with gardens and apartment or unit dwellers⁷.

On the other hand, cultures of high water consumption were documented in new upmarket housing estates where people constructed leisure-centred garden spaces to enhance social status⁸, and among some water tank owners who used a lot of water for leisure (washing boats, wetsuits), hosing hard surfaces and in the garden⁹.

An important point to note across all these studies is that attitudes do not necessarily map onto practices. Some of the most avid water savers expressed vehemently antigreen attitudes¹⁰, drawing instead on a rhetoric and identity of frugality and being antiwaste. Conversely, water tanks could provide a badge of green identity in highconsumption households without necessarily changing practices¹¹. A number of studies identified the importance of living under regimes of scarcity (for example in a rural or overseas childhood) in forging lifelong practices of frugality¹². These findings remind decision-makers not to get too hung up on attitudes, but rather to focus on practices. As Sofoulis argues, 'practices and values can operate somewhat independently (a feature of adaptiveness as well as hypocrisy!)¹³.

Technology alone will not save us - the water tank story

The technology of 'Big Water' has been subject to considerable critique in the social sciences¹⁴, including when it provides problematic friction against which consumers who want to change their practices must push¹⁵. But the complex interactions between technology, behaviour and cultural meanings are also evident in the 'smaller' technologies which became more widespread during the drought years – water tanks, shower timers and flow restrictors¹⁶. Candice Moy's work on water tanks in the Illawarra provides an instructive example here¹⁷.

After a number of decades of prohibition in urban areas, water tanks were rehabilitated during the drought. They were heavily promoted and subsidised, and enthusiastically adopted. Moy's analysis provides the first published post-installation analysis of retrofitted rainwater tanks and their effects on mains water consumption. She compared the mains water consumption of over 7000 households who installed a tank during the drought (for two years before and two years after installation, to smooth out seasonal differences) with that of total household mains water use under a regime of

water restrictions. Both populations showed about the same amount of reduction – 10.26 per cent for tank households and 10.8 per cent for the wider community.

This was a puzzling finding as the policy view and the natural expectation is that, even when only fitted with outdoor connections, as most are, domestic tanks are a logical way to reduce the consumption of mains water, 28 per cent of which is assumed by Sydney Water to be used outdoors¹⁸. Interviews and ethnographic study with a sub-sample of these households identified two distinct sets of practices, summarised by Moy as 'water savers' and 'water users'. The former cohered around practices of frugality, and included a number of people who had grown up in the country. Water users were vocal about the importance of autonomy and freedom from government restrictions in their reasons for installing a tank, as expressed in the following quotes¹⁹:

I can do what I want to do. I'm not governed by government rules.

I think, I can do that, [be]cause it's my water.

It's just that freedom that if I want to hose the concrete, I'm allowed.

Comparing the practices of tank and non-tank households in survey results by Gordon Waitt and others²⁰, Moy also showed that tank households were not statistically more likely than others to undertake water saving practices (turn off the tap while cleaning teeth, only wash clothes with a full load, avoid the tap running while washing dishes, reduce the length or number of showers, reduce toilet flushes) inside the house. (The first three of the above practices were adopted by a majority of all households in the survey; the latter two were a minority concern.)

The implications of Moy's work are yet to be fully worked through, but it is clear that no technological solution – even a low tech one – provides a straightforward fix. Rainwater tanks do not achieve water savings in and of themselves, but rather become entangled with social practices and bundles of meaning in assemblages that can both increase and decrease water consumption. The challenge is to get all components of those assemblages ratcheting in the same direction rather than rubbing against each other²¹. It is worth remembering also that even the 'no-tech' tool of stringent water restrictions – apparently quite effective in driving behavioural change – requires a technological regime of public education and compliance to hold it in place.

Inside versus outside

Taken together, this body of research shows that we have made significant, albeit neither universal nor irrevocable, shifts in our outdoor water use. The inside of the home remains a frontier to be conquered for water conservation. There are several things going on here. Outdoor water use is relatively public, amenable to surveillance by both government officials and neighbours, and an obvious first step in terms of restrictions. But also implicit in the lack of restrictions inside the house is the idea that water for cooking, washing and cleaning of humans and their stuff is more essential than water for the nonhuman life forms of the garden, notably plants. This assumed hierarchy of needs was contested by some garden lovers who thought that everyone should get a 'ration' to use as they saw fit²².

Maria Kaïka²³ has argued, using the example of water, that the modern home is constructed discursively and materially as a pure space, distant from nature. Hence the pipes and the infrastructure of supply and of waste disposal are hidden from the householder, at least until something goes wrong. The example of people's interaction with their gardens disrupts this view in several ways. The strong desire to maintain

gardens, and the associated labour of water collection, recycling and redistribution, is indicative of a lifeworld consciousness²⁴ extending well beyond the human and particularly towards favoured plants. Those plants exerted agency in the exchange by making visible to humans their desperate need for water. They wilted, dried up and died. Muir and I argued that 'it is in the relationship between house and garden that people see, understand and participate in the network of water storage and distribution. Their active engagement with these processes enhances their capacity to manage and reduce consumption²⁵. Further, and in contrast to Kaïka, they were prepared to

tolerate 'bad' or 'dirty' nature, within certain limits. The bucket in the shower catches and holds (soapy) bodily wastes rather than insisting they be immediately expunged from the house. Used washing machine water, also containing bodily wastes, goes on to sites of food production. Basins containing dirt washed from vegetables and hands are allowed to sit beside the sink until someone is free to empty them on the garden²⁶.

Moy, however, unearthed considerable resistance to taking dirt in the other direction, i.e. bringing tank water inside the home. A number of her interviewees thought tank water was 'dirty', or at least of lesser quality than mains water, and unsuitable for use inside the house²⁷. She argues 'that 'dirty water' is only tolerated if its reuse is outdoors. Much greater resistance is met at the prospect of bringing water from outside into the home'²⁸. This partly explained why only five per cent of tank households had indoor connections, to toilets, washing machines or elsewhere.

Inside the house we encounter norms of cleanliness, for both human bodies and their clothes, that are embedding increasing levels of water consumption in the bathroom and laundry²⁹. One example is provided by teenagers who may have four changes of clothing a day: for exercise, university, part-time job, and going out at night³⁰. The particular dirt of each context, for example the sweat of sport, has to be removed by washing from both bodies and clothes. And guess who by? The mother in that research case reported doing four loads of washing a day. There is no problem waiting for a full load in households with such high throughput of washing. More than one shower per day is not uncommon among young adults with active and complex lives³¹.

We can cope with scarcity and simplicity – can we cope with variability and complexity?

If we are going to depend on the dry continent rhetoric to mobilise the populace during droughts, we need to acknowledge the wet continent when it is wet. There are strengths and weaknesses in promoting too close a correlation here. People see the connection to water, and respond to it, but they do not so easily notice the environmental costs of the underlying infrastructure, for example the electricity needed to pump it around, which remain high during wet periods. Water supply is not just about water. Yet if adaptive management means responding flexibly to scarcity, it surely also means savouring abundance when it occurs, as long as that does not lock in interactions between behaviour and technology that are difficult to undo later.

People who have grown up under regimes of water scarcity, for example overseas, or in rural areas, and older people with a well-entrenched ethic of frugality and not wasting, have considerable adaptive capacity when it comes to water. This calls into question the view that the more socially vulnerable have the least resilience and capacity to change. Indeed generations who have grown up with water abundance and

social norms of ever-increasing cleanliness, are likely to find it much harder to change. The complexity identified in social science research is often considered a problem by decision-makers who want a simple answer to the question, 'what do I do on Monday?'³² Yet that complexity and diversity is also a resource; it helps imagine alternatives, and identifies different adaptive capacities than might otherwise have been considered.



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- ¹ Sofoulis, Z (2005) Big Water, Everyday Water: A Sociotechnical Perspective *Continuum* 19: 445-463.
- ² Lawrence, K and McManus, P (2008) Towards Household Sustainability in Sydney? Impacts of Two Sustainable Lifestyle Workshop Programs on Water Consumption in Existing Homes. *Geographical Research* 46: 314-332.
- ³ Allon, F and Sofoulis, Z (2006) Everyday Water: cultures in transition, *Australian Geographer* 37: 45-55.
- ⁴ *Ibid*: 47.
- ⁵ Head, L and Muir, P (2007a) Changing cultures of water in eastern Australian backyard gardens. Social and Cultural Geography 8: 889-906; Head, L and Muir, P (2007b) Backyard. Nature and Culture in Suburban Australia. Wollongong: University of Wollongong Press.
- ⁶ Sofoulis (2005) *op cit*; Allon and Sofoulis (2006) *op cit*; Head and Muir (2007a) and (2007b) *op cit*.
- ⁷ Troy, P, Holloway, D and Randolph, B (2005) Water Use and the Built Environment: Patterns of Water Consumption in Sydney. City Futures Research Centre Research Paper: 1. University of New South Wales.
- ⁸ Askew, LE and McGuirk, PM (2004) Watering the suburbs: distinction, conformity and the suburban garden. *Australian Geographer* 35: 17-37. Note however that the fieldwork for this project was undertaken at the beginning of the drought years (2001-02), so it would be interesting to examine consumption figures for the following decade.
- ⁹ Moy, C (in press) Rainwater Tank Households: Water Savers or Water Users? *Geographical Research* doi: 10.1111/j.1745-5871.2011.00720.x
- ¹⁰ Sofoulis (2005) *op cit*: 447.
- ¹¹ Waitt, G, Caputi, P, Gibson, C, Farbotko, C, Head, L, Gill, N and Stanes, E (in press) Sustainable Household Capability: Which households are doing the work of environmental sustainability? *Australian Geographer*; See also Moy (in press) *op cit*.
- ¹² Allon and Sofoulis (2006) *op cit*; Head and Muir (2007a) and (2007b) *op cit*; Moy (in press) *op cit*.
- ¹³ Sofoulis (2005) *op cit*: 451
- ¹⁴ See for example Sofoulis (2005) op cit, and various chapters in P Troy (ed) (2008) Troubled Waters. Confronting the Water Crisis in Australia's Cities. ANU E-Press.

- ¹⁵ Lawrence and McManus (2008) op cit.
- ¹⁶ Hobson, K (2006) Bins, bulbs, and shower timers: on the 'techno-ethics' of sustainable living,
 Ethics, Place and Environment 9: 317-336.
- 17 Moy (in press) *op cit*.
- ¹⁸ It is possible that these assumptions are wrong. They seem to be based on projections of theoretical behaviour rather than actual consumption patterns.
- ¹⁹ Moy (in press) op cit: 8. Autonomy was also identified as an important issue in Gardiner, A (2010) Do rainwater tanks herald a cultural change in household water use? Australasian Journal of Environmental Management 17: 100–111.
- ²⁰ Waitt et al. (in press) *op cit.*
- ²¹ Shove, E (2003) Comfort, cleanliness and convenience, Berg, Oxford.
- ²² The ration-type campaigns in Melbourne and Brisbane, which focused on per capita consumption, were among the most effective water conservation strategies of the drought.
- Kaïka, M (2005) City of Flows. Modernity, Nature and the City. London, Routledge.
- ²⁴ Allon and Sofoulis (2006) *op cit.*
- ²⁵ Head and Muir (2007a) *op cit*: 902.
- ²⁶ *Ibid*: 901.
- ²⁷ See also Po, M, Kaercher, J and Nancarrow, B (2004) *Literature Review of Factors Influencing Public Perceptions of Water Reuse*. Australian Water Conservation and Reuse Program, CSIRO Land and Water, Perth.
- ²⁸ Moy (in press) *op cit:* 11.
- ²⁹ Shove 2003, Troy et al. (2005) *op cit*; Allon and Sofoulis (2006) *op cit*; Davison, G (2008) Down the gurgler: historical influences on Australian domestic water consumption. In Troy, P (ed) *Troubled Waters: Confronting the Water Crisis in Australia's Cities*. ANU E Press, Canberra. Australia: 37–66.
- ³⁰ Sofoulis (2005) *op cit.*
- ³¹ See also Shove (2003) *op cit.*
- ³² Sofoulis, Z (2010) Water managers' views on the social dimensions of urban water. Report from Cross-Connections: Linking Urban Water Managers with Humanities, Arts and Social Sciences Researchers. Penrith: Centre for Cultural Research, University of Western Sydney.



Academy News

International Program

The International Program continues to strengthen institutional links between Australia and the international social science community, such as through the Academy's ongoing leadership of the Asian Association of Social Science Research Councils. AASSREC recently held its biennial conference in October in Manado, Indonesia with ASSA represented by Executive Director Dr John Beaton. ASSA's increasingly prominent place within AASSREC was warmly received by other member nations.

The Academy also continues to promote its international activities through its longstanding joint-action and international exchange program. In 2012, these exchange programs will be with academic partners in China, France and the Netherlands. Applications for travel in 2012 closed at the end of October, with applicants to be notified by the end of the year. Through its joint-action agreements in particular, the Academy pays close attention to potential collaborative achievements of early career researchers. Given the size of these funding grants, the joint-action framework is especially well placed to fill a niche that might exist for targeted investigations in two countries. Topics addressed are invariably of high importance to social science research in Australia and the partner country, and a successful joint-action grant often forms the basis of a subsequent longer-term research grant. As all of the international exchange activities of ASSA are vitally dependent on the cooperation and goodwill of researchers and social science networks overseas, the International Committee warmly thanks all those who have taken the time to apply this year and who have supported this application and research process, including partnering institutions.

For travel in 2012, there have been 20 joint applications received for the China program, six for the French program and a further six for the exchange program with the Netherlands. The partner institutes for these funding grants are the Chinese Academy of the Social Sciences, the French Embassy in Australia and the Royal Netherlands Academy of Arts and Sciences (KNAW), respectively. Subject to ongoing partnerships and potential future agreements, the call for applications will next open in the third quarter of 2012, probably in August. More information is available on the International Programs page of the Academy's website.

Public Forums Program

2011 events

Fay Gale Lecture

On 24 October 2011 the University of Western Australia co-hosted the second presentation of the Academy's 2011 Fay Gale lecture, by Associate Professor Denise Doiron of the University of New South Wales on the topic, 'Trends and recent developments in income inequality in Australia'. Approximately 130 people attended. Associate Professor Doiron presented her lecture the third and final time at the University of Tasmania on 23 November 2011, where the Tasmanian branch of the Economic Society of Australia and the University of Tasmania jointly hosted the event with the Academy. The lecture formed the basis of an opinion item by Adele Horin in

the *Sydney Morning Herald* on Saturday November 19. It will be published in *Dialogue* in early 2012.

Annual events

The 2011 annual events were all well attended. The Symposium 'Food Regimes and Food Security' was held on Tuesday 8 November and attracted a large audience (115 registrants) including a good number of non-Fellows. Non-Fellows included students and academics working on issues related to food security, representatives of NGOs with an interest in the field, and representatives from government agencies such as AUSAID, ABARES and the Department of Agriculture, Fisheries and Forestry. Symposium convenors were Mark Howden (CSIRO), Geoff Lawrence (FASSA), Elspeth Probyn (FAHA, FASSA) and Tim Rowse (FAHA, FASSA). The Department of Agriculture, Fisheries and Forestry contributed sponsorship.

For the first time, the annual Cunningham Lecture was on a theme closely related to the Symposium. Professor Tim Lang (City University London), an international expert on food policy, presented the Cunningham Lecture on the theme 'Living with an unsustainable food system: can food democracy resolve the dilemmas?' A videorecording of the lecture and a copy of the slides used will be added to the Academy's website. A copy of the lecture will be published as Academy Proceedings in 2012.

To mark the Academy's 40th year, Professor Meredith Edwards gave a short address on the Academy's history at the Fellows' Dinner on the evening of 8 November 2011.

The format of the Fellows' Colloquium, on 7 November 2011, was another 'first' for the Academy's annual events. On the evening of 7 November 2011, 19 of the 26 Fellowselect for 2011 each provided a short presentation on their research. The presentations were very well received and provided an excellent means of introducing Fellows-elect to other Academy Fellows.

2012 activities

Paul Bourke Lecture

The recipient of the 2011 Paul Bourke Award for Early Career Research, Dr Linda Graham, ARC Discovery Postdoctoral Research Fellow in the Centre for Research on Social Inclusion and the School of Education at Macquarie University, will be invited to present the 2012 Paul Bourke Lecture at her home university early in 2012. Dr Graham's work focuses on the role education policy plays in the increased identification of special educational needs and how these trends differ over time and across space. Her research findings have challenged claims that the increase in identified needs simply reflects increase in the incidence of disability. Her work has highlighted how these trends in the classification and diagnosis of learning disabilities may work against students by reducing the funding pool and increasing stigma.

Keith Hancock Lecture

Nominations for the 2012 Keith Hancock lecturer will be called for shortly.

Annual events

The 2012 Symposium will be convened by Vera Mackie and Carol Johnson on the theme 'Globalising Social Sciences'. The annual events will take place from 19-21 November 2012, with the Symposium to be held on 20 November 2012.

State-based event

Book Launch: Creativity and Innovation in Business and Beyond

ASSA ACAPE **C**reativity and Innovation in Business and Beyond: Social Science Perspectives and Policy Implications, edited by ASSA Fellows Leon Mann and Janet Chan and published by Routledge, 2011, was launched at a large gathering of ASSA Fellows and guests at the University of Melbourne on March 30, 2011. ASSA president Professor Barry McGaw chaired the event and executive director Dr John Beaton attended.

Professor Glyn Davis, University of Melbourne Vice Chancellor and ASSA Fellow, launched the book. He reflected that universities:

offer a unique vantage point for exploring innovation. Through their research they are directly and intimately involved in innovative processes. They are also able to deliver an objective and dispassionate view of all innovation processes, as we see in this book, where social science academics place social, economic, and technological breakthroughs into a much wider social and historic picture. With government and business, universities are a key part of what many contributors call the national innovation system. Whether we call innovation a system, a process or even a wonder of the universe, this book exemplifies the great contribution universities and the social sciences can make to understanding its dynamics and its importance.

The editors, Leon Mann and Janet Chan, responded on behalf of the 11 contributors, who included ASSA Fellows Jane Marceau, Simon Ville, Joshua Gans, Mark Dodgson and John Sweller. Professor Mann observed that the book shows how the broad range of social science disciplines, from the more macro-oriented such as history, economics, law and geography to the more individual-focused such as psychology and education, together provide a deeper understanding of the wellsprings of creativity and innovation. The authors also seek to debunk many of the myths and misconceptions about creativity and innovation. Another of the aims is to explore the links between creativity and innovation, which are often neglected in the literature and in practice.

The collaborative work shaping the edited volume was supported by an ARC Learned Academies Special Projects grant to ASSA (Leon Mann and Janet Chan were chief investigators). The book launch, co-hosted by ASSA and the University of Melbourne, was supported by a grant from the Academy.



Workshops Program

2012-13 workshops program

The call for proposals for the 2012-13 workshops program closed on 21 October 2011. There were eighteen proposals (the same number as received in 2010) and the Workshop Committee met to consider them on 23 November 2011.

Recent workshops

'Cultures of Humanitarianism: Perspectives from the Asia-Pacific Region'. Convened by Jacinta O'Hagan (ANU), William Maley (FASSA, ANU), Miwa Hirono (Nottingham, UK), 8-9 August 2011.

'Family, Work and Wellbeing over the Life Course'. Convened by Belinda Hewitt (Queensland), Lyn Craig UNSW), Janeen Baxter (FASSA, Queensland), 20-21 October 2011.

'Religion and Social Policy in Australia and Neighbouring Countries'. Convened by Peter Saunders (FASSA, UNSW), Minako Sakai (ADFA at UNSW), 24-25 November 2011.

'Australian Women's Non-Government Organisations and Government: An Evolving Relationship?' Convened by Marian Sawer (FASSA, ANU); Patricia Grimshaw (FASSA, Melbourne); Judith Smart (Melbourne), 29-30 November 2011.

Forthcoming workshops

'The Paradox of Melancholia: Paralysis and Agency'. Convened by Anthony Elliott (FASSA, Flinders), Jennifer Rutherford (Flinders), Brian Castro (Adelaide), June 2012.

Reports from workshops conducted under the workshops program, including policy recommendations, are published in *Dialogue*.

This issue of *Dialogue* includes reports on the following workshops:

'Whither Australia's Children's courts? Contemporary Challenges and Future Prospects'. Convened by Allan Borowski (FASSA, La Trobe) and Rosemary Sheehan (Monash), February 2011.

'Work and Employment Relations – An Era of Change'. Convened by Marian Baird (Sydney), Keith Hancock (FASSA, Flinders) and Joe Isaac (FASSA, Melbourne), 31 March – 1 April 2011.

'Australian and International Perspectives on the Cosmopolitan Civil Sphere' a workshop funded under the ISL program. Convened by Ian Woodward (Griffith), Robert Holton (FASSA, Trinity College Dublin and Flinders) and Zlatko Skrbis (Queensland), 28-29 April 2011.

'Australian State Politics in Transition: The case of New South Wales'. Convened by Rodney Smith (Sydney) and Murray Goot (FASSA, Macquarie), 7-8 July 2011.

Cultures of Humanitarianism: Perspectives from the Asia-Pacific Region'. Convened by Jacinta O'Hagan (ANU), William Maley (FASSA, ANU), Miwa Hirono (Nottingham, UK), 8-9 August 2011.

The 2010 workshop in the Federal Election series of workshops is supported by the Academy under a memorandum of understanding with The Australian Federal Election Series Research Editorial Group.

Reports from Workshops

Cultures of Humanitarianism: Perspectives from the Asia-Pacific *Miwa Hirono, Jacinta O'Hagan and Pichamon Yeophantong*

As complex humanitarian emergencies and natural disasters occur with greater severity and frequency in various parts of the rapidly globalising world, questions about humanitarianism – particularly how it should be conceived and practised – have become more relevant. In spite of conventional perspectives of humanitarianism as constituting a 'universal' value that transcends both time and context, there are, in fact, diverse interpretations of this complex concept. Its meanings are far from uncontested and uncontroversial. The socio-cultural context of any given situation in which humanitarian action is taking place often works to significantly complicate matters.

This two-day workshop sought to address these issues. It was held on 10-11 August 2011 and was hosted by Dr Jacinta O'Hagan and Dr Miwa Hirono at the Department of International Relations in the School of International, Political and Strategic Studies, Australian National University. It included a range of speakers and participants from academic and practitioner fields. The academics ranged from senior scholars, such as ASSA Fellows Professor William Maley and Professor Tessa Morris Suzuki, to emerging scholars such as Sarah Teitt, Hiroko Inoue, Pichamon Yeophantong and Paul Zeccola. International speakers included Professor Yukie Osa from Japan and Dr Sigit Riyanto from Indonesia. The workshop was further enriched through the participation of speakers and participants from the practitioner community, including Jeremy England of the International Committee of the Red Cross and Tanvir Uddin from Muslim Aid Australia. Comments do not necessarily represent the views of the participants' respective institutions.

The objective was to interrogate to what extent different cultures share similar understandings of humanitarianism; and how diverse and varied understandings of humanitarianism inform the way distinct societies and cultures respond to humanitarian imperatives and challenges. We sought to achieve this through comparing and contrasting how actors' understandings of the humanitarian imperatives are expressed in responses to three key questions: Who acts in response to humanitarian crises? Why do they act? And how do they act? In discussions on these questions, we considered ethical, practical and policy implications for how external agencies should interact with agencies from other cultures and traditions. The three major themes emerged from the workshop discussions, which underlie ongoing debates over the 'use and abuse' of humanitarianism in national and global policy agendas.

Major themes and findings

Universalism versus particularism

A key tension in conceptualisations of humanitarianism is between universalism and particularlism. Workshop discussions affirmed that culture and context do matter, and that there can be multiple interpretations of humanitarianism. "Humanitarianism is not static, nor monolithic. It has evolved and it is influenced by a variety of historical and political factors" (Pichamon). Most participants agreed that "understandings of what 'humanitarian' means can lead to very different actions and patterns of behaviour". Cultures of advocacy also lie at the very root of humanitarian efforts. Practices of

humanitarian advocacy in Asia tend to differ greatly from their Western counterparts, being much more low-key and, in certain cases, more dependent on the good graces of the state.

However, the conventional understanding that cultural differences are irreconcilable is not always correct for various reasons. First, cultures transform over time. In Japanese and Chinese society, a communitarian ethic of obligation – which sees one's ethical obligations as expanding in concentric circles – has long been the predominant mode of thinking on humanitarianism. China continues to harbour this attitude in its foreign policy-making, where its responsibility is conceived to be first and foremost to its own people. This has limited the level of Chinese participation in international humanitarian assistance. However, its growing international confidence and increase in material power have led to a gradual shift in Chinese attitudes toward alleviating the suffering of those who live afar. This is clearly indicated in the increase in Chinese peacekeeping efforts and the provision of disaster relief. Japan is also experiencing transformation. After the first Gulf War in 1991, popular pressure persuaded the government to become more active in the delivery of humanitarian goods in complex emergencies.

Second, cultural differences can be reconcilable because there are common grounds between different cultures. For example, in the case of Indonesia, the philosophical basis for understandings of humanitarianism is embodied in the Indonesian tradition of the Pancasila (five principles). One of the principles is 'Kemanusiaan yang Adil dan Beradab', which means that all human beings should be treated with due regard given their dignity as God's creatures, whilst noting that the sentiment of 'humanity' transcends religions and wider ethnic groups within the society. In addition, Islamic principles of 'giving' differ from Western notions of 'charity', but ultimately they rest on similar humanitarian grounds. The origins of this idea can be traced back to the Islamic faith and Divine Law, which have subsequently come to inform the operation of Muslim faith-based organisations. It was noted that although these organisations tend to be heterogeneous in operational terms, they are 'homogeneous in inspiration'.

Political imperatives versus ethical obligations

Another tension that surfaced in discussions was whether we should understand humanitarianism as deriving from ethical obligation or political imperatives. It was suggested that it is necessary to first understand the politics of any crisis, for only then can we begin to understand the power-based human relations that underlie the politics of humanitarianism. The humanitarian agenda and activities are primarily state-led in Japan, China and Indonesia, and there are clear political interests in engaging in international humanitarian assistance. This dilemma was illustrated through the challenge faced by the Association for Aid and Relief (AAR) in attempting to find a balance between state prerogatives and (non-state) humanitarian concerns. For instance, officially, Japan cannot provide assistance to North Korea – a stance which, by extension, applies to non-state humanitarian actors in Japan. However, as an independent humanitarian organisation, AAR has an imperative to provide assistance to those in need regardless of the political regime.

The tension between political and ethical motives is also evident when we compare how state actors respond to complex emergencies and natural disasters. Responses to disaster events tend to be less politicised and, as a consequence, governments prove to be more willing to extend assistance. In the Chinese discourse, providing disaster relief and humanitarian assistance is a less-politicised activity than engaging in humanitarian intervention. Assisting a country in the aftermath of a natural disaster does not mean that China interferes in internal politics, which then encourages China to take a more active approach to disaster relief than to humanitarian intervention. Similarly, in the wake of the devastation following the tsunami in Aceh, the Indonesian government was more willing to accept international disaster assistance than humanitarian intervention in the Aceh conflict, viewing the matter in relatively depoliticised terms.

However, it is not entirely feasible to distinguish so-called ethical from political imperatives in humanitarianism. Often, the issue of whether a humanitarian act is ethical or political depends on interpretation. It is important to be aware that both elements co-exist, and are necessary prerequisites for the deployment of effective humanitarian activities.

Facilitating communication between technical/policy cultures and social/indigenous cultures

Closely related to the above themes is the challenge of negotiating humanitarian space. Whilst access to this humanitarian space constitutes a defining advantage for stakeholders, it is a space that needs to be renegotiated "day-by-day through trust and cooperation between all parties in the conflict. You earn it through years of hard work, but you can lose it in an afternoon." A key issue here is communication. Effective communication is critical both for effective coordination and building trust.

Practitioners, policy-makers and academics have their own unique language, standards of expectations and ways of thinking. More often than not, however, there is a tendency for these distinct cultural characteristics to get easily lost in translation among these actors. More importantly, technical and policy language is rarely comprehensible to local populations.

All stakeholders should make efforts to keep this language neutral and acultural, so that there is a common basis of understanding. However, such efforts have resulted in unintended consequences in culturally and politically complex situations. This problem was highlighted in the case of East Timor, where the language used had a significant impact on perceptions of a hierarchical relationship between humanitarian actors and local populations. It is essential to acknowledge the significance of local agencies and networks, and integrate them into humanitarian operations. This requires ensuring that effective communication is established between external and local actors, which builds trust and cooperative relationships. Such acknowledgment runs counter to tendencies to label people as 'victims' and passive recipients of aid, instead of active agents that form an integral part of humanitarian processes.

The way forward: challenges and opportunities

How do we move beyond the mere recognition of cultural specificity and difference, and address humanitarian policies that embrace difference and diversity? It is essential to develop the capacity to balance culturally diverse conceptions of humanitarianism with the imperative to create and disseminate a common humanitarian language that all can refer to, irrespective of their more particular differences. But only by recognising the contested nature of such understandings and the existence of alternative conceptions can the barriers that currently inhibit effective cross-cultural communication be gradually taken down.

To take down the barriers among different cultures, it is crucial for humanitarian agents to be reflexive. Actors need to be aware of their own cultural subjectivities and be clear

about their motives. At the same time, self-reflection must be balanced by the willingness and capacity to listen to the perspectives and priorities of others. This task is arguably one of the most challenging, as it necessitates humanitarian workers looking beyond their understandings of humanitarianism, while also being open to alternative perspectives.

One of the key observations made in the workshop was that trust is the most important humanitarian commodity. Those affected by crises and humanitarian actors need to build and maintain trust by constantly keeping channels of communication open. This requires training and development in social and cross-cultural communication, as well as in the technical skills required for humanitarian emergency responses, in order to strengthen capacities to build relationships and networks, as well as to gain access without causing harm.

The workshop also highlighted the need to enhance engagement between state (including military), non-state and transnational humanitarian actors, whilst recognising that the relationship between these actors varies across societies. The specific areas of expertise of these actors – whether technically, culturally or policy oriented – are complementary, and as such, partnerships between them would not only help contribute to the construction of a more inclusive humanitarian space but would also aid in facilitating humanitarian efforts in the field.

Whilst it is important to continue to investigate approaches to humanitarianism in the Asia-Pacific from a broad and holistic perspective, workshop participants also noted that there is the need for more focused research on specific issues and case studies, taking a bottom-up approach. Such focused research would provide rich empirical insights into continuity and variation in conceptions and practice of humanitarianism in the region, which could provide a valuable contribution to training and the design and implementation of assistance policies.



Purposes Beyond Ourselves: Power and Principle in Foreign Policy *Tim Dunne, Matt McDonald and Robyn Eckersley*

Contemporary debates about foreign policy are replete with questions about what constitutes appropriate ethical behaviour for states, particularly developed, liberal democratic states. This applies both to public debate about state action and to academic engagement with diplomacy and international politics more broadly. This 'ethical turn' reflects the institutionalisation of an international society in world politics, as well as the development of a range of pressing transnational problems (from climate change to refugees) that compel cooperation and seem to require states to be other-regarding in their foreign policies. What this commitment might mean in practices of statecraft, however, remains far from settled.

With the theory-practice nexus as a backdrop, a workshop on 'Purposes Beyond Ourselves: Power and Principle in Foreign Policy' was held at the University of Queensland (UQ) on July 13-14 2011. It focused on (liberal) internationalism as a foreign policy orientation characteristic of the 'good state' in world affairs. The workshop aimed at addressing the questions of: the composition of a good state, the desirability of internationalism as a foreign policy agenda and practice, the forms of action that a good state might engage in, and the dilemmas of internationalism (linked in particular to the vexed question of military intervention). While located principally in the discipline of political science and more specifically its sub-field of international relations, the workshop also drew on expertise from colleagues in history, philosophy and anthropology.

The workshop was structured around sessions featuring the presentation of two papers, comments on these papers by a nominated discussant, and open discussion featuring all participants. All paper-givers provided draft papers, and these were circulated to all participants in advance in electronic and hard copy form.

The role of the state

The first session served as a frame, focused on the good-state debate in international relations in the context of changing conceptions about the role of states in global politics over time. Participants were asked to address debates about the possibilities for states behaving as ethical actors while noting the dangers associated with internationalism as a normative goal for states in the international system. Peter Lawler (University of Manchester) provided the first paper, in which he discussed the development of debates about good states and examined contemporary forms of internationalism in foreign policy. The paper endorsed the notion and importance of the good state, and made a case for a form of internationalism tempered by recognition of the importance of national community, the limits of universality and the dangers of endorsing a muscular internationalism that would demand the spread of liberal democracy or market capitalism throughout the globe.

Anthony Burke (University of New South Wales) gave the second paper in this session, and focused on the limits of thinking of the 'autonomous but generous state'. Specifically, he noted the dangers of reifying states as the appropriate moral referent object in international politics through the language of the good state. Indeed Burke suggested that our ontological claims in international relations thought needed to shift from states to humanity, with states acting as possible vehicles for realising legitimate common human aspirations. In his role as discussant, Ian Hunter (UQ) noted that

many axes of contemporary engagement with the dilemmas and possibilities of internationalism and morality in global politics more broadly had their origins in early modern political thought. In particular, debates in these contexts had precisely engaged with the vexed question of how it might be possible to map a moral universe on to the emerging state system with the apparent limits imposed by borders and the developing imperative of sovereignty. Hunter also raised the question of who constituted a plausible agent for realising common goods, and the possible role of policy-makers within this schema.

Distribution of world power and the challenges for internationalism

The second session addressed the dynamics and distribution of power in the contemporary international system and its implications for internationalism. Andrew Phillips (UQ) examined the challenges for internationalism posed by an increasingly multi-polar world order. In particular, he suggested that competing approaches to terrorism in a post-9/11 world illustrated the difficulties of achieving global consensus on the composition of an appropriately internationalist foreign policy agenda and associated practices. He highlighted the distinction in this case between the 'wars on terror' undertaken by liberal states and those prosecuted by authoritarian states after 9/11, linking this to competing visions of international society.

The second paper, presented by Ian Clark (Aberystwyth University) and Christian Reus-Smit (European University Institute) engaged with the guestion of 'special responsibilities' in world politics. Here, the authors argued that special responsibilities are those held by a minority of members within an international society: states or institutions socially recognised as having the capacity and obligation to provide leadership in given areas. Using the example of the UN Security Council, they suggested that the concept of special responsibilities draws our attention to the ways in which some actors come to be positioned as having more significant obligations towards other-regarding behaviour in their foreign policy, suggesting in the process the need to draw considerations of power into the way we conceive of internationalism. In his comments as discussant. Richard Devetak (UQ) probed the historic relationship between power and law in international politics. Ever since the mid-18th century. international lawyers - and diplomatic practice - have recognised the special rights and duties of great powers. The challenge today, he argued, is to ground such exceptional powers in a global order that values universal norms such as democracy and procedural equality.

Internationalism and domestic contexts

The third session explored the relationship between internationalism and domestic politics, interrogating the relationship between an internationalist foreign policy and the domestic contexts in which it might be articulated, institutionalised and pursued. Matt McDonald (UQ) suggested the need to explore the domestic conditions in which policy makers are enabled or constrained in their pursuit of an internationalist foreign policy agenda. Employing Pierre Bourdieu's theory of practice, McDonald noted the need to come to terms with the impediments to progressive policy practices (linked to global dynamics, distribution of domestic capital and extant discourses of identity, for example) while recognising the possibility for actors to accrue and wield symbolic power to enable such approaches to foreign policy to develop and become resonant. Richard Shapcott (UQ) delivered the second paper in this session, and made the case for the institutionalisation of cosmopolitan moral imperatives in state constitutions.

Shapcott suggested the need for a return to the focus on republican states that characterised Kant's 'Perpetual Peace', noting the ways in which theorists needed to recognise the power of existing forms of belonging to the nation state even while attempting to incorporate cosmopolitan moral principles into the constitutions of states themselves. He suggested here that progress in terms of the realisation of cosmopolitan goods might be achieved through institutionalising commitments to global harm reduction within state constitutions. In commenting on the papers, Ghassan Hage (University of Melbourne) touched on the national-global divide and noted the inherent challenges of mediating between the particular and the universal in conceiving of internationalism, suggesting that most individuals sought some degree of recognition as members of both spheres. He also suggested the importance of conceiving of debates over foreign policy as sites of contestation between actors with varying kinds and quantities of capital or resources at their disposal.

Internationalism and global political practice

The fourth session engaged with the question of internationalism in contemporary global political practice. Participants here examined the issues of global environmental politics and humanitarian intervention as key sites of internationalism in practice, in the process examining the contexts in which such principles are likely to be articulated and institutionalised. Katie Linnane (UQ) discussed Australia's commitment to global action on whaling as a dimension of an internationalist foreign policy. She suggested here that the discourse associated with Australia's approach to whaling could be understood both as an attempt to project a particular brand of internationalism to a domestic and international audience, and as a form of foreign policy that served to define or constitute Australian national identity.

In the second paper, Tim Dunne (UQ) explored the norm of the 'responsibility to protect', linking this norm to the vexed issue of humanitarian intervention. Here, Dunne explored the moral and philosophical basis of intervention, defined in terms of the universality of reason, a commitment to common humanity, a commitment to good citizenship and a dual commitment to individual and collective responsibility. He also examined the ways in which this form of internationalist praxis had been misrepresented in critical accounts of intervention, accounts which had the unfortunate potential effect of undermining the normative basis of international society and encouraging inaction in the face of suffering outsiders. In her role as discussant, Marianne Hanson (UQ) raised a number of points that connected the two papers. First, why do advocates of an ethical foreign policy prioritise one issue area over another? In relation to Linnane's paper, for example, one dilemma for animal rights activists is why single out whales for protection and not other threatened species? In relation to Dunne's paper, Hanson challenged the distinction between 'defencist' and 'crusading' forms of intervention.

Summing up

The final session oriented around open discussion and focused on two related concerns. The first was the core themes and dilemmas that animated the workshop as a whole, while the second was the more pragmatic question of issues to be addressed in advance of the publication of the edited project (a special issue of the journal *International Politics*). This discussion was led by 'critical friends' of the project, Colin Wight (University of Sydney), Ian Hall (Australian National University) and Jason Sharman (Griffith University). In their comments and subsequent open discussion, a

range of issues were seen as uniting the focus of the papers, including a conception of ethics and foreign policy as not wholly separate or separable; a conception of internationalism as a socially constructed practice that will find different degrees of support and manifest in different ways in different contexts; recognition of internationalism itself as a site of struggle and contestation between actors at the national and international level; and a belief in the need to explore the possibility for states acting for 'purposes beyond themselves' even while recognising the need for reflexivity about the liberal internationalist project and endorsing states as moral actors.

The workshop therefore illuminated some of the key dilemmas and tensions associated with exploring ethical foreign policy generally, and internationalism specifically as a form of liberal commitment to 'purposes beyond ourselves'. It also, however, reaffirmed the necessity of considering states as agents for the global common good, and outlined the contexts in which such commitments were most likely politically, and most necessary pragmatically. Paper-givers committed themselves to the further development of papers on the basis of feedback received for completion by mid-2012, and publication in a special issue of the journal *International Politics* in late 2012/early 2013. The title of the special issue will be 'The Politics of Liberal Internationalism: Reaching Purposes Beyond Ourselves'.



Work and Employment Relations – an Era of Change *Marian Baird, Keith Hancock and Joe Isaac*

This workshop marked the retirement of Professor Russell Lansbury, ASSA Fellow and Professor of Industrial Relations at the University of Sydney. Early career researchers, senior academics from a number of Australian universities and distinguished scholars from the UK, the USA and Austria met at the University of Sydney in late March 2011 to discuss theoretical and policy implications of the changing regulatory, economic and social context of work. The workshop was generously funded by ASSA with additional funds from the University of Sydney Business School. This allowed the 25 attendees to enjoy two full days of paper presentations and commentaries. Justice Guidice, President of Fair Work Australia, was the guest speaker at the workshop dinner.

Employment regulation

The theme of employment regulation pervaded much of the discussion, especially as it related to legislative changes introduced in Australia by the Fair Work Act (2009). One set of changes has been the establishment of a stronger safety net of conditions of employment. Ron McCallum's (University of Sydney) paper on the National Employment Standards canvassed the background to these standards and demonstrated that the power over minimum labour standards is now very much with the Federal parliament, rather than the federal industrial tribunal. Mark Bray (University of Newcastle) discussed the other part of the safety net, minimum standards enshrined in modern awards. He argued that the modern award-making process is very complex, with over 1500 old awards replaced by 122 new ones.

To Tom Kochan (Massachusetts Institute of Technology), Australia is a beacon of positive change because of the minimum standards now in place. These are far more than employees of the US could anticipate without political will and support for serious change from unions and from educators and professional associations. Willy Brown (Cambridge University) noted that it is increasingly difficult to uphold labour standards through conventional collective bargaining because of the increasing intensity of competition in a global economy and the declining influence of collective bargaining outside public employment. Accordingly, legally prescribed minimum wages have reemerged as an issue across much of the industrialised world. Drawing on the UK experience, Brown identified the factors that make minimum wages more effective and politically acceptable: independence from government, having the support of both employers and trade unions and being sensitive to economic pressures.

Separate presentations by Rae Cooper (University of Sydney), Alison Barnes (Macquarie University) and Trish Todd (University of WA) covered union and employer responses to the Fair Work Act. Cooper commented on the decline in union power, especially in the private sector, as evidenced by lower density, fewer industrial disputes and reduced union influence over wages and conditions. There is some promise for unions with the promotion of 'good faith' collective bargaining under the Fair Work Act. Barnes outlined the community alliance campaigns being developed by unions to strengthen their policy and labour market influence. Todd examined employer strategies in the new regulatory environment. Two interrelated themes emerged in her analysis. One was that the Fair Work Act has diminished employer prerogative, especially when compared to the previous WorkChoices legislation. The other was that employer responses are highly associated with industry pressures and patterns. For instance, employers in the hospitality and care sectors rely on the awards; but in mining, employers are keen to negotiate above the award – preferably not with unions.

Marian Baird (University of Sydney) and Gillian Whitehouse (University of Queensland) discussed other regulatory changes, specifically those which relate to female employees. Baird's analysis focused on employer responses to the new Paid Parental Leave Act. She examined employer submissions to the Senate Inquiry into the Employment and Workplace Relations Amendment (Work Choices) Bill 2005 to show that employers' main concerns related to their role as pay administrators. Employers expressed support for the scheme, especially in terms of the attraction and retention of employees, and financial benefits for families. Whitehouse provided a comparison of the equal remuneration decisions of tribunals in three jurisdictions in 2005 and 2006. In each case, the initial step was to determine that undervaluation of this primarily female work existed. This was confirmed in all three cases. The next step was to determine the appropriate pay rate. The NSW and Queensland tribunals awarded higher rates than did the federal commission. In the making of the modern award for the industry, the lower Australian Industrial Relations Commission rate was set. As a consequence, there is a risk that the gains from the NSW and Queensland decisions will be eroded over time unless the modern award is adjusted.

Workplace efficiency

Richard Hall (University of Sydney) and Bill Harley (University of Melbourne) covered two areas related to workplace efficiency. In neither area has Australia made much progress in recent years, and both authors recommend policy changes to stimulate progress. Hall argued that skills policy in Australia tends to be dominated by concern

for the supply side of skills formation. He maintains that more attention should be given to the demand side and, in particular, to the role of employers and workplace dynamics in the management and development of skills. Hall advocates policy initiatives such as a focus on regional and industry-specific skill ecosystems, encouraging workforce development initiatives at the workplace level and identifying and supporting vocational streams as pathways for worker advancement. Harley argued that in some circumstances 'high performance work systems' (HPWS) deliver benefits to both employees and employers. They are most likely to be introduced and to be beneficial when particular technologies, market conditions and institutional arrangements governing industrial relations are present. HPWS are not prevalent in Australia, however, and there is a case for formulating government policy to promote their more widespread adoption.

These papers were followed by a discussion of productivity in Australia by John Buchanan (Sydney University). Buchanan challenged the contention that a 'free' labour market, with minimal union and regulatory intervention, is conducive to higher productivity and hence general economic advancement. He argued that the standard view – promulgated by the Business Council of Australia two decades ago – entails a short-term perspective, as is evidenced by the problems encountered by previous 'high-performance' countries such as Ireland and Greece. Preoccupation with optimal employment of labour in the short run retards economic development in the medium and long terms.

International and historical comparisons

The discussions providing international and historical comparisons were an important contribution to the debates about employment relations in Australia. Nick Wailes (Sydney University) raised the issue of Australia's exceptionalism. He challenged the view that our institutions are so different from those elsewhere that little progress in understanding Australian experience can be made by referring to the broader themes of industrial relations analysis that are to be found in the international literature. Greg Patmore's (Sydney University) historical study of non-union voice in the US suggested the industrial democracy debate needs to be resuscitated in Australia. Patmore drew on North American inter-war experience to argue for legislation to promote forms of worker voice that are bona fide and do not weaken freedom of association.

Lucy Taksa (Macquarie University) raised another of the enduring themes in employment relations, that of fairness. She used historical examples of struggles for fairness at work by identifying links between struggles for shorter, fairer working hours and employee participation. The rhetoric of fairness is manifest in the Fair Work Act, the starting point for many of the workshop papers, as noted earlier in this report. Turning to a contemporary analysis of work and community, Barbara Pocock (University of South Australia) explained the ways in which new communities can enhance work and family outcomes.

Peter Auer (International Labor Organisation), outlined the mixed fortunes of 'flexicurity', a concept adopted broadly in the European Union. The term, originally applied to policies of the Nordic countries, Denmark in particular, denotes a combination of employment flexibility for enterprises and a high standard of social security for workers. In many EU countries, the concept was successfully applied before the onset of the global financial crisis. Since the GFC, trade union concerns about inadequate employment protection have brought the conflict between greater flexibility and employment protection to the fore. Flexicurity has been advocated by some in the Australian union movement, but with the emphasis on security for employees, rather than flexibility for employers. It demands greater intervention by government, which the legislation of minimum standards may go part way to providing.

The papers presented at the workshop and the discussion and debate that accompanied them reflected the tradition of multi-disciplinary, empirically based research which characterises the discipline of industrial relations. A clear policy focus was also evident in all the papers. Later this year, Federation Press will publish a book arising from the workshop on the changing nature of employment relations.



The 2010 Federal Election *Marian Simms*

Introduction

This project is the latest in a series of post-election workshops and books supported by the Academy of the Social Sciences in Australia. During discussions at the 1998 election workshop, the Academy agreed to sponsor future election workshops, with the proviso that the convenors provide a general outline and budget. The previous workshops have all resulted in publications: *The Politics of Retribution: The 1996 Federal Election* (Allen & Unwin, 1997); *Howard's Agenda: The 1998 Australian Election* (University of Queensland Press, 2000); *2001: The Centenary Election* (University of Queensland Press, 2002); *Mortgage Nation: The 2004 Australian Election* (Australian Public Intellectuals Network, 2005); and a two-part special issue of *Australian Cultural History* (2009 and 2010), Kevin07: The 2007 Australian Election. John Warhurst (ANU) was involved as co-convenor and co-edited from 1996-2005.

The publications have been well reviewed by academics and well received by the general community. Writers such as Paul Kelly utilise them as valuable sources for their interpretative histories of Australia. Copies of such reviews and commentaries are available on request.

The edited papers from the workshop will be published by ANU E-Press in a volume entitled *Julia 2010: The Caretaker Election*, with Professor Marian Simms (Deakin University) as editor and Professor John Wanna (ANU) as co-editor. The advisory group comprises Dr James Jupp FASSA (ANU), Professor John Wanna FASSA (ANU), Professor Carol Johnson FASSA (University of Adelaide), and Professor Dean Jaensch (Flinders University).

Rationale

The purpose of these projects is to bring together a team of 22 to 25 academics and practitioners to present and debate their points of view about the national election. The unique value of the ANU location is that it provides useful synergies between 'town and gown', and facilitates practitioners providing important data – for example, their own quantitative and qualitative survey research – and also receiving feedback from academics about the relevance of party research for academic study. Equally,

academics benefit from learning about the internal decision-making processes of election campaigning, and from accessing some of the internal party research findings, which provide useful insights often beyond the scope of academic research. Normally workshops have been held six to eight weeks after the national election when memories are still fresh and some data are available from empirical surveys.

The team

The workshop and the book include academics who are experts on the politics of their states, others who are leading experts on key interest groups and social movements, especially unions, business, migrants and women, writers on political leadership, political culture, campaigning, media – print, electronic and 'new' – and opinion polls, and the Australian Election Study group. The team includes the leading specialists, for example, Clive Bean (Queensland University of Technology), Murray Goot (Macquarie University), John Wanna (ANU), Malcolm Mackerras (Australian Defence Force Academy), Marian Sawer (ANU), James Jupp (ANU), and Dean Jaensch (Flinders), as well as emerging scholars such as Peter Chen (University of Sydney). Party directors or their nominees from all parties with parliamentary representation were invited.

Overview

Labor's unique challenge after the record-breaking win in December 2007 was to manage its policy commitments whilst facing multiple crises, including: the global financial crisis; a resurgent Opposition under Tony Abbott; and dramatically declining poll ratings for Kevin07. The 2010 election showed that the historic decision to replace Kevin Rudd with his Deputy Leader, Julia Gillard, was not the 'circuit breaker' for Labor that was predicted by the media. The tied election result, the subsequent process of negotiating for a new government and the resultant minority government raised crucial questions about the nature of the Australian political system and the capacity of the party system to reflect underlying changes in the electorate.

The overarching issue is whether leadership was a pivotal issue in 2010 as it was in 2007 when the election campaign itself '... became a testing ground for the Liberal leadership team of John Howard and Peter Costello and a proving ground for the new opposition leadership team of Kevin Rudd and Julia Gillard'. (Marian Simms in *Australian Cultural History* December 2009).

Workshop contributors approached this issue in a range of different and complementary ways. Sources included interviews and observations, published material such as televised interviews, transcripts of speeches and published opinion polls, internal party research, the Australian Election Survey, and aggregate data, including previous results and census data.

The two-day workshop was held at University House on 9 and 10 October 2010. It commenced with an informal welcome by Dr James Jupp (ANU), an ASSA Fellow and former director, and an overview by Professor Marian Simms, the convenor.

The two morning sessions were on 'Leaders and the Campaign' and 'The Media and the Polls'. In the first session there were papers on 'The Leaders', 'Campaign Diary' and 'The Ideological Contest' by author and former minister Rodney Cavalier, Marian Simms (Deakin) and Carol Johnson (Adelaide). Papers on 'Opinion Polls', 'Political Cartoons' and 'The Electronic Campaign' were presented by Murray Goot (Macquarie University), Haydon Manning (Flinders University) and Peter Chen (University of Sydney) respectively. A paper on 'Leaders' Interviews and Speeches' was tabled by Geoffrey Craig (University of Canberra). Much of the lively discussion at those sessions related to the role of the Labor Party's new leadership team of Julia Gillard and Wayne Swan, reasons for the failure of the Rudd team to retain its previous popularity, and the remarkable leadership transition of 24 June, which saw Rudd deposed by Caucus as Leader and Prime Minister.

The first afternoon session featured presentations by the ALP's Elias Hallaj and by the Australian Greens campaign director, Ebony Green, and high-profile candidate and former Australian Democrats senator Andrew Bartlett. Apologies were received from the Liberal Party director and the ALP's secretary, Karl Bitar. A paper was received from the Liberals for inclusion in the edited volume.

The next session was the first of two panels presenting research on the campaigns, issues and results in the states and territories. Papers were presented on Victoria (Nick Economou, Monash University), South Australia and the Northern Territory (Dean Jaensch). The importance of Labor's campaign in NSW was emphasised as well as the extreme variability of the swings across Australia. Papers on Queensland (Ian Ward, University of Queensland), New South Wales (Elaine Thompson) and Western Australia (Narelle Miragliotta, Monash and Campbell Sharman, University of Western Australia) were tabled.

Sunday morning commenced with presentations on Tasmania, the Australian Capital Territory, and rural and regional Australia by Tony McCall (University of Tasmania), Malcolm Mackerras (ADFA) and Jennifer Curtin (University of Auckland)/Dennis Woodward (Monash), respectively.

The second Sunday session was a very lively panel on 'Social Constituencies' with presentations by Marian Sawer (ANU) on women, James Jupp (ANU) on immigration and ethnicity, John Wanna (ANU) on business and unions, and John Warhurst (ANU) on religion.

The final session included discussion of the state of Malcolm Mackerras' pendulum and the variability in the swing across the country and concluded with general discussion regarding the next stage of the project. The discussion throughout was lively and interesting, and drew upon over 20 papers that had been circulated in advance. It was decided to invite Professor Brian Costar (Swinburne University of Technology) to contribute a paper on the post-election period and the construction of the minority government, for consideration in the proposed edited volume.

The political science community was saddened to hear of the death of Dr Dennis Woodward in May 2011. Dennis was a long-term contributor to this and many other projects. To commemorate his work, the edited volume will be dedicated to Dennis.



Australian State Politics and Policy in Transition: The Case of NSW *Rodney Smith*

'Australian State Politics and Policy in Transition: The Case of NSW' was held at the Darlington Centre, the University of Sydney, on 7-8 July, 2011. The workshop was sponsored by the Academy and the Department of Government and International Relations, University of Sydney.

The rationale for the workshop was to produce a systematic analysis of stability and change in Australian politics and public policy at the state level. Labor's recently completed 16 years in office in NSW provided an excellent case study for such analysis. The five objectives of the workshop were to:

- 1. assess the extent to which the politics and public policy of Australia's largest state have changed over the past two decades;
- 2. identify the causes of change and stability in NSW state politics and public policy;
- 3. apply some of the newly dominant concepts in political science and policy analysis, in order to assess critically their explanatory strength in the Australian state context;
- 4. undertake an unusually comprehensive overview of the patterns of politics and public policy-making in one Australian jurisdiction;
- 5. provide presenters with high-level feedback on papers that will later be included in a major publication.

The workshop was organised by two political scientists (Rodney Smith and Murray Goot) but had a multi-disciplinary focus, spanning political science, public administration, economics, history, law, sociology, education, environmental science, health policy, transport and logistics. Presenters and participants were chosen as experts in their fields who were at various stages in their careers, from early career researchers to emeritus professors.

Program

Most of the workshop papers were circulated beforehand. These included several from invited participants who were unable to attend: Bradley Bowden on rural politics in NSW (Griffith University), David Clune on the 2011 election campaign (Sydney), Robert Freestone and Peter Williams on urban planning (New South Wales). The program was divided into eight sessions over two days, covering the following topics:

Session 1 Stability and Change in Government Institutions (1)

Parliament (Rodney Smith)

The Impact of Federalism (Anne Twomey)

Session 2 Stability and Change in Government Institutions (2)

Premiers and Cabinets (Paul Fawcett)

The Public Sector (Michael Di Francesco)

Session 3 Key Public Policies (1)

Budgets and Finance (Russell Ross)

Education (Geoffrey Sherington and John Hughes)

Session 4 Key Public Policies (2)

Health (Jeremy Sammut and David Gadiel)

Law and Order (Sandra Egger)

Session 5 Key Public Policies (3)

The Environment (Bruce Thom)

Transport (Corinne Mulley and Claudine Moutou)

Session 6 The Political Parties and Independents 1995-2011.

The Labor Party (Rodney Cavalier)

The Liberal Party (Rodney Smith)

Minor Party and Urban Independent Challengers (Rodney Smith)

Session 7 The 2011 NSW Election.

The Polls (Murray Goot)

The News Media (Peter Chen)

The Results (Antony Green)

Session 8 Interpretations and Conclusions.

1995 to 2011 in the Longer-Term Perspective (Michael Hogan)

Overview

In the first two sessions, participants discussed changes to major institutions of government. In his paper, Rodney Smith focused on the role of Parliament. Labor's dominance in the Legislative Assembly between 1995 and 2011 contrasted with its lack of control in the Legislative Council, leading to different patterns of legislative behaviour and culture becoming consolidated in the two houses. Anne Twomey argued that the Labor Government played a supporting rather than leading role in the development of Australian cooperative federalism. In two papers that dovetailed well, Paul Fawcett and Michael Di Francesco explored the operations of the core executive and the wider public service in NSW. Both argued against simplistic accounts of governance failure during the later period of Labor government, pointing instead to more complex understandings of the dynamic power relationships between premiers, ministers, ministerial advisers, public service heads and watchdog agencies.

The next three sessions considered NSW Labor's record in key policy areas. They provided mixed results. Russell Ross, for example, argued that the Labor governments had generally performed well in economic policy, while Jeremy Sammut and David Gadiel pointed to consistent failures to reform a poorly performing health system in the face of powerful professional and union interests, the parochial demands of voters, ministerial flux and organisational uncertainty. The other policy papers described positions somewhere between these extremes. Bruce Thom, for example, argued that despite the difficulties of its final years, the Labor Government continued to achieve some environmental initiatives. One of the most valuable aspects of the discussion in these sessions was the way in which it allowed policy experts to see whether the institutional patterns described in the first two sessions could be used to explain the trajectories of success and failure in particular policy areas.

Papers in Session 6 analysed party politics. Rodney Cavalier outlined the structural problems that have developed within NSW Labor over the past decade. Rodney Smith argued that the poor performance of the NSW Liberal Party after 1995 lay in its failure to find lasting solutions to problems identified by commentators almost fifty years ago.

The final paper explored the rise of the NSW Greens and the different ways in which the Christian Democrats and the Shooters Party had consolidated their positions.

The presentations by Murray Goot on the opinion polls and Peter Chen on the news media in Session 7 both emphasised the ways in which NSW politics in the lead up to the election was treated as a horse race, even when the outcome was certain. Opinion pollsters and the media both missed opportunities to focus more broadly on policy issues and support for alternative public policy options. Antony Green's analysis of the results demonstrated both the extent of Labor's 2011 loss and its foreshadowing by Labor's low first preference vote in both the 2003 and 2007 elections.

The final session, based on a paper by Michael Hogan, saw lively discussion of the future of NSW politics and public policy. Participants disagreed on the extent to which the current NSW position was indicative of broader Australian and even international trends or was the product of a unique set of circumstances. They also differed on whether the quality of NSW politics and public policy had declined, when any such decline began and the nature of its causes.

Outcomes

Papers from the workshop have since been revised to form the chapters of the forthcoming book *From Carr to Keneally: NSW Labor in Office 1995-2011*, which is edited by David Clune and Rodney Smith and will be published by Allen & Unwin in March 2012. Many participants acknowledged the helpfulness of the two days of discussion in revising their draft chapters for the book. The cross-disciplinary nature of the sessions was particularly valuable. Apart from the forthcoming book, several participants discussed possible future collaborations and projects in areas of politics, governance and public policy.



Whither Australia's Children's Courts? Contemporary Challenges and Future Prospects

Allan Borowski and Rosemary Sheehan

An Academy-supported workshop on the Australian Research Council (ARC)-funded National Assessment of Australia's Children's Courts was held at the University of Melbourne on 17-18 February 2011. It was led by Professor Allan Borowski (School of Social Work and Social Policy, La Trobe University), and Associate Professor Rosemary Sheehan (Department of Social Work, Monash University).

The ARC project is a collaborative one involving researchers from all states and territories, with co-investigators based in the following universities: The University of Western Australia (WA); University of Adelaide (SA); Monash University (Vic); La Trobe University (Vic); Charles Darwin University (NT); Australian Catholic University (ACT); University of New South Wales (NSW); Griffith University (Qld); University of Tasmania (Tas) and Deakin University (Vic). The national team of researchers includes experts in juvenile justice and child protection drawn from such disciplines as sociology, law, criminology, psychology and social work. The project began in 2009 and will be completed in 2011.

Children's Courts are responsible for important decisions regarding child welfare and juvenile justice, and are generally engaged with vulnerable children and families and marginalised delinquent youth. The purpose of the national study is to examine the current status of Australian Children's Courts, to identify the contemporary and future challenges they face from the perspective of judicial officers and other key stakeholders, to identify directions for reform and assess their feasibility. The research project developed through a collaborative process involving the identification and utilisation of common research questions, data collection instruments and data collection strategies.

The workshop was held over two days with the aim of sharing the preliminary findings for each state and territory with the larger research group, summarising the findings and emerging issues and locating them within international alternatives/developments. Participants also discussed future publication and research directions.

Day 1

Each state/territory team delivered a 45-minute presentation outlining the preliminary findings of their research. Semi-structured in-depth interviews had been conducted with judicial officers and other key stakeholders in the Children's Courts such as child protection workers, youth justice workers, legal representatives, court officers, and non-government workers with family and youth support roles. Each study analysed general issues within the courts, and specific issues relating to the dual role of the courts, namely, the child care and protection function and the youth justice function.

Researchers discussed various themes that emerged in the research. Thus, the preliminary findings pointed to the inadequacies in available infrastructure; equity issues regarding access to representation and adequate resources; significant Indigenous over-representation and the adequacy of existing Indigenous-specific programs; concerns with the adversarial nature of the court; lack of evidence-based evaluations of diversionary programs; interagency collaboration and professional skills; and inequities and social exclusion. Workshop participants engaged in a rigorous discussion regarding the philosophical underpinnings of the Children's Courts system, including the goals and objectives of the courts and opportunities for making the court less adversarial. Several ideological binary tensions within the courts were discussed including 'welfare versus punishment', 'needs or deeds', 'hands-on or hands-off', 'youth assistance or community protection', and 'child protection or family preservation'.

It was particularly evident that each jurisdiction has unique issues and needs, and factors such as geography, resources, political climate, demography, and culture are highly relevant in analysing the current state of Children's Courts and determining options for reform. Clearly, a one-size-fits-all model cannot apply across jurisdictions.

The first day concluded with a brief reflection on issues from two senior academics in the fields of child protection and juvenile justice, Professor Marie Connolly, Head, Department of Social Work, University of Melbourne and Associate Professor Judy Cashmore of Sydney University's Law School.

Day 2

The first half of the second day was an open session involving the research team and select invited visitors, including Judge Paul Grant, president of the Children's Court of Victoria, Ms Gill Callister, Secretary of the Victorian Department of Human Services, Magistrate David Fanning of the innovative Collingwood Neighbourhood Justice Centre, Associate Professor Helen Rhoades of Melbourne University's Law School and

Dr Darryl Higgins from the Australian Institute of Family Studies, and other relevant stakeholders from the child protection and juvenile justice sectors.

The second day began with a presentation of the summary of emerging findings from the workshop rapporteur, Naomi Godden. She outlined the key themes that emerged from the eight presentations of the previous day. She reported on general observations including the philosophical debates that emerged in the comparative research studies (including the tensions arising from the care and crime components of the system), diverse perspectives regarding the legal model and framework, issues within the court system and processes, concerns regarding the socio-economic conditions of young people engaged with the courts, significant issues with Indigenous over-representation, equity issues in rural and remote areas, and issues regarding statistical collection and program evaluation. She then summarised the previous day's deliberations on key strengths and challenges confronting the child care and protection, and juvenile justice 'divisions' of the Children's Court. Key needs and possibilities for reform were discussed along with national directions for the next decade.

The workshop then further considered options for reform with presentations focusing on international responses to juvenile crime and child abuse and neglect. Professor Connolly provided an international perspective on children's courts in respect of their child protection function. She briefly discussed various overseas models including the United Kingdom pre-court focus with case conferencing and interagency consultation, and the lay tribunals of Scotland. She then provided a detailed description of the New Zealand system, one which is strongly focused on supporting families to find solutions to child welfare concerns without finding blame. It is less adversarial, strongly childfocused and family responsive, and takes a collaborative problem-solving approach. A specific strength of the New Zealand system is Family Group Conferencing which has been found to be highly effective in supporting families, particularly Maori families, to make collaborative decisions regarding their children. Some practice tensions within the New Zealand system include the difficulties in developing effective family safety plans, responding to complex needs and achieving the departmental goal of a 'home for life' for children. Connolly stressed that, although difficult, cross-institutional collaboration is vital to good process and effective outcomes. She also discussed the complexities of adopting programs from other countries or jurisdictions and the challenge of achieving a 'cultural fit' for introduced ideas in a different society.

Associate Professor Cashmore provided an international analysis of children's courts focusing on the juvenile justice function. Various alternative models include the United States collaborative model and the Scottish and Swedish models where children under the age of 16 are not dealt with as criminals but rather as children with welfare needs. Additionally, she discussed therapeutic models such as the Koori Court, Circle Sentencing, and Youth Drug Courts. Some challenges to sentencing in youth justice include ensuring rehabilitation, reintegration in the community, and individual deterrence, along with general principles of proportionality (ensuring adequate punishment to fit the crime), consistency and equity, and specificity regarding the precise nature of the crime. Cashmore pointed to the limited available research regarding children's experiences of the court, with some evidence suggesting that children are concerned about recognition and respect, and 'being listened to'. Finally, Cashmore discussed the United Nations benchmarks in youth justice, such as advocating a minimum age of criminal responsibility of 12 years, the primary objective of promoting the 'best interests of the child' and rehabilitation, encouraging non-

discriminatory practices and enabling reintegration, utilising judicial proceedings and detention as a final resort, and ensuring the child's right to be heard.

The public session closed at midday. The second day concluded with the research team discussing opportunities for the publication and dissemination of findings, advocacy for policy reform, and potential future research in this field.

The study on which the workshop was based is an excellent example of a multiinstitutional, multi-jurisdictional social research project whose findings have great scope for informing social policy reform. The final report of the project will be available in late 2011.



International Science Linkages Workshop

Australian and International Perspectives on the Cosmopolitan Civil Sphere Ian Woodward

Though a concept of antique provenance, the idea of cosmopolitanism has been at the forefront of innovations in the contemporary social sciences since Martha Nussbaum's polemical essay on patriotism and cosmopolitanism. The concept has attracted recent attention by encouraging innovative approaches to the study of the interlinked social and cultural consequences of mobilities and globalisation. While the concrete realisation of a cosmopolitan global society may quite rightly appear to be an unrealistic fantasy, being able to 'think ourselves beyond the nation' - beyond forms of national belonging, and beyond the fixities of time and space - is becoming not only easier, but also increasingly vital in an age where global issues manifest and effervesce locally. It is therefore no exaggeration to say that Australia, like all other nations, is undergoing an uneven process of cosmopolitanisation. The consequences of this process confront Australian citizens on a daily basis in the form of bubbling public issues related to migration, global environmental issues, matters of national sovereignty, the impacts of global economic processes and the flow of different cultural goods such as movies or music.

This development comes under the rubric of what Ulrich Beck and other theorists have called 'cosmopolitanisation'. Part of the social scientific challenge of such an idea is finding its articulation at the layer of everyday life; here we turn to the notion of the civil sphere to explore the impact of cosmopolitanisation on the lives of citizens. The idea of the civil sphere has been important for understanding the constitution of social collectives, which are formed as a result of the feelings and connections within and amongst citizens (for example, in the works of Habermas, Cohen and Arato, and Alexander). In the terms posited by cosmopolitanisation theory, the civil sphere of any nation is shaped by national and local events, but also increasingly by events outside its borders. Thus, the processes which tie citizens together, including the legal and normative processes by which disputes are resolved, cultural differences negotiated and hospitalities afforded, is determined significantly by international contexts and the way they play out in local contexts. Australia is embedded within such global networks,

a sign of our dependency on such sets of connections. Being embedded presents opportunities and challenges not just in terms of Australia's economic health, but also in terms of its social and cultural cohesion.

Workshop overview

The workshop was led by three Australian scholars who have been at the forefront of recent international developments in studies of globalisation and cosmopolitanism theory (Emeritus Professor Robert Holton, ASSA Fellow, Trinity College Dublin and Flinders University of South Australia); migration, transnationalism and belonging (Professor Zlatko Skrbis, University of Queensland); and culture, consumption and cosmopolitanism (Dr Ian Woodward, Griffith University). It gathered an interdisciplinary mix of researchers to examine the way Australian society is being shaped and challenged by this process of cosmopolitanisation. In addition, the injection of leading scholars from Asia and the United Kingdom encouraged local scholars to compare and contrast their own methodologies and standpoints in the light of international perspectives. Specifically, the workshop's goals were: (i) to understand theoretically the impact of these cosmopolitanisation processes on various aspects of Australian society and culture, (ii) to apply diverse empirical approaches to understand the way cosmopolitanisation processes influence parts of Australian society, and (iii) to apply the insights of leading international researchers to understand the composition and make-up of the national civil sphere and its part in global networks.

At the start of the first day, Dr Woodward gave an overview of contemporary understandings of the notion of cosmopolitanism, foregrounding current debates, issues and areas for further research opportunities. Professor Chris Rumford (Royal Holloway, University of London) presented his research on borders and processes of bordering in the UK and Europe. Rumford's research shows that borders are to some degree more flexible and permeable than we have imagined, and that through processes of 'bordering' and various types of 'border work', citizens engage in practices which can effectively open, close and shift geographic borders. Thus, it is not just citizens who are mobile across borders, but borders themselves are to some degree flexible. Borders are thus somewhat more permeable than imagined and are able to be influenced by various types of transnational agents. Rumford's research shows that while borders are spaces of connectivity and agency, making them potentially cosmopolitan in nature, in reality the capacity to influence borders is related to types of privilege and mobility. Professor Holton then gave an analytic, precise discussion of the history, dimensions and issues related to theories of cosmopolitanism. Holton's talk clarified strands of cosmopolitan thinking and discerned the particular qualities associated with cosmopolitan ethics and practices, distinguishing it from globalisation in terms of its gualities and consequences.

The talks that followed those by Professor Rumford and Professor Holton considered the nature of meaning of cosmopolitan practices through various empirical and applied endeavours. Dr Val Colic-Peisker (RMIT University) discussed the links between the cosmopolitan civil sphere and global capitalism; Dr Raelene Wilding (La Trobe University) presented findings from her research project on the use of internet communication technologies as a way of assisting refugees to settle in to their communities and to stay in contact with their home; and Dr Sara Davies (Griffith) presented an overview of her research on global disease monitoring and surveillance networks. Dr Davies's research reveals the issues related to monitoring global health scares, mechanisms for reporting them and the variable types of responses nations

make to them. In short, her research reveals something of the drama related to managing global health scares, and the ways in which transnational monitoring of disease is currently made difficult by the often conflicting interests of nation-states and the international community. Day one of the workshop also featured a talk by Professor Brenda Yeoh (National University of Singapore) on state-imposed forms of cosmopolitanism, modeled on the Singaporean experience. Emphasising the arrangements within Singapore, which have led to a particular state-led expression of the cosmopolitan ideal, Yeoh's talk charted Singapore's migration history and multiracial legacy. She argued that although this legacy provides a possible framework to build cosmopolitan sensibilities, in reality it charts a pathway ridden with considerable contradictions in the city-state's attempt to forge its own globalised future.

The second day of the workshop opened with a talk by Professor Mica Nava (University of East London) on her ideas about 'visceral cosmopolitanism'. Professor Nava's research focuses on instances of exemplar cosmopolitans of early modernity, and the link between commercial cultures and cosmopolitanism. More broadly, she argues for a strand of research into cosmopolitanism which emphasises its basis in emotions and the 'allure for difference'. Papers by Dr Anthony Moran (La Trobe University) and Professor Andrew Jakubowicz (University of Technology, Sydney) explored the links between multiculturalism and cosmopolitanism in the Australian context. Both shed light on the peculiar civic and social processes within Australian nationalism that can mitigate the development of strong cosmopolitan attachments. The paper by Dr Luke Howie (Monash University) analysed the links between global media and the development of cosmopolitan attachments. In his summing-up of the workshop's major themes, Professor Skrbis highlighted a number of tensions and contradictions within the cosmopolitanism research program which need clarification and further exploration: the normative dimensions of the cosmopolitan idea; the plural social manifestations of the cosmopolitan impulse and their contextual expression; 'top-down' versus 'bottom-up' versions of the cosmopolitan ideal; and the links between the cosmopolitanism agenda and research agendas in globalisation and multicultural studies.

In conjunction with the workshop, Professor Nava delivered a Griffith University public lecture on 'visceral cosmopolitanism'. Drinks and an invited dinner followed this lecture. In partnership with Griffith University's Centre for Cultural Research, Professor Nava also led a three-hour postgraduate research methods workshop for research students across Brisbane's three major universities.



Reports from Roundtables

'Sustainable Population Policy: Public Policy and Implementation' Roundtable

On 15 April the Academy convened a roundtable on the multifaceted policy challenge of population sustainability, in partnership with the Institute for Public Administration (IPAA). Held in Canberra, the event was titled 'Sustainable Population Policy: Public Policy and Implementation'. In attendance were some 40 participants from the government, research and private sectors, including from Ernst and Young and Minter Ellison, who along with IPAA were financial sponsors of the event.

As with previous National Roundtable Series events in partnership with IPAA, the Academy's main contribution was to bring together the leading exponents of social science knowledge in this policy field. To this end, ASSA Fellow Professor Graeme Hugo opened with an address in which he gave an overview of the important new trends in Australia's population growth, the 'drivers and implications of population dynamics.' As discussed in greater detail in a subsequent paper by researcher Liz Allen ('Sustainable Population Policy: Public Policy and Implementation Challenges', Academy Proceedings 2/2011), and at the roundtable itself, this involves identifying future population growth trends, and assessing the impact of this growth rate on infrastructure and other government planning and spending. Dr Hugo's paper appears in this issue of *Dialogue*.

One of the catalysts for the event was the high-profile debate that has surrounded this policy area for several years now. In 2008, the Australian Bureau of Statistics projected a population of 35.5 million for Australia by 2056. After subsequent public and media interest in government responses to this projection, Tony Burke was appointed as the first Minister for Population in April 2010. Since the most recent election, 'Population' has been explicitly incorporated into the responsibilities of a Federal Government department: the Department of Sustainability, Environment, Water, Population and Communities. As indicated by the topics, sponsorship and attendance of ASSA's recent roundtable, interest in the concept of sustainable population reaches beyond policymaking and research sectors and into the private sector.

Participants at April's roundtable agreed on the importance of a clearly articulated public policy strategy on Australia's future population. While it was found that predicting future population outcomes is itself not an exercise in certainty, planning and preparation will positively influence any future scenario of population growth. 'Sustainable population' was characterised by participants as a challenge in managing migration so that it meets skills needs in the economy, while at the same time providing the housing and infrastructure projects necessitated by any population increase.

'Measures of Hardship' Roundtable

On 25 July a policy roundtable on methods for the 'Measurement of Hardship' was jointly convened with the National Health and Medical Research Council (NH&MRC), in partnership with the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) at Tuggeranong. This event was conducted as a half-day symposium, with some 20 participants from mostly research and policymaking circles. NH&MRC provided the funding for this event.

A specific area of focus was on those who experience poverty over a long period of time, as opposed to people who pass through the social welfare system on a

temporary basis. For this reason, the roundtable addressed the subject of those who experience persistent hardship, such as through disability. The roundtable was chaired by Carol Ey, the head of Research at FaCSHIA, and Dennis Trewin, Chair of the Policy and Advocacy Committee.

The event was an important opportunity for researchers and government agencies, including Centrelink, to compare what data each has already collected separately in this policy field. Participants recommended that any further exploration of poverty measurement should include identifying the limits on government's capacity to meet the needs of those experiencing long-term poverty, and whether there are better ways of providing them with financial assistance than are currently being administered.

A more detailed report, 'Reducing Hardship: Effective Measures' on the following page.

The lan Castles Roundtable on Tax and Social Security

On 12 and 13 October 2011 the Ian Castles Roundtable on Tax and Social Security was held in Canberra. This was a collaborative event convened by the Academy in partnership with the Australian National University (HC Coombs Policy Forum, the Australian National Institute for Public Policy, the Australia and New Zealand School of Government and the Crawford School of Economics). Federal Treasury and the Department of Families, Housing, Community Services and Indigenous Affairs were also actively involved.

Approximately 35 participants attended the event, which consisted of a dinner and opening address followed by an all-day panel event. Opening remarks were made by Professor Andrew Podger, who was on the reference panel on behalf of the ANU, and is also one of the new Fellows inducted into the Academy in 2011.

The initial impetus for the event was to offer a specialist knowledge response to the Federal Government's own 'Tax Forum' the preceding week. The intention of the partnering conveners was to generate a series of policy recommendations especially on the tax/transfer system, in an environment of confidentiality perhaps more conducive to frank contributions than the forum itself. Several Fellows attended.

As with the government's own forum, a major starting point for these discussions was the 2009 Henry Tax Review. That review strongly recommended equity, simplicity, fiscal sustainability, consistency and efficiency as the guiding principles in any reform of the taxation and social payment transfer system. Accordingly, three overarching issues were addressed by the roundtable:

- income taxation rates and families
- the transfers-and-payments system
- aged care and, in particular, the superannuation system.

Notwithstanding the Chatham House rules governing this event, the Academy is looking to publish a series of reports and briefing papers that were prepared on this topic. The Policy and Advocacy Committee would like to extend its gratitude to those Fellows who attended and to each of the partnering institutions, for a successful and worthwhile day of discussions.

Submissions

In September, the 'Strategic Roadmap for Australian Research Infrastructure' was released by the Department of Innovation, Industry, Science and Research, reflecting several recommendations contained in an Academy submission to that review. The full

version of the Academy's submission is available on the website, in accordance with our policy of making all published submissions available for wider readership.

The Academy has recently submitted recommendations to the Department of Education, Employment and Workplace Relations (DEEWR)'s Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander Peoples. Given that a specific branch of this review is focused on retention, the Academy provided a response to this specific issue. DEEWR's review, chaired by Professor Larissa Behrendt FASSA, is scheduled to release its findings in September 2013.



Reducing Hardship: Effective Measures

Dennis Trewin

Objective

An important Australian government policy objective is to reduce the number of Australians suffering hardship. This involves alleviating financial hardship and building capacity. Developing an appropriate policy response to reduce the number suffering persistent hardship requires an effective understanding of the issues – how do we measure persistent hardship? Who experiences it? And how can we break the cycle? The objective of the roundtable, held on 25 July 2011, was to build on existing studies to better understand what additional information, research and analysis will best inform initiatives to effectively reduce the number of Australians suffering long-term hardship.

Introduction

Policy makers require a better understanding of hardship for the purposes of both the 'service delivery reform' agenda and the 'participation' agenda. There is a need to better distinguish those who may be able to move out of hardship with some support, those who will require an ongoing safety net and those who will be able to manage over the medium to longer term. The analogy of three groups in a hole was used throughout the roundtable: those in the first group can escape given a ladder, those in the second require a bed (care is the appropriate response) and a third group require the ladder and some instructions (i.e., something to remove barriers). Effective policy requires that we know which people fall into which category – and yet we currently find it difficult to identify who falls into these groups.

What are the dimensions of permanent hardship?

There was agreement that it is necessary to broaden out from considerations of financial hardship to multidimensional disadvantage (including health, social and participation disadvantage) in order to design effective policy responses. A framework is needed for putting into operation the measurement of multidimensional disadvantage that draws on the existing theoretical and conceptual work on social exclusion and multiple disadvantage. Such frameworks exist and it may be a matter of adapting one for Australian circumstances. For example, the UK Social Exclusion Task Force applied a framework developed by Ruth Levitas and colleagues at the University of Bristol to the analysis of social exclusion for different life stages using large, nationally

representative surveys. It is worth considering but might have to be adapted to address the 'three groups in a hole' and to take account of the data that exists here.

Aspects of hardship that should be examined include the drivers or causal pathways, the attributes of those in hardship including location, and the length of time in hardship.

For an effective policy response, the dynamics of hardship are also an important focus, for example, how people fall into hardship and the policy interventions that may assist people to escape hardship. Intergenerational aspects are also of interest. At present, income support policy tends to focus on income in the current period. Surveys that provide a snapshot are limited in their usefulness.

Useful data sources include Household, Income and Labour Dynamics in Australia (HILDA) and Youth in Focus. It is also worth examining the different waves of sample data to study the patterns of specific groups over time. It might be necessary to assess whether different measures or indicators of hardship are required for different groups depending on their life cycle stage. The measures for families may well be different to those for mature persons largely dependent on income support.

It was suggested that labour market research may provide some useful models: specifically the analysis of employment surveys which tracked the group of those unemployed for more than 1-2 months, for a period of 4-5 years, and examined the variables associated with the length of time in unemployment. This allowed researchers to give weighting to different variables according to their predictive power on the length of time unemployed.

It may be difficult to obtain a clear picture of those in deep hardship, and the routes into and out of hardship using conventional methods, because surveys such as these rely largely on consistent addresses, phone numbers, etc. Those suffering the greatest hardship, such as the homeless, may not be captured by such methods.

A key question is whether persistent hardship is the correct criteria to be considering; the severity of hardship might be more relevant. The appropriate measure will depend partly on the policy objective, for example, if the goal is to empower people rather than to alleviate hardship. The 'three groups in a hole' analogy suggests both are important but different measures may be needed for each concept.

Given that surveys such as HILDA have both advantages (e.g. flexibility in the variables to be included) and disadvantages (no data on the personal benefits from policy interventions) as do administrative data sets (they show policy/program interventions but do not usually capture variables of interest), there is a need to look at and combine both sorts of data. The Youth in Focus study was mentioned as a useful model – a sample drawn from an administrative data set, which was then surveyed on specific issues of interest. A similar approach was used with mature aged recipients of unemployment assistance.

It was agreed that there is scope to improve the use of information available in existing data sets – for example, many people receive multiple interventions and it would be useful to draw together administrative data from different programs to get a more holistic view of the impact of government programs.

There was some discussion on the strengths and limitations of HILDA, including whether the seven or eight HILDA questions on hardship are optimal. Would it be preferable to ask more qualitative questions that allow for self assessment of hardship based on personal experience, noting that there can be a wide difference between

objectively measured (financial) hardship and self-assessment? This might include subjective questions such as a respondent's assessment of the opportunities they have, or whether they have some choice and control over what happens in their lives. However, the sample size for HILDA may not be large enough for the study of specific issues, such as those who need services and support. Some questions on hardship may also need to be reviewed, as they may no longer be relevant given social changes since HILDA started.

In short, the main points arising from the discussion were that:

- there are multiple dimensions to determining whether permanent hardship exists or not; it is not just a measure of current income – subjective measures also need to be considered
- financial hardship and capacity may need to be considered separately, and may require different measures
- the dynamic and intergenerational aspects are important and need to be considered as part of the analysis
- both surveys and administrative data have limitations, but a combination of these two types of data source may well be the most useful
- some amendment to the current protocols to the use of administrative data for statistical purposes may be required – the focus should be on making greater use of existing data sets rather than developing new data sets.

Who experiences persistent hardship?

Policy makers are particularly interested in exploring intergenerational issues associated with those in hardship. Existing data sources such as the Longitudinal Study of Australian Children, the Longitudinal Study of Indigenous Children and the Youth in Focus studies might be able to provide some insights here – for example, by studying the income support history of the parents of young people on income support. There is anecdotal evidence of a strong correlation but ways of reducing this correlation need to be examined.

Tracking those in high levels of hardship across the different waves of HILDA indicates that the household types (e.g. single parents) in significant hardship in one wave (using cross sectional data) are also likely to have relatively high levels of persistent hardship. (Given this, cross-sectional studies may have value in analysing persistent hardship.) There was some discussion as to whether this analysis could be taken further so that the predictive value of different variables for persistent hardship could be identified. It was mentioned that hazard modelling, using a range of variables, had been used successfully for a longitudinal analysis of those who had experienced persistent unemployment over time and provided insights into the characteristics of those in persistent unemployment. It was felt that this may be more powerful than cross-sectional analysis. In this context it is also important to examine the characteristics of those who do not remain in hardship over time.

Representatives from the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) mentioned that they have done some data mining to examine the variables associated with those in significant hardship, e.g. many changes of address and/or relationship status. But there are barriers to using Centrelink data for research purposes: it is expensive to extract for a longitudinal examination (but probably not as expensive as conducting longitudinal surveys) and frequent changes of policy settings lead to discontinuities in data. The researchers at the roundtable agreed that it would be desirable to see an investment in the development of Centrelink data to generate a longitudinal data set available for research into social policy together with easier access to data. It was recognised that protocols would need to be put into effect to protect the privacy of those whose data was being used. FaHCSIA advised that restrictions in the Social Security Act provide a constraint.

The main conclusion from this section of the discussion was that analysis of those who experience permanent hardship requires data sets that facilitate analysis over time. The roundtable encouraged investigation of ways to increase access for those researchers who have the skills to use these data sets to provide policy insights.

What do we know about breaking the cycle of permanent hardship?

The severity of hardship may determine the outcome, at least in the short term. For example, although obtaining work is generally seen as the best way to escape permanent hardship, for some people and groups, engagement in society (i.e., social inclusion) may be a valuable (and more realistic) short-term outcome. It may also be an important step towards the long-term goal of employment. Other alternatives, such as contingent loans, might be worth considering for those who need a ladder to get out of the hole. Micro-finance initiatives have been quite successful in developing countries.

It was posited that persistent hardship is not new and for most it is not a cycle; there is strong evidence that childhood and education are central to life chances, especially for those coming from a less privileged background. However, we don't know precisely what aspects are most important. More information on behaviour types and attitudes, especially by parents with respect to children, is needed. This would include longitudinal data. Administrative data that enabled analysis of inter-generational issues would be most useful. It would be particularly useful if it were possible to draw from different sources such as health and income support data. This would require a significant change to what is now possible for the research use of administrative data.

Analysis of the transmission of intergenerational disadvantage should build on existing knowledge both in Australia and internationally. There are some programs that appear to be successful – for example, the Nurse Family Partnership program in the United States, which provides intensive support to disadvantaged parents during pregnancy and the first few years of the child's life, has been shown to have significant impacts across a range of outcomes (including skills and workforce participation) for both the parent and child. For the child, these positive impacts have been shown to persist into adulthood. Similar programs in the UK have also been successful and have been shown to deliver cost savings over the longer term.

To focus on policy, we need to understand what we need to know. Do we need to change circumstances or attitudes and behaviours? Behavioural economics may be relevant, but understanding the role of behaviour and how to entice behavioural change is not a mature field of evidence-based policy. A better understanding of the characteristics of those who have got out of hardship may provide useful insights.

This raises the larger question of what government should be responsible for. What are the limits to the capacity of governments to help people manage their lives effectively? Given that society is becoming more complex, is it likely that the opportunities for those with lower capabilities are shrinking? What is the government role in increasing individuals' capabilities to avoid hardship? Should government play a leadership role in

changing social norms to reduce the dependence on income support of those who can 'get out of the hole'?

There is a mantra about better targeting. It is important but there is also a need to be realistic. Better targeting will only improve the odds. There will still be errors in targeting (false positives and false negatives). Also, substitution effects need to be carefully considered. That is, although one person might benefit from a targeted program, it may be at the expense of another person. Another issue needing exploration is whether the way in which assistance is delivered is important given the impact of attitudes and behaviour.

It was also noted that the Australian Social Inclusion Board has published a report on 'Breaking Cycles of Disadvantage'.

Conclusions

The roundtable concluded that it is important to know more about the most effective ways of breaking permanent hardship. There have been some successes, and lessons may be learned from them. Intergenerational aspects are important. Education is key, but it is also important to look at what can be done to change behaviours. The government's role beyond providing a safety net needs to be considered.

The roundtable agreed that:

- focus should be on improving capability and behavioural change, not just income support
- intergenerational aspects have to be addressed
- the government's role has to be clarified it has a responsibility to provide a safety net and a leadership role in changing behaviour, but what else?
- research and analysis is vital for addressing these questions but the emphasis should be on making greater use of existing data sets, including evaluation studies, rather than undertaking new data collections
- ways of increasing data access, that respect privacy considerations, should be investigated.

Vale Fellows of the Academy

Roderick McDonald (Psychology)

Hyland Neil Nelson (History)

The Academy extends its condolences to their family and friends. Obituaries will appear in the *Annual Report*.

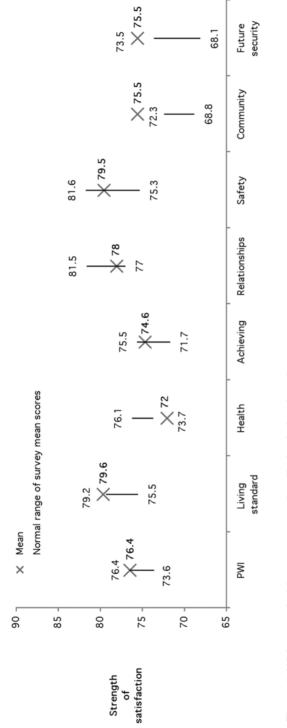
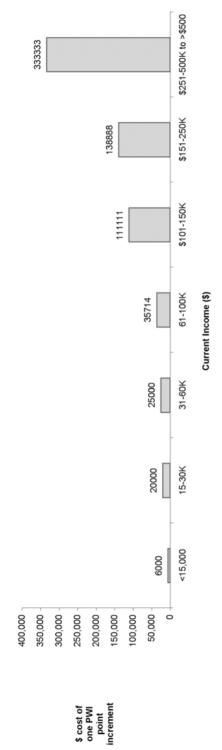
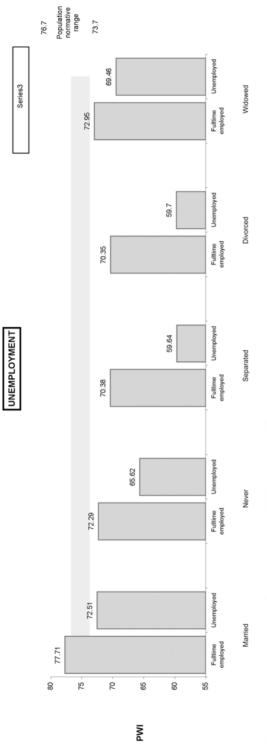


Figure 1: Widows and widowers: personal wellbeing index domains

We apologies that graphics accompanying the article 'Subjective Wellbeing as a Key to a Healthy Society' in the previous issue of Dialogue did not print clearly. They are reprinted here for your convenience. Please refer to the original article for further explanation of the graphics









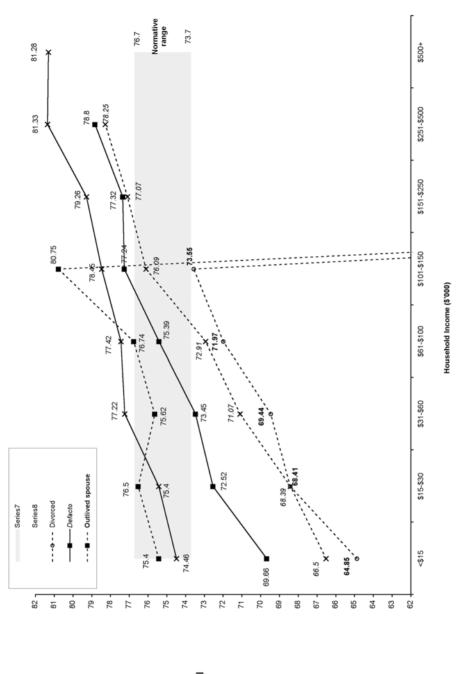


Figure 4: Income x relationship status

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C: History, law, philosophy, political science.
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D: Education, psychology, social medicine.
Chair: Robert Boakes

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