

# ANU Reporter

THE AUSTRALIAN NATIONAL UNIVERSITY

Spring 2011

## Alice in Antarctica





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# ANUreporter

THE AUSTRALIAN NATIONAL UNIVERSITY



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ANU Reporter is published quarterly by the  
Communications and External Liaison Office  
at The Australian National University

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Canberra ACT 0200

Design: Wendy Dawes

Production: Fairfax Media

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Volume 42 No.3

Cover: Alice Giles, Alice in Antarctica, p 18

Photo: Glenn Jacobson/Australian Antarctic  
Division

ISSN 0727-386X CRICOS Provider No.  
00120C



## In brief 6

News and views from Australia's  
national university.

## Stacking up the stakes 9

The latest ANUpoll suggests that Australians are  
divided over gambling regulation.

## Putting science into practice 10

Informing public debate through scientific study.

## In the shadow of Fukushima 12

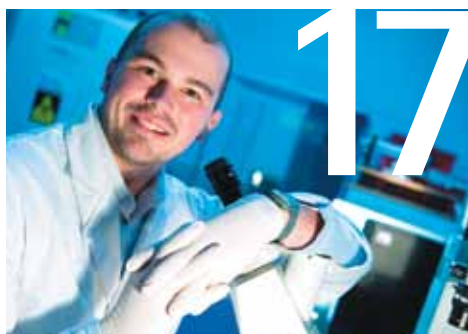
Japan's recent natural disasters  
and the nuclear tragedy of 1945.

## Does absinthe make the heart grow fonder? 13

Exploring the link between liquor and love.

## Rights and wrongs 14

Working for human rights in Palestine.



## Engineering better bodies 17

Using technology to regenerate damaged brain  
and spinal cord tissues.

## Alice in Antarctica 18

Music and memories at the South Pole.

## Insurgent intellectual 20

Recollections of an activist academic.

## Cancer goes back to basics 22

How astrobiology is helping in the fight  
against cancer.

## Out for the count 24

Voting systems, political apathy and popular  
myth in the UK.

## Art, design and Diaspora 26

How an amazing art collection escaped  
the Nazis.

## The air up there 28

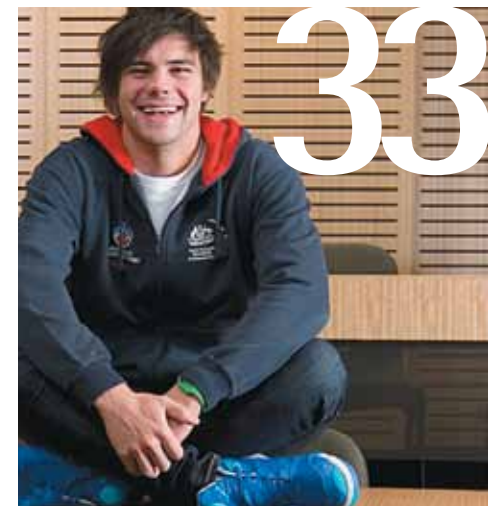
A turbulence breakthrough leads to a better  
understanding of cyclones and wind energy.

## Time and tide 29

Boosting Indigenous knowledge, language and  
livelihoods on the Crocodile Islands.

## Keeping hope in the family 30

Child removal and the cycle of destructive hope.



## Sight and summit 32

Mountain expedition aims for new  
fundraising peak.

## From pool to school 33

Living up uni life in the fast lane.

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# Vice-Chancellor's introduction



This is the first edition of *ANU Reporter* I have introduced and it is a pleasure to welcome readers to a publication that has featured many of the significant events, discoveries and people that are the foundation of this great institution.

After five months leading ANU I still have much to learn, but one thing is plain – ANU is home to staff and students of exceptional quality and vigour. My aim is to make the most of that energy and excellence, and build on it.

Putting that aim into action is my first big task and the new strategic plan, *ANU by 2020*, will be issued in its final form very shortly.

It will build the University's profile as Australia's national university and Australia's finest university.

The plan outlines an ambitious set of goals and targets, focused on boosting excellence in three key areas: research, education and our role as a public policy resource for the nation.

As outlined in the plan, the vast majority of ANU staff will be research-active and our education will continue to be grounded in what we research. Staff will win more competitive research grants and more staff will be ranked world-class and above world-class on the Commonwealth's Excellence in Research for Australia scale.

ANU staff will continue to excel as teachers and students will be part of a flourishing community of scholars.

We will also establish a \$10 million fund to attract and retain new world-class staff at senior and mid-career levels.

But most of all *ANU by 2020* is about people: staff, students and alumni. It is about the people whose inspiring stories you will continue to read in *ANU Reporter*.

**Professor Ian Young**  
Vice-Chancellor and President



The Master Blogging Challenge was one of the highlights of Asia Pacific Week 2011 held at ANU in July. It set some high-profile writers the challenge of live-blogging in front of an audience. In this photo Dr Andrew Walker, Cynthia Banham, Dr Shiro Armstrong and Graeme Dobell are put through their paces by cravat-clad event host Dr Nicholas Farrelly.

*PHOTO BY DARREN BOYD.*

## New Pro-Chancellor appointed

ANU Council has appointed Ilana Atlas as the University's new Pro-Chancellor. Ms Atlas began her role on 1 August.

Ms Atlas has extensive experience in business and has held executive and non-executive roles across a number of industry sectors. She has served on the University Council since July 2004 and takes over as Pro-Chancellor from the Honourable Justice Annabelle Bennett – who steps down after 13 years in the role.



## Bees 'read sky' to find home

Bees remember landmarks and read information from the sky to find their way home from an amazing 11 kilometres away and over several days' travel, a new study shows.

Led by Professor ShaoWu Zhang from the ARC Centre of Excellence in Vision Science and ANU, the research team released bees in Canberra, where the landmarks the bees used include Black Mountain, Mount Ainslie, Red Hill and Lake Burley Griffin.

"We found that from four kilometres onwards, honeybees coming from the eastern direction return to their hives sooner than bees from the north, west and south," says Professor Zhang. "Also, when we released these bees from seven kilometres and above, only those from the east can successfully find their way back.

"This is because bees released from the east can see Black Mountain in the opposite direction. It also helps if they are released in the early afternoon, when the sun is situated in the west, too. When they fly towards Black Mountain, familiar local features can guide them back to the hive."

## Demographer wins UN award

Professor Mohammad Jalal Abbasi-Shavazi, an ARC Future Fellow in the Australian Demographic and Social Research Institute, has won the 2011 United Nations Population Award.



The annual award is presented by the UN Population Fund (UNFPA) to an individual who has made outstanding contributions to population questions and solutions.

The award recognises Professor Abbasi-Shavazi's contribution to enhanced understanding of Iran's fertility decline.

# Indigenous war veterans' stories told



Professor Mick Dodson. PHOTO BY BELINDA PRATTEN.

A new research project will reveal for the first time the important role Aboriginal and Torres Strait Islander Australians have played in Australian war and peacekeeping.

The study, led by the National Centre for Indigenous Studies (NCIS) in partnership with the Australian Centre for Indigenous History, will focus on the contributions of Indigenous personnel to all conflicts and peacekeeping operations since the Boer War.

"Honouring the service contribution of Indigenous Australians to the nation is a vital part of the reconciliation process and will feed into new and richer understandings about Australian identity and history," says NCIS Director Professor Mick Dodson.

"If action is not taken soon, important history will be lost, particularly the oral history held by Indigenous elders and the families of Indigenous war veterans which is at immediate risk." ■

## Story of Japanese outback historian lives on

The story of a young Japanese historian living in the remote outback has come back to life seven years after his death, with the launch of his book at ANU.

*Gurindji Journey* recounts former ANU student and academic Dr Minoru Hokari's experience living for a year with the Gurindji people in the Northern Territory – where he researched Indigenous modes of history telling and practice.

The book was first proposed by Dr Hokari's former supervisor and colleague, Director of the Australian Centre for Indigenous History, Professor Ann McGrath. Professor McGrath said the posthumously published book was a way of celebrating Dr Hokari's unique and profound contributions to both the field of history and the people who knew him.

"The passing of Dr Mino Hokari, one of the brightest and most innovative young scholars working in



Dr Minoru Hokari.

Australian Indigenous history research, was a tragic loss to the field," she says.

"Mino was a trailblazing historian who, in a short time, made profound contributions to the field of history and found critical acclaim – in Australia, Japan and the wider world." ■



Professor Michael Cardew-Hall. PHOTO BY STUART HAY.

# ANU fund seeds innovation for the nation

**T**he University has officially launched a new multi-million dollar fund to assist innovation and research.

The fund was launched by CEO of ANU Connect Ventures and ANU Pro-Vice Chancellor for Innovation and Advancement, Professor Michael Cardew-Hall. He says the \$3 million Discovery Translational Fund (DTF) will transform concept into reality and provide a commercialisation path for technology-based ideas.

"The fund aims to translate good ideas, research and discovery into viable investment opportunities.

"Funding between \$25,000 and \$100,000 is available to eligible projects coming out of ACT-based research institutions, start-up companies and entrepreneurs.

"Thanks to this fund, which has been established with assistance from the ACT Government and MTAA Super Fund, these projects will get the kick-start they need in moving from the lab to the market place."

In addition to launching the DTF, the University has also relaunched the \$27 million Seed Fund managed by the ANU-MTAA Super Venture Capital Partnership, as well as opening a new innovation complex at 121 Marcus Clarke Street, Canberra.

Professor Cardew-Hall says the Seed Fund will be

made available to outstanding commercialisation prospects in the ACT, while the new complex will be a place for students, academics, business and the community to interact.

"ANU innovation activities use new research and discovery to meet commercial, social and environmental needs in the wider community," he says.

"The main purpose of our move to 121 Marcus Clarke Street has been to bring these innovation activities together, as well as engage and strengthen existing relationships between ANU and the wider business and public service sector.

"We now have, under one roof, the capacity to support the commercialisation of breakthrough discovery and new ideas.

"The new complex has created an innovation hub that not only serves ANU but also the local and national innovation community, confirming Canberra's place as the nation's knowledge capital."

The ANU innovation complex at 121 Marcus Clarke Street brings together ANU Connect Ventures, ANU Edge and the ANU Office of Commercialisation and will be known as Innovation ANU. ■

## Picture of the past points to shared history

A new painting unveiled at ANU has put reconciliation with Indigenous Australians firmly in the frame.

The painting, *By the shores of History*, is a major work by ANU graduate and award-winning contemporary Indigenous artist Dr Dannie Mellor (pictured). It was commissioned by ANU to mark the significance of 2011 Sorry Day.



The artwork depicts native animals and Aboriginal Australian men from North Queensland, Mellor's mother's home, gathered around a memorial to Captain James Cook at Sydney's Botany Bay.

## Nuclear threat tackled by new initiatives

Worldwide efforts to stop the spread of nuclear weapons and eventually eliminate them have been boosted by the launch of a new centre at ANU.



The Centre for Nuclear Non-proliferation and Disarmament (CNND) will be headed by former UN Assistant-Secretary General Professor Ramesh Thakur (pictured) who will work with a small advisory group led by ANU Chancellor Professor Gareth Evans. The centre has been funded for its first two years of operation by the Australian Government and ANU, with support from the governments of Switzerland and Slovenia.

The centre will produce a regular 'state of play' report card on worldwide efforts to minimise the risk of nuclear weapons use, stop their spread and ultimately achieve their complete elimination.

## Hi-tech language lab opens at ANU

A new state-of-the-art facility is set to enhance the study of foreign languages through cutting-edge technology and teaching methods.

The Ethel Tory Centre gives students and staff access to the latest in technology-based, flexible and interactive language studies and ensures ANU continues to support more foreign languages than any other Australian university.

The new teaching and learning space features five studios – one for video conferencing, one for collaborative learning and three for teaching. The studios use digital, satellite and Internet technology to connect classrooms, teachers and students across the globe.

# life sentences

In the wake of the announcement of the Queen's Birthday Honours List for 2011, postdoctoral fellow **KAREN FOX** explores the intersections between the Australian honours system and the Australian Dictionary of Biography.

**T**he Australian Dictionary of Biography (ADB) and the Australian honours system, administered by the Honours Secretariat in the Governor-General's Office, have a lot more in common than might at first be imagined.

Both are national institutions recognising the lives of significant Australians, both comprise galleries of characters who have had an impact on the nation, and both are select companies (more than 200,000 people have been honoured since 1901, while just over 12,000 biographies will be included in the ADB by the end of 2012).

There are some considerable points of difference, too. For one, appointments to the Order of Australia are not made posthumously, whereas death is a prerequisite for inclusion in the ADB. Though honours systems have often been a target of criticisms over process and outcome, an honour is given for high achievement or important service to the community, and can be revoked if the recipient commits an offence or brings 'disrepute' on the Order. The ADB, as part of its mission to depict Australian life in all its varieties, includes not only people selected as representative of particular social groups, but also several people who might best be described as notorious – among them convicted murderer Eugenia Falleni (c.1875–1938) and bushranger Captain Thunderbolt (1835–1870). And finally, while one has to be an Australian citizen to be nominated for appointment to the Order of Australia, inclusion in

the ADB does not require Australian birth, but only that one has made a significant contribution to the nation.

The ADB began its life in 1959, with its first volume published in 1966; the Order of Australia was established by the Whitlam Government in 1975. Gough Whitlam was attracted to the model of national honours adopted in Canada, based around the Order of Canada, which had been created in 1967, the centenary of Canadian Confederation. Australians remained eligible for imperial honours for some time, as Malcolm Fraser's government reinstituted the practice of making recommendations for British honours and some state governments also continued to make such recommendations. Though Paul Keating announced in 1992 that no further recommendations would be made for British awards, Australians may still receive honours in the Queen's personal gift, such as the Royal Victorian Order.

Today, the Australian Government website *It's An Honour* provides a record of the many thousands of Australians honoured since Federation in 1901, while the ADB offers over 11,000 biographies of those who have shaped Australia. Many honoured individuals appear in the ADB, especially those appointed to the upper levels of an order of chivalry like the Order of the Bath or the Order of St Michael and St George. A search of the ADB Online yields 1068 Sirs and 23 Dames – the imbalance a reflection of the small number of women who received such high honours.



Eugenia Falleni, also known as Harry Crawford, was one of early Australia's most notorious criminals. PHOTO COURTESY OF JUSTICE & POLICE MUSEUM, HISTORIC HOUSES TRUST, SYDNEY.

The National Centre of Biography's new initiative, *Obituaries Australia*, includes links to honours that individuals received during their lives, which will eventually allow researchers to track cohorts of honoured people.

In a new project located in the NCB, I am investigating the history of honours in Australia, from the early bestowal of imperial honours on colonial administrators, through to the democratisation of honours that began with the establishment of the Order of the British Empire in 1917 (the first order open to women in their own right), and the creation of Australia's own national system of honours. A collection of essays telling the history of the ADB is also due to be published soon. Together, the two projects will give these national institutions recording the lives of significant Australians life-histories of their own. ■

# word watch

The Australian National Dictionary Centre is a joint venture between Oxford University Press and ANU. Director **BRUCE MOORE** takes a look at Australian rhyming slang.

**H**ave you, or a member of your family, ever complained about being relegated to the magoos or the scooby doos? These are recent examples of Australian rhyming slang for 'twos', referring to the 'reserve or seconds team of a sporting club'. Magoos alludes to the nearsighted Mr Magoo, an animated cartoon character created in 1949 by United Productions of America, and scooby doos alludes to Scooby-Doo, another American animated cartoon character, this time a dog.

A surprising feature of the history of rhyming slang is that it appears very late. The slang books of the 18th Century and the first half of the 19th Century know nothing of rhyming slang. In Britain, rhyming slang is first mentioned in JC Hotten's *The Slang Dictionary* (1859). The first evidence of rhyming slang in Australia occurs two years earlier, in 1857, when jimmygrant appears as rhyming slang for

'immigrant'. But rhyming slang does not become common in Australia until the beginning of the 20th Century, no doubt influenced by London or Cockney rhyming slang. It was at this stage (about 1910) that pomegranate became a rhyming slang synonym for jimmygrant the 'immigrant', on its way to truncation into pom and pommy.

The most productive period for Australian rhyming slang was the Second World War. Examples include: she's apples (abbreviated from apples and spice = 'nice'), billy lid 'kid', comic cuts 'guts', dead horse 'sauce', fiddly-did 'quid', Joe Blakes 'the shakes', charlie (abbreviated form of Charley Wheeler, a painter of nude women) 'sheila', Dad and Dave 'shave', on someone's hammer (abbreviated form of hammer and tack) 'back', mallee root 'prostitute', Ned Kelly 'belly', Noah's ark 'shark', and Warwick Farm 'arm'. Characters, real and fictional, live on in rhyming slang:

Adrian Quist (the tennis player) 'pissed', Captain Cook 'look', Ginger Meggs 'legs', Harold Holt (or, simply, Harry) 'a bolt, a disappearing act', Lionel Rose 'nose', and Wally Grout 'a shout (of drinks)'.

At first glance, it might seem surprising that Australian rhyming slang has recently fastened on to two American cartoon characters, Mr Magoo and Scooby-Doo, to create new terms. But long before that, Australian English picked up the name of an American gangster, and turned Al Capone into Australian rhyming slang for 'phone'. And Mickey Mouse has been rhyming slang for 'grouse'. Rhyming slang is no longer a major feature of Australian English, but there is still some life in the Old Jack Lang (Australian rhyming slang for 'slang', from the name of the Premier of New South Wales 1925–27, 1930–32)! ■



# Stacking up the stakes

Associate Professor Jonathan Mond and Dr Tanya Davidson. PHOTO BY BELINDA PRATTEN.

The latest ANUpoll suggests that Australians are torn when it comes to the regulation of gambling activity. By **TANYA DAVIDSON** and **JONATHAN MOND**.

**T**he regulation of gambling activities is currently under review in Australia and changes, such as the introduction of mandatory pre-commitment schemes for electronic gaming machines, have been recommended. The most recent ANUpoll gives an idea of how the public feels about these issues.

The findings strongly suggest that the public is aware of adverse consequences associated with gambling and, in turn, the need for some degree of government regulation. Most respondents agreed that there are too many opportunities for gambling nowadays (84 per cent), that gambling is dangerous for family life (80 per cent), that gambling should be discouraged (69 per cent) and that gambling in Australia should be more tightly controlled (70 per cent). Further, fewer than one in five participants (16 per cent) agreed with the statement that, on balance, gambling is good for society.

At the same time, however, respondents were concerned that any moves to tighten gambling regulation not go too far. Some 67 per cent of respondents believed that people should have the right to gamble whenever they want, while less than one-quarter of respondents (24 per cent) believed that it would be better if gambling was banned altogether. In addition, a substantial minority of participants (42 per cent) believed that the government has no right to restrict a person's gambling.

Of particular interest is that almost three-quarters of respondents (74 per cent) agreed with the statement that people should be limited to spending an amount they nominate before they start gambling. This finding is notable given the Federal Government

“**Most respondents agreed that there are too many opportunities for gambling nowadays, that gambling is dangerous for family life, that gambling should be discouraged and that gambling in Australia should be more tightly controlled.**”

proposal to introduce a mandatory pre-commitment scheme for electronic gaming machines. Also of interest, in light of recent debate surrounding the advertising of betting odds during live sporting events, less than half of respondents (46 per cent) believed that gambling activities are advertised responsibly.

Although respondents' own gambling behaviour was not a focus of the survey, the inclusion of a question addressing participation in any gambling activity during the past 12 months made it possible to consider whether and how beliefs about gambling related to actual gambling behaviour. As might be expected, respondents who gambled regularly were less likely to be in favour of restrictions on gambling activity than non-gamblers. Even among the most frequent gamblers, however, there was considerable

support (67 per cent) for the idea that people should be limited to spending a nominated amount before they start gambling.

In another section of the survey, participants were given a list of various gambling activities and were asked to nominate which of these activities they have in mind when thinking about 'problem gambling'. The activity that participants most often nominated first was poker or gaming machines (69.4 per cent), followed by horse or greyhound racing (14.2 per cent) and tables games at a casino (9.4 per cent). Very few respondents associated problem gambling with instant or other lottery tickets and games such as bingo or Keno.

The findings from the ANUpoll on gambling suggest that the public is aware of adverse consequences associated with gambling and, in turn, the need for at least some regulation of gambling activity. Further, support for such efforts may be strongest when it comes to poker machines, since this is the activity most often associated with problem gambling. However, most Australians also believe that people should have the right to gamble whenever they want and less than one-quarter believe that it would be better if gambling was banned altogether. ■

The latest ANUpoll can be found at: [publicpolicy.anu.edu.au/anupoll](http://publicpolicy.anu.edu.au/anupoll)

Dr Davidson is Director of the Centre for Gambling Research in the School of Sociology. Dr Mond is Associate Professor in the School of Sociology. ANUpoll is a survey of Australian public opinion regarding issues of national significance.

# Putting science into practice

Climate science and climate scientists have increasingly come under attack as the public debate over climate change rumbles on. **JANETTE LINDESAY** writes that helping the public understand the process of scientific study might be the key to breaking the deadlock.

**A**s a climatologist I have been working in climate science for nearly three decades, researching the nature and drivers of the variability of climate over the last 150 years in southern Africa and Australia. My work contributes to developing approaches to seasonal prediction, and investigating in detail trends and fluctuations in rainfall and temperature and some of the impacts of these changes. I work with the observational data collected at weather stations around the world, and with the data produced by increasingly sophisticated weather and climate models.

My early motivation in engaging with this area of science was a deeply rooted desire to understand the things that I observed and found fascinating in the natural environment; weather, climate and their role in the Earth system. That is still what motivates me. Like most scientists, I am driven by curiosity and by the desire to contribute to a clearer, more detailed and precise understanding of the world. I am also committed to sharing my knowledge through education in its broadest sense, and in that process expanding my own understanding and perspectives.

I see the essential practice of science as based on a combination of well-informed curiosity, tenacity (and patience!) and rigour. Scientific insights are frequently the result of a well-trained, well-prepared mind observing something (which may be quite unexpected) that gives rise to the question 'Why?' – and then pursuing an answer to that question, which is where tenacity and rigour come to the fore. Rigorous questioning is at the heart of the practice of science, and constitutes the scepticism that is fundamental to that practice.

The understanding that human impacts on the Earth system are a cause of observed increases in global average temperature in the last 30–40 years arises from a substantial body of science that has its roots in the work of Priestly (mid-18<sup>th</sup> Century), Arrhenius (1896), and others. The great majority of climate scientists, who concur with this statement, have arrived at this understanding through a process that is based on scientific scepticism.

We test and probe the observations, the hypotheses, the analyses and findings of both our own work and that of

others working in the field. We read the scientific literature, discussing our ideas with colleagues, and test explanations of observed phenomena and relationships against other possible explanations.

When we complete a research project, we present scientific papers for peer review prior to publication, ensuring that work that is published has been scrutinised by knowledgeable and well informed peers with appropriate background to be able to critique the work and the findings. Once it is published, the work is open to broad scrutiny and questioning, and forms the basis for our own and others' future research to address the questions that remain unanswered. It is by finding the gaps in the work and understanding of others that science advances.

The application of a sceptical approach may lead to the conclusion that the idea being considered is correct, or that it is flawed and needs further testing and analysis.

Importantly, we should be mindful of the fact that our understanding is shaped by the state of current knowledge in the field of interest. The

best scientific thinker could not have understood the role of greenhouse gases like carbon dioxide and methane in global warming without the ability to measure and identify these gases and to test their physical properties, including their capacity to absorb heat. The scientific advances during the 18<sup>th</sup> and 19<sup>th</sup> centuries that brought this understanding changed the view of how part of the Earth system works. There will continue to be advances in scientific knowledge that will change our understanding in the future.

This is part of what may seem the puzzle of scientific uncertainty. As scientists we are open to the possibility that there is likely to be something we do not fully understand in what we are studying. We present the probability of our findings being correct on the basis of current understanding, and deal with the weight of evidence because, if we are rigorous, we do not have absolute certainty.

This does not mean that the great majority of climate scientists are in disagreement about the nature and causes of current climate change, or about the seriousness of the potential

A portrait of Associate Professor Janette Lindesay, a woman with short blonde hair, wearing a grey tweed jacket over a white collared shirt. She is seated at a wooden table, looking directly at the camera. The background is a vertical wood panel wall.

“  
[We] deal with  
the weight of  
evidence because,  
if we are rigorous,  
we do not have  
absolute certainty.  
”

Associate Professor Janette Lindesay. PHOTO BY BELINDA PRATTEN.

future consequences of continuing global warming. It also does not mean that our understanding of the climate system, and climate change, is insufficient to form the basis for policy decisions on addressing anthropogenic climate change.

It does mean that these scientists are practising their discipline with rigour.

Some aspects of the current public discussion of science in Australia, which happens to be focused on climate change science at the

moment, are of particular concern. The discussion frequently reveals a lack of understanding of the actual state of scientific knowledge and consensus in this area; it shows that the nature of scientific uncertainty, and what that means, is not well understood; and it demonstrates that there is a general lack of understanding about how science is practised.

At the same time, we are increasingly dependent on science and science-based understandings of the world to

support the living standards to which we are accustomed or to which we aspire, a dependence that is becoming more acute as the resources of the Earth system are stretched beyond sustainability.

If the community loses its respect for the rigorous processes of science and its findings, the motivation for the next generation to seek careers in science is likely to be diminished, to our great cost.

Effective public engagement with the findings of science requires a more informed understanding of the nature of science and the role of scientists. Effective science education, in schools, universities and other tertiary institutions, and in the community, has never been more important. ■

**Associate Professor Janette Lindesay** is the Deputy Director of the Fenner School of Environment and Society, and a Deputy Director of the ANU Climate Change Institute.

# In the shadow of Fukushima

The terrible twin disasters of earthquake and tsunami that devastated parts of Japan in March have also caused nuclear misery in a country with a dark past, writes **RIKKI KERSTEN**.



Professor Rikki Kersten. PHOTO BY BELINDA PRATTEN.

A dark symmetry permeates the aftermath of Japan's triple emergency of 11 March. The fact that a major nuclear accident has occurred in a nation that is also the world's first nuclear victim country holds a particular fascination. What has been learned since 1945? How does a mature democracy handle information about radiation contamination, given the horrific precedents of Hiroshima and Nagasaki?

While there are significant differences between an act of war and an act of nature in the form of a massive earthquake and destructive tsunami, there are disturbing similarities between 1945 and the present.

The propensity to withhold, misrepresent or mismanage information concerning nuclear issues remains tangible. After the bombing of Hiroshima and Nagasaki in 1945, the atomic bomb became hostage to Cold War enmity and atomic censorship became the policy of the mainly US occupation forces in Japan. Information concerning the human suffering on the part of the victims of those bombings was delayed until the Occupation ended in 1952. The powerful writings of Wilfred Burchett and John Hersey arrived in a Japan that was newly independent and grimly determined to look forwards, not backwards.

In 2011, Prime Minister Naoto Kan's efforts to force the nuclear plant operator Tepco to deliver accurate and timely advice has put him into a diabolical position. Slowly but surely, the inaccuracy of Tepco's information has gradually become known to an increasingly distrustful public. In relaying information from Tepco to the people, Kan has become tainted with the same mistrust that envelops the nuclear industry in Japan.

This is not merely a consequence of collusion between

“There are disturbing similarities between 1945 and the present.”

industry and bureaucracy, though this is one of the problems that the Fukushima disaster has brought into sharp focus. Kan is acutely aware that the roles of industry promotion and regulation must be separated, not only in the nuclear power sector but throughout Japan's public sphere.

The history of Japan's hitherto thriving nuclear industry is itself cause for popular scepticism, as industry and regulators have competed with each other in the obfuscation stakes whenever a nuclear industry accident or botched safety inspection has belatedly come to light.

The focus of concern on the part of Japanese civil society that is emerging after the trauma of 3/11 rests at a deeper level, that of the collapse of trust in the capability and benevolence of authority.

After 1945, Japanese victims in Hiroshima and Nagasaki were eventually offered state support in the form of health, housing and other services, but this assistance came attached to a demand that these sufferers accept the label of 'irradiated persons'. This double victimisation, and the social ostracism that still attaches to that victim identity, remains a live issue in contemporary Japan.

As the Fukushima victims step forward for health checks, radiation monitoring and housing support, we can only hope that this pattern of assistance coupled with ostracism does not become the fate of



The Fukushima nuclear power plant. PHOTO BY DAVEEZA  
[HTTP://WWW.FLICKR.COM/PEOPLE/VIZPIX/](http://www.flickr.com/people/vizpix/)

the people who lived within a 40 kilometre radius of the Fukushima plant. Japanese authorities envisage that monitoring of potentially affected persons will continue for at least 30 years. Anecdotal evidence is not encouraging, as survivors who have moved south to try to reclaim their lives encounter prejudice and superstition from their fellow citizens. This deficit of trust can be attributed in large part to decades of nuclear misinformation since 1945.

In the long shadow of Fukushima, we see more than an echo of past suffering. We discern an urgent need for government to re-occupy the moral high ground. Japanese authorities must restore trust, not only in themselves but also in society at large. It is only through the fusion of responsibility with trust that civil society can function and rejuvenate itself as it endures sustained trauma. ■

Rikki Kersten is a Professor of Modern Japanese Political Thought in the ANU College of Asia and the Pacific.

# Does absinthe make the heart grow fonder?

A new ANU study is looking at the link between liquor and love, writes

JAMES GIGGACHER.

Courtship has dramatically changed since the tragic days of the star-struck lovers Romeo and Juliet. In the modern dating game, serenades and swordfights have been replaced by love coaches and online matching. There are even algorithms which crunch the numbers to help you find that, statistically speaking, 'perfect match'.

But some things never change, such as how a drink or two can quiet dating nerves, which is the subject of a new ANU study. Psychology student Sonia Ip is exploring the link between alcohol and attraction. She wants to know why people drink during romantic encounters and what impact it has on the dating experiences of 18 to 25-year-olds.

"The idea behind the study is that alcohol will play a role in either enhancing or decreasing intimacy during a date," says the PhD student. "In general, alcohol relaxes a person and gives them courage and this can be pretty beneficial on a date.

"For any person, dating can provoke a level of anxiety and nervousness, no matter how experienced they are. And if you wanted something to come out of the experience, this would naturally create some anxiety as well.

"So what alcohol does in this situation is that it acts like a social lubricant which relaxes the person. You can talk more easily with each other and that way the date will go more smoothly.

"But it also really depends on the amount of alcohol that you drink, because there is a point at which a date goes downhill the more alcohol you consume. So overall the study aims to determine whether alcohol, and what amount of it, will enhance or decrease intimacy on a date."

Ip and her supervisor Dr Bernd Heubeck have spent the last four months surveying 290 young drinkers, asking them how much they drink and what they generally expect from a date. The next stage of the study will see Ip analyse her participants' survey



Sonia Ip. PHOTO BY MARTYN PEARCE.

responses while they hit the dating scene. Three months later they'll report back on the dates through a series of interviews that aim to gauge alcohol's impact on dating intimacy and expectation.

Ip wants to use her findings to help people better connect in their dating experiences and eventually find that special someone.

"I believe in love: as a scientist, as a girl and also as a psychologist. I see love everywhere. I even pick it up in things that other people don't see. And of course I believe in fairy tales. So hopefully my research will help other people find their fairy tale.

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I believe in love: as a scientist, as a girl and also as a psychologist.  
”

"What I'm hoping to do is to have more answers about how a relationship actually develops. I think in doing that I can help a lot of people in getting the romantic relationships that they want."

Because at the end of the day it's all about finding Ms or Mr Right, right? Now that's something we can all drink to. ■



Dr Victoria Mason. PHOTO BY BELINDA PRATTEN.

# Rights and wrongs

A project led by an ANU researcher aims to put the sidelined issue of economic, social and cultural rights in Palestine on the academic map. By **MARTYN PEARCE**.

Imagine, for a moment, that you have broken a limb – perhaps a leg, or an arm. But instead of properly setting it and putting you on your way to healing, your doctor simply bandages it up and sends you on your way.

Before long, you're back – your leg still broken, the problem every bit as serious as before. Your doctor treats you in the same way, and before long you're back again. An endless cycle without a lasting cure.

For Dr Victoria Mason, a researcher in the Centre for Arab and Islamic Studies and the School of Politics and International Relations, the fragile peace between Palestine and Israel is that broken limb; ever damaged, never healing and an issue that has ramifications far beyond the fractious borders of Israel and the Palestinian Territories.

Mason is the Chief Investigator on a three-year British Academy-funded project on 'Economic, Social and Cultural Rights in the Occupied Palestinian Territories'. These rights are the counterpart to civil and political rights in the international human rights system, but have historically been marginalised. To Mason, you can never hope for long-term peace between

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**Some Palestinians spend up to 40 per cent of their income buying additional water.**  
”

Israelis and Palestinians without addressing these issues.

“Economic, social and cultural rights are things like the right to water, adequate housing, freedom of movement, the right to food – basic existence rights,” she says.

“In Palestine, these rights are some of the core reasons that life is so difficult.”

And if you want an example of how difficult, she says, you need look no further than something most of us take for granted – access to sufficient water for your daily needs.

“Israel controls 80 per cent of the main source of water for the West Bank, with the Palestinians controlling the remaining 20 per cent. Additionally, 60 per cent of the West Bank is in 'Area C' – which is under Israeli civil and military control. Most of the water pipes go through Area C, so in order to do repairs or build pipes, there is a very convoluted permissions process

that means that very few are approved,” she says.

That administrative process is more than just a burden of paperwork and public servants; it also has very real outcomes for Palestinians.

“The World Health Organization recommends a minimum of 100 litres of water per person per day. Most Palestinians get about 70 litres of water each day, but some get as little as 20 litres. The average amount of water for Israelis is 300 litres, and for settlers it can be much more than that.

“Some Palestinians spend up to 40 per cent of their income buying additional water. Most of us would complain about spending that proportion of our income on rent, but Palestinians are paying it just to live.”

Mason's research project aims to bring together scholars, human rights lawyers and human rights practitioners working in the field of economic, social

and cultural rights in the Occupied Palestinian Territories. It has already spawned workshops in the West Bank and across the UK, and Mason has high hopes for the research creating something lasting.

“All of the workshops have been about building capacity and drawing people's attention to the issues,” she says.

“I hope, at the end, there will be a network of scholars, human rights lawyers and NGOs working on these issues who can continue to work together. I also hope that we'll have raised the profile of economic, social and cultural rights, both within the academic community and among the public.”

The issue of human rights in the region is a contentious one, and at times hard to unpick from the ongoing conflict between Israel and Palestine, but Mason is no stranger to big, difficult issues. She was born in South Africa to British parents, but raised in Perth. By the age of 16 she was engaged in human rights issues and took a trip back to the continent of her birth, visiting refugee camps in Zimbabwe with an aid organisation.

For the teenage Mason, it was the first



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In more recent years, Palestinians have shifted their modes of resistance dramatically – particularly in terms of undertaking non-violent resistance – and the international community needs to recognise and engage with that.

”

step in a career concerned with getting hands-on experience of human rights and social justice issues.

“From an early age I was interested in social justice and human rights issues. [After school] I started off doing a journalism degree, realised it wasn't for me and switched to doing Middle East politics. I was shocked at how the presentation of the region [in the media] was so different to how things in the Middle East actually were.”

The academic career that began with that switch has also allowed her to revisit the country of her birth. It's a place she sees as holding lessons for the Middle East.

“I was only in South Africa while I was a toddler, but I've always been very interested in the country. I got a chance to work on a project about the Truth and Reconciliation Commission. I think there are a lot of lessons that can be taken from that situation,” she says.

One of those lessons, she says, is that a failure to protect basic rights means that big state-level peace processes are doomed, however well intentioned they are.

“In peace studies we look at 'negative peace' and 'positive peace',” she explains.

“Negative peace is where you get a settlement, but it tends to be short-term because none of the underlying conditions have been addressed. Positive peace means the underlying conditions driving the conflict are addressed, so you're able to transform the situation.

“In the Israel/Palestine case there's an asymmetry of power between the Israeli state and the Palestinians, and that carried through the Oslo peace process. Israel has legitimate security concerns but that shouldn't cancel out

or negate the human rights concerns of the Palestinians.

“The reality is that, since the Oslo peace process, human rights violations against Palestinians have accelerated – they've got much worse. The amount of land that's been taken has accelerated, the same with house demolitions. And the water distribution inequalities were actually enshrined in the Oslo process.”

Mason acknowledges that there have been times when the actions of Palestinian political and military leaders have set their people back in the eyes of the international community, even while they were making strides towards lasting peace.

“When Palestinians have used armed struggle and resistance, particularly through suicide bombings, that has damaged how they have been seen by the international community.

“However, in more recent years, Palestinians have shifted their modes of resistance dramatically – particularly in terms of undertaking non-violent resistance – and the international community needs to recognise and engage with that.”

But despite the difficulties faced by Palestinians and the fragility of peace in the region, Mason still sees hope for the future as long as all sides can keep talking.

“To make peace you've got to talk to your enemies,” she says.

“Peace in South Africa wouldn't have been achieved without the apartheid government talking to the African National Congress, and peace in Northern Ireland wouldn't have happened without talking to Sinn Féin and the IRA.

“I think that peace is possible, and I'm interested in it because I think it's something that can be changed.” ■

A West Bank checkpoint. PHOTO BY CHRIS YUNKER/Flickr.



Dr David Nisbet in the lab.

# Engineering better bodies

Engineers are helping to rebuild human tissue in collaborative work that will lead to real medical breakthroughs. By **LEANNE O'ROURKES**.

**W**hen faced with a personal medical problem, most of us would consider approaching a health professional. Then, if the experience was positive, we'd probably thank doctors, and maybe consider the contribution of medical researchers. But not many of us would think of praising the work of engineers. In many cases, however, we should.

For materials engineer Dr David Nisbet, a research fellow in the ANU College of Engineering and Computer Science, the opportunity to use his expertise to help people is never far from his mind. Among his diverse research projects, he's looking into applying his engineering expertise to materials that could help damaged brain and spinal cord tissues regenerate.

"We're hoping to develop a successful treatment for central nervous system (CNS) injury and diseases like Parkinson's by encouraging stem cells to repair damaged tissue," he says.

"At the moment, there's no effective cure for CNS damage so any advances in the area would have a very high impact on affected people and their families.

"To develop a treatment, we're using polymer nanofibres – biodegradable plastic fibres that are 100

times smaller than the human hair – that create a physical and chemical environment which 'teaches' stem cells how to develop.

"Basically, it's like building scaffolding to support the construction of a building, which is removed once the structure is finished. We want to repair the nervous system so we build nanofibre scaffolding, cells grow and develop within it and then it degrades away."

Nisbet was recently awarded the 2011 Victorian Fulbright Scholarship while he was completing his postdoctorate studies at Monash University. The grant will see him spend six months at The University of California, Berkeley in the USA furthering his research.

"I'll be looking at developing more advanced methods of attaching proteins to the surface of the 'scaffolding' to replicate the features that are there during development," he says. "The aim is to trick the body into thinking it's not an adult, believing instead that it's embryonic which will encourage CNS tissues to grow."

The role of engineers in medical science is wide-ranging, with application in areas from tissue and genetic research to designing clinical equipment or medical devices like pacemakers and dental implants.

"In every single surgery, medical practitioners use materials like scalpels or dissolving sutures that have been developed by engineers," says Nisbet. "In the past, clinicians have tended to take these things for granted, but now there's a shift towards realising that to make significant medical advances you need to have interdisciplinary action."

Nisbet is passionate about contributing what he hopes will be high-impact research that will one day provide some relief for people confronted with brain and spine-related problems.

"If something I do shows promise, then other people can start from where I finished and branch off in different directions," he says. "That's what excites me. The prospect of making a leap forward that is useful to other scientists so that the cycle can continue and someone might have another innovation down the track.

"I'm really interested in breakthrough science which is where materials engineering in a medical context comes in for me. Like renewable energy and the environment, for example, it's an area that will continue to benefit society because it's clinically relevant and has an application with impact." ■

# Alice in Antarctica

Alice Giles has followed in the family footsteps with a once in a lifetime trip to Antarctica, with her harps in tow. By **MARTYN PEARCE**.

For most of us, the ice-bound stark and barren landscapes of Antarctica will forever be the stuff of imagination – the last great unexplored expanse at the edge of the world.

But for Alice Giles, Head of the Harp Area in the ANU School of Music, the frozen wilderness of Antarctica is in the blood. This year, Giles packed up her harps for the trip of a lifetime, inspired by her grandfather, Dr Cecil T Madigan. Dr Madigan was a member of the first Australasian Antarctic expedition of 1911–1914 – the team led by the legendary explorer, Sir Douglas Mawson.

It's a history that has proven to be inspirational for the musician.

"As a child I was brought up with the idea of Antarctic exploration and found it fascinating. I never met my grandfather, but as a young girl I would hear tales about his journey and the subsequent crossing he did of the Simpson Desert. I was very proud of him and looked up to him – he was one of the last explorers," says Giles.

Among the scientific stations, penguins and elephant seals, a musician may be a surprising addition to the frozen landscape. So how did the harpist and academic end up in Antarctica, following in the family footsteps?

Giles wanted to do something to commemorate the centenary of the Mawson expedition, so she applied for the Australian Antarctic Division Arts Fellowship.

"Most past participants of the Fellowship have been visual or sound artists. This is the first time there has been a classical musical performer," she says.

She set off by boat in February on the one-month

round trip. It would be five days before she saw her first iceberg, and 14 before she arrived on the solid frozen ground.

"I liked the fact that it took a long time because you got a different sense of time and space by being on the ocean for all that time.

"There was very little life to be seen during the voyage, just the odd whale or bird. But when you have a hectic life it takes a while to get into a different place," she says.

Not that Giles was completely alone. In addition to the two harps she took along – a full-size electro acoustic and a small blue custom-made composite instrument – Giles also had a worldwide audience for her adventure through her blog.

"The blog was interesting," she says. "I'm not a blogger, but I really enjoyed it. It became my performance – a continuous update of ideas. I enjoyed developing a creative writing side and having that interaction with people. I felt like I was doing something all the time, and that kept me in the mode."

While en route Giles put together a performer program for her time at Mawson Station. It was to become the first full concert program performed on the continent and featured music which had a special resonance for her and her family.

"I put together the program by reading through the diaries of my grandfather. In the program I sing two songs that he was always called on to sing, because the people on his expedition had to make their own entertainment. When my mum heard me sing she got a bit teary because she remembers him singing those songs," says Giles.



The harpist also took down some pieces specially composed for the trip, and recorded Antarctic sounds for use by School of Music students, such as the sound of ice breaking and the wind blowing through the strings of her harps.

But while the weather was too harsh to allow for an outside concert, she was able to get out and play a few notes to a select audience of elephant seals.

"The seals didn't pay much attention to humans. I was terrified of them – it was a new kind of performance anxiety, and I made mistakes. It felt quite surreal," she says.

"Taking the harp out on the ice felt other-worldly, but it helped me make a connection with the continent."

All too soon, it was over and Giles was on the long boat trip home. But not before she had a lesson in the unpredictability of the Antarctic.



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I was terrified of [the  
seals] – it was a new kind  
of performance anxiety.  
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“At Mawson they cancelled the helicopter [back to the boat] because of high winds. I knew that the ship wouldn't wait forever and that it could mean I'd have to wait until the next voyage.

“Even though getting to and from Antarctica is easier now than 100 years ago, it makes you realise that you're at the mercy of the weather.”

Had the boat left without her, it would – like the trip itself – have continued a family tradition. Her grandfather's one-year expedition became two years after their ship left without the whole party to prevent getting frozen into a rapidly chilling bay. His diaries, says Giles, tell of both the horrendous conditions and the strength of the human spirit those left behind displayed.

“The diaries tell of the men left behind, confined to this small cold space, their sleeping bags sticking to the walls because of the ice and the team trying to keep the snowdrift coming into the hut,” she says.

“My grandfather was engaged to be married, but ended up being away for more than two years. We have the letter he wrote back when he had to stay behind. It was the last thing he wanted, but he felt obliged.

“But the diaries show that they all keep incredibly cheerful, even though they spent most of their time confined inside. There was a strong sense of camaraderie.”

And even though she never met Madigan, Giles believes he would have been as proud of her expedition as she is of his.

“I think he would have been proud and fascinated by the adventure because he was an adventurous personality.

“For me, it was a once in a lifetime experience. But if I had the opportunity I would go again – it was a huge wrench to leave.” ■

To find out more about Alice Giles' trip to Antarctica, see videos and read the blog: [aliceinantarctica.wordpress.com/](http://aliceinantarctica.wordpress.com/)

# Insurgent intellectual

In a career spanning almost 50 years, Professor Des Ball has worked on ballistic missile defence, nuclear strategy, signals intelligence and Asia's long-term stability. He talks to **NICHOLAS FARRELLY** about a life of both reflection and action.

**In 1966 during anti-Vietnam War protests you had a run-in with the law. Can you talk us through what happened?**

In 1966 I was going through a quite significant philosophical change. I still believed in the Vietnam War but I was an outspoken opponent of conscription. Forcing people to do something seemed to be against the values for which we were fighting in Vietnam. So I went to a number of demonstrations in Canberra where I put aside my views about the war and spoke against conscription.

At one protest I climbed up a statue of King George V. When asked to come down by the police I refused. They put up a ladder, pulled me down and charged me with offensive behaviour. The next day *The Canberra Times* and *The Australian* both carried front page stories with the headline 'Prize winning economics student arrested'. When it did come to court I was found guilty and fined \$10.

Kep Enderby, who was a member of parliament later on, but in those days was a junior member of the law faculty here at ANU, came to see me and said "Let's appeal this decision". We went to the Supreme Court where it was heard by Justice Sir John Kerr who found in my favour. Kerr argued that the Australian public should be mature enough to hear alternative views, whether or not somebody was expressing those views by sitting on a statue.

**At the start of your career you could have gone down two different academic paths – economics or strategic studies. What led you down that second path?**

My former economics mentor, Sir John Crawford, had been instrumental in setting up the Strategic and Defence Studies Centre at ANU in 1966. He had also been personally involved in bringing Hedley Bull to ANU as a professor in international relations. He told me about some of Hedley's work and introduced me to him.

As a result of that meeting I decided that I would leave economics behind and move in to strategic studies. About nine months into my PhD, Hedley arranged for me to go to the Institute of War and Peace in the US to help focus my research. There I spent a lot of time in underground missile silos working with some of America's nuclear weapons, like the 1.2 mega tonne Minute Man 2 – a warhead a thousand times bigger than the Hiroshima Bomb.

I was also working on the most secret matters that it was possible to work on, as well as being involved in work for US President Jimmy Carter. As President he had inherited a strategic nuclear policy which included plans for fighting so-called limited nuclear wars. I had produced a study which showed that those plans were seriously flawed – once you started using nuclear weapons on any serious scale, you so disturbed, damaged or destroyed the command and control architecture that very soon a limited exchange would degenerate into an all-out nuclear exchange.

**In your time you have been investigated by the Defence Security Branch and the Australian Security Intelligence Organisation (ASIO). Do you think the resources spent following you around was money well spent?**

ASIO started taking an interest in me in 1966 when I was involved in anti-war protests. But in 1969 ASIO really upgraded its levels of interest in me because I had started to take an interest in Pine Gap.

The CIA had asked ASIO who is this guy who is interested in Pine Gap? At that time I did not know that Pine Gap was a CIA facility and they certainly did not want that to be known.

When I look at my file, I'm not surprised that ASIO had taken an interest in me through those years. But I suppose two things surprised me; one was just the extent of their interest and the other was the extent of the resources that they devoted to me. I think that ASIO had lost the plot by then. ASIO was formed for a very specific purpose, which was to identify a group of Australians who were working for the KGB in the late 1940s.

Today we have double the amount of people whose job it is to go round the Australian community trying to find terrorists. This is really what it has come down to. I think that terrorism and counter-terrorism has, to a large extent, been taken out of proportion to what the real threat is internally in this country. I could be proven wrong, but the enormous amount of resources that are being devoted to this subject outweigh the real threat.

**In more recent decades you have looked at security issues in the Asia-Pacific region with a focus on mainland Southeast Asia. What first got you interested in that part of the world?**

I had started looking at some security issues in East

Asia and Southeast Asia in the 1980s. I had also been involved in assisting and, in some cases, playing the leading role in setting up strategic studies centres in Southeast Asia.

In the mid-1990s I was still interested in signals intelligence and got involved in a project looking at Burmese communications, and Burmese signals intelligence. In the later part of the 1990s this resulted in a book called *Burma's Military Secrets*. To put that book together I got to know some of the ethnic insurgent organisations along the Thai-Burma border.

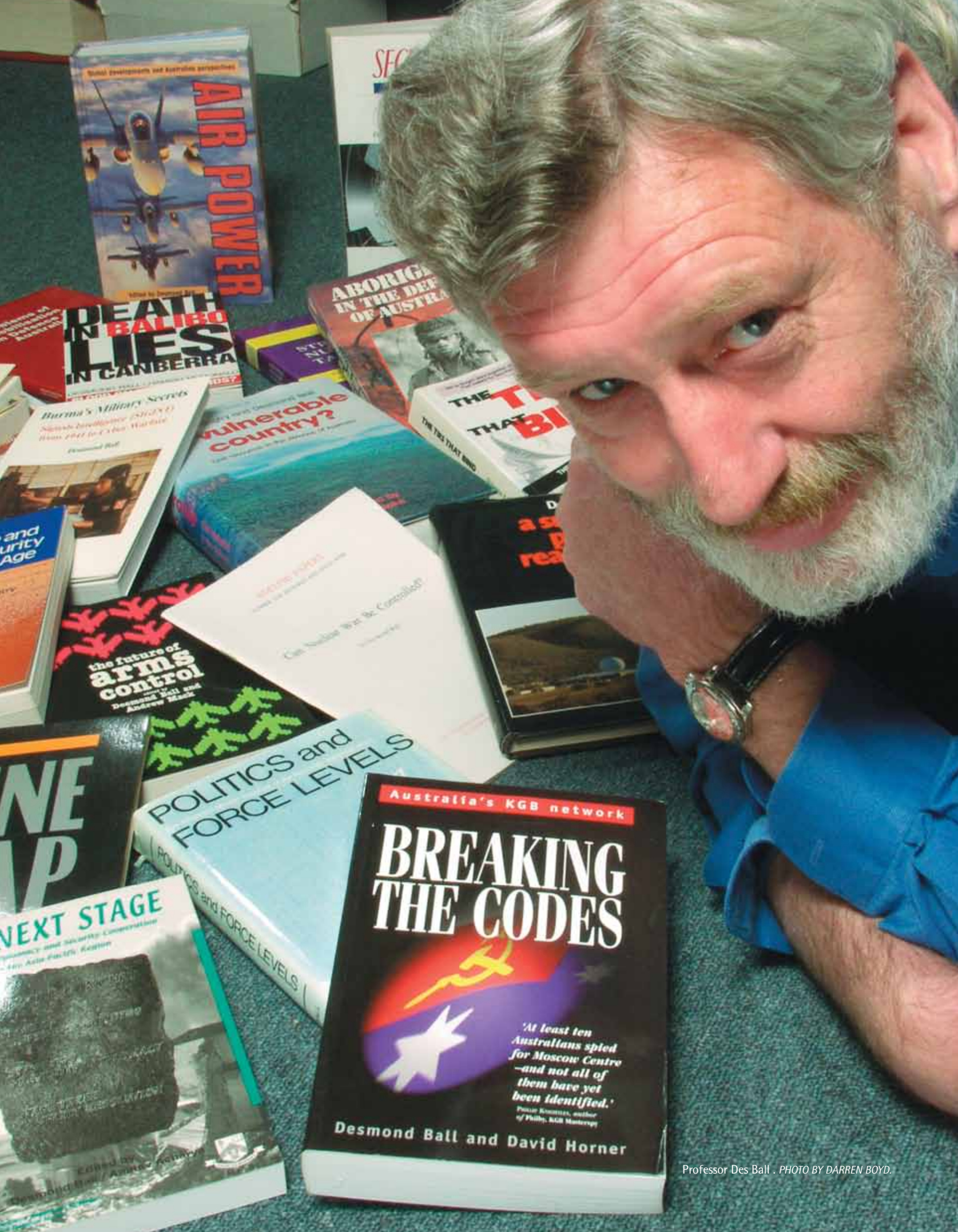
**Since then you have spent a huge amount of time going up and down the border between these two countries. What is it that gets you up there all the time and keeps you inspired to continue this work?**

Two things, I suppose. One is that through the process of monitoring communications I got a very real understanding of the extent of human rights abuses that were being committed by Burmese army units against villages.

The other is a personal commitment to some of those ethnic groups. If I am really such an expert in strategic and defence matters, as I am sometimes portrayed, then I think that I have an obligation to apply some of that expertise to assisting some of those ethnic armed groups. So where I think I have expertise that can help them I believe that I have an obligation to apply it. And that is really what I have been doing over the last decade up there.

There are instances where the Burmese army would go into villages and would take away as many as 25 or 30 young women. They would have their way with those young women, they would put them in bark and thatch huts and set fire to those huts or they would machine gun those huts and just kill all of those young girls. I mean there are aspects of that which are really quite sickening and led me to decide that I couldn't really stand aside. There was no way that I could come back to Australia and pretend that I didn't know about this; and having known about it I wasn't not going to do something about it. ■

This interview is an excerpt from *Mentors* – a pilot video series which explores the careers of ANU academics and the significant contributions they have made to their field of expertise. Watch the full interview online soon at ANU Channel on YouTube.



Australia's KGB network

# BREAKING THE CODES

'At least ten  
Australians spied  
for Moscow Centre  
—and not all of  
them have yet  
been identified.'

Pauline Krumm, author  
of *Philly, KGB Master Spy*

Desmond Ball and David Horner

Professor Des Ball . PHOTO BY DARREN BOYD.

# Cancer goes back to basics

Astrobiologist Dr Charley Lineweaver's new spin on cancer theory paints an optimistic picture of a limited and predictable adversary. By **TEGAN DOLSTRA**.

**T**wo opponents face off for battle. One can chop and change between an unlimited arsenal of deadly weapons and state-of-the-art armour. The other has only their fists to fight with. I know which I'd rather face.

The current view of cancer is as the fully-armed opponent; able to evolve to evade anything we throw at it. But ANU astrobiologist Dr Charley Lineweaver believes we may actually be fighting a much less intimidating opponent.

As an astrobiologist, Lineweaver spends most of his time pondering whether we are alone in the universe. But he was recently called upon to turn his gaze from the stars to the origins of cancer. The switch was an unlikely consequence of the global financial crisis.

"Most oncologists are trying to save someone's life; they don't have time to theorise about cancer," says Lineweaver. "With money received as part of the GFC stimulus, the US National Institutes of Health said: 'The oncologists need help to think up some lateral approaches to cancer'.

"So Paul Davies of Arizona State University – a long-term collaborator of mine – put in a bid to get oncologists together with other scientists. Paul has a very good nose for important questions and what to put together to help solve them."

Lineweaver, whose father was a high school biology teacher in New York, says he was the obvious choice for go-between.

"Paul knew the oncologists knew all the details of cancer but very little of the evolution of it. I have every book Stephen Jay Gould has ever written; it's all I read for 10 years, so I have this big picture view of evolution hardwired into my head in a way almost no other astrobiologist has. So the idea was for us to put our heads together."

The resulting interdisciplinary meeting of the minds led to a paper reconceptualising cancer, published by Lineweaver and Davies in *Physical Biology*.

Cancer occurs when cells "go

haywire", reproducing and spreading uncontrollably. This aberrant behaviour requires a variety of complex and cooperative abilities.

According to Lineweaver and Davies, the current theory that cancer cells evolve these abilities through intense selection pressure acting on random mutations over several decades (what they term 'internal Darwinian evolution') doesn't hold water.

Instead, they believe that cancer is a relic from our past: cells that have switched to an ancient default setting as a coping mechanism when things go wrong. Sort of like a computer starting in Safe Mode when confronted with a software error.

"Our cells were once free living and always got to reproduce. In order to become multicellular, you've got to convince the vast majority of cells not to reproduce. And that's a difficult task; it took about 1.6 billion years and a lot of genetic regulation," Lineweaver says.

The astrobiologist-cum-oncologist

believes that when this outer layer of regulation is short-circuited by mutation, cells revert to the way they used to behave at the dawn of multicellularity, when humans were just a "loose-knit colony" of single-celled organisms.

"If you train a cell for two billion years to just reproduce, reproduce, reproduce, and then give them new instructions not to reproduce, if those instructions go wrong, they'll just revert to what they knew before the instructions," he says.





“  
If your enemy has  
a limited arsenal of  
weapons [it] gives  
you hope that you  
can fight it.  
”

Dr Charley Lineweaver. PHOTO BY BELINDA PRATTEN.

"The cell is not evil; it doesn't mean any harm. It's just doing what it was trained to do before it became part of a multicellular organism. "

Lineweaver says his hypothesis doesn't discount Darwinian evolution altogether; it's just a question of how the variation that selection works upon is generated.

"We call the range of variation that drives cancer development 'the chest of poems that have already been written'. A poem is picked out at random, but it

isn't new: it was written a billion years ago."

If Lineweaver and Davies are on the right track, it's great news for cancer treatment.

"[Our idea that cancer is not evolving] means it cannot get more sophisticated in the way viruses and bacteria can. The idea that your enemy has a limited arsenal of weapons gives you hope that you can fight it."

Although the idea of a pre-existing cancer toolkit isn't new, Lineweaver says

his oncologist counterparts took a bit of convincing.

"Weinberg, the grandfather of the field, hinted at this idea but didn't take it seriously. I thought: this is crazy!"

"All the data suggest – from our naïve astrobiological point of view – that this is the obvious solution, and you're not taking it seriously. What's wrong with you?"

While many have embraced Lineweaver and Davies' hypothesis, it has been met with controversy. A recent *New*

*Scientist* article stated 'reactions to Lineweaver and Davies's idea vary from cautious enthusiasm to outright scepticism'.

Lineweaver is undaunted by the critics. A second interdisciplinary conference to refine the model and look into technology to test it is planned for February.

"We've invited some of our most informed critics so we can hear what they have to say," he says. ■

# Out for the count

**BEN WELLINGS** was in the United Kingdom during the recent, historic referendum on preferential voting. The poll revealed a lot about voter apathy and the unpopularity of politicians. It also exposed some shady myths about Australia, he writes.

Australia enjoyed a high profile in Britain this April and May. But this time there were no shark attacks, Scott and Charlene were not getting married and nor was a bikini-clad Lara Bingle stepping out of the surf asking 'Where the bloody hell are you?'

It was far more exciting than that: it was about voting systems. I was lucky enough to be in England during these heady days and saw the whole thing unfolding with my own eyes.

As a result of the negotiations that produced Britain's first post-war coalition government last year, Britons went to the polls in May to vote on whether or not to change their first-past-the-post voting system for Westminster elections to an Australian-style preferential system called AV (Alternative Vote). Hence, all the coverage of Australia.

But while it was nice to enjoy some visibility (the 'No' campaign produced a map with Australia highlighted to aid readers), not everything that was said about the AV system – and by implication Australia and Australians – was nice. Detractors claimed that this preferential voting system would give voters for extreme parties like the British National Party a second bite of the cherry; they claimed it was too complicated; and, worst of all, it meant that you would get second-choice politicians who would be forced to form coalition governments like the hugely unpopular one that brought this referendum about in the first place.

Australia was ranked alongside Papua New Guinea and Fiji as examples of how bad things could be under preferential

voting. The 'No' campaign – No2av – deployed some spurious claims to demonstrate this. The Fijians, it was claimed, had plans to ditch the AV system (in the sense that since the military coup of 2006 there have been no elections). No2av also claimed that six out of 10 Australians wanted to get rid of preferential voting (which was a surprise to those of us from Australia, since we had never heard of this). This left PNG for Britain to emulate. Papua New Guinea is best known in Britain as the title of the Future Sound of London's 1994 dance floor anthem, so this didn't give already unenthusiastic voters much to go on.

Many Britons don't like to vote since it encourages politicians and it would be a stretch to say that this issue was really galvanising public opinion. Conversations in pubs tended to revolve around speculation about what Kate Middleton would wear at 'that wedding' or whether Queens Park Rangers would be promoted to the football Premier League, rather than whether adopting AV would lead to greater civic engagement. Most people were confused and put off by the negative campaigning from the no camp, which was just the sort of thing that politicians had promised to do away with during the General Election.

The context for all this was the 'New Politics' of post-expenses scandal Britain. Cast your mind back to 2009 and the images of duck houses, moat cleaning and pornographic DVDs all obtained by politicians at the public expense. Led by the righteous press, public opinion turned against politicians



of all parties, allowing people to forget that it was the businessmen and women of the City of London which had ruined their country the year before. In the election of 2010 the public were promised something different, something 'new'. What they got was Nick Clegg. Within months Clegg led the Liberal Democrats into a junior partnership with the Conservatives and rapidly become the most unpopular man in Britain, breaking almost every significant election promise by Christmas.

Along with some British and Australian colleagues, I went along to see Clegg speak in favour of AV at one of those 'Westminster village' events where Clegg seemed to know the audience of about 50 by name. Clegg – a smoker who becomes irritable if he goes too long between ciggies – began by reminding the audience how unpopular he was and how ineffectual his party was in the Coalition. It got worse. He didn't particularly like AV either, but

that was just part of the deal done with the Conservatives. The Lib Dems have wanted electoral reform for ages. They want to translate their votes into seats and not be penalised under the first-past-the-post system. The Tories like first-past-the-post, partly because they're Tories and don't like changing things and partly because it helps them and Labour form stable governments on small proportions of the vote. The Tories weren't going to allow proportional representation in a million years, so AV was the compromise since they knew no-one really wanted it in the first place. Which leads us to referendums.

Referendums are another innovation in British politics that owes something to Australia. Before last May there had only been one UK-wide referendum. That was back in 1975 on the issue of whether Britain should leave the Common Market or not. Then Prime Minister Harold Wilson – who claimed to have more relatives in Australia than Britain – borrowed



“Australia was ranked alongside Papua New Guinea and Fiji as examples of how bad things could be under preferential voting.”

Dr Ben Wellings. PHOTO BY BELINDA PRATTEN.

from Australian experience in setting up the referendum. But here the similarity ended. In Britain you hold a referendum not because a section of the constitution says you have to, but because a political question has become too hard for a party or parties to manage. Similarly, you might hold a referendum to endorse changes already made by Parliament to give them popular legitimacy. The AV referendum came under the former heading.

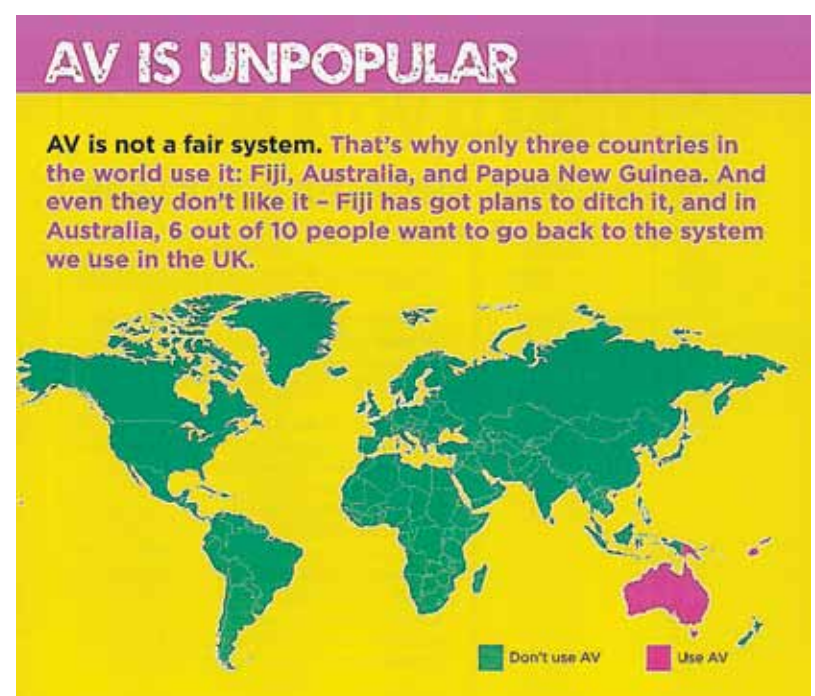
In this sense the AV referendum was bad for the 'New Politics'. This was a referendum that no-one really wanted. Voters in England felt resentful at having to go to the polling stations and the competitive nature of referendums only reminded people of a political style that they find alienating. The 40 per cent turn-out reflected this. The two-to-one majority in favour of retaining the first-past-the-post system reflected the success of No2av's negative campaign.

While all this was happening,

potentially more profound and far-reaching events were unfolding in Scotland. There the referendum vote coincided with elections to the Scottish Parliament. And there, much to everyone's surprise, the secessionist Scottish National Party formed a majority government pushing the Lib Dems out of some of their electoral heartland and Labour out of theirs. Look out for a referendum on Scottish independence in a few years' time.

The Lib Dems can take some heart. They're now so unpopular that no-one will vote for them so they won't have to suffer disproportional representation in Parliament. The next election is scheduled for May 2015 – if the Coalition lasts that long. Perhaps then we will be able to say to the Lib Dem's MPs, 'Where the bloody hell are you?' ■

Dr Ben Wellings is convenor of European Studies at ANU. He is currently researching a book on the links between English nationalism and Euroscepticism.



Australia is highlighted by a 'No2av' campaign leaflet.

# Art, design and Diaspora

Nineteenth Century Vienna was a city of extraordinary art, music, literature and ideas. It was also a city of rising anti-Semitism. **TIM BONYHADY** writes about the largest private Viennese art and design collection to escape the Nazis and the three generations of women in his family who brought it to Australia.

Vienna's museums get repeated requests to lend their spectacular holdings of the art of Vienna 1900 – above all, the paintings of Gustav Klimt and Egon Schiele and the design of Josef Hoffmann and Adolf Loos. Almost always, the museums refuse. They want to keep their treasures in Vienna. But when the National Gallery of Victoria approached them a few years ago, these museums very soon said yes, allowing the Gallery to stage its *Vienna: Art and Design* show.

At the opening of the exhibition in June, Wolfgang Kos, the director of the Wien Museum, explained why. He had learned that the Melbourne Gallery had two major collections of the art and design of the Vienna 1900 movement – both brought to Australia by refugees who fled Vienna following the Nazis' annexation of Austria in March 1938. Kos revealed that he not only saw an opportunity – but also felt an obligation – to help to place these collections in their original context. For him the decision to lend was easy.

One of the National Gallery of Victoria's collections – the Gallia collection – was formed by my great-grandparents, Hermine and Moriz Gallia. They were Jews who came to Vienna in the early 1890s from the Czech Crown Lands and soon became patrons of the city's modern art movement. They probably bought their first modern painting from the Vienna Secession in 1898 when the Secession held its first exhibition in its spectacular new building on the city's *Friedrichstrasse*. In 1903 Gustav Klimt painted a full-length portrait of Hermine, which again was shown at the Secession. That year Hermine

also acquired her first piece of Wiener Werkstätte – the famous Viennese craft workshops which had just been established by the designers Josef Hoffmann and Koloman Moser.

A decade later Hermine and Moriz commissioned Hoffmann to design five of the front rooms in their new apartment in Vienna's *Wohllebengasse* or Good Living Street. By then they had formed one of the major collections of modern Viennese art and design.

In between, along with a significant number of other Viennese Jews, Hermine and Moriz and their four children converted to Roman Catholicism. They did so partly for pragmatic reasons – in the hope that they would encounter reduced anti-Semitism which intensified in Vienna from the 1890s. But Hermine, who had been educated by nuns when she was a small girl in the Silesian town of Freudenthal, did so at least partly because of genuine attachment to Christianity.

These changes, of course, made no difference to the Nazis. And when they invaded Austria in 1938, my grandmother Gretl, great-aunt Kathe and mother Anne were not only lucky to flee – but also lucky to be able to bring with them much of the family's collection of Secessionist paintings and Wiener Werkstätte collection. This collection was the best private collection of Austrian art and design to escape the Nazis.

For over 30 years this collection was retained by Gretl and Kathe in Sydney. But when Gretl had a stroke in 1971, Kathe and she had Klimt's portrait of Hermine auctioned by Christie's in London. A few years later, the portrait



Bruno REIFFENSTEIN. Austrian 1868–1951. *The smoking room of the Gallia apartment c. 1916. gelatin silver print. Private Collection.*

was acquired by the National Gallery in London where it became – and remains – the only Klimt in a British public collection.

When Gretl died in 1975 followed by Kathe in 1976, the National Gallery of Victoria acquired the family's Wiener Werkstätte collection, making it the only substantial Hoffmann commission to enter a museum largely intact. Not even Vienna's Museum of Applied Arts has anything like it.

I decided to write what became my book *Good Living Street: The Fortunes of my Viennese Family* when my mother Anne died in 2003. My intention was initially to focus on my mother. But as I began working my way through family diaries and letters, which were much richer than I ever expected in relation

to the period of Vienna 1900, the book grew. I found myself writing a story stretching over a century, focusing on three generations of women – my great-grandmother Hermine, my grandmother Gretl and mother Anne.

As I worked on the book, I also realised that for all the international interest in Vienna 1900, only Alexander Waugh's *House of Wittgenstein* had taken one of the families that had been among the big patrons of this culture and told their story over several generations.

There was no other book which explored where one of these families had come from, how they made their money, what they spent it on, who they mixed with, what happened to their religion and what became of them and their possessions. If this material

Gustav KLIMT Austria 1862–1918  
Portrait of Hermine Gallia 1904  
oil on canvas 170.5 x 96.5 cm  
The National Gallery, London  
Purchased, 1976 EXH1012205

existed for other families, no-one had exploited it. I would write this book about my family.

Soon after I started writing *Good Living Street*, I suggested to the National Gallery of Victoria that it should mount a major Vienna 1900 exhibition – something attempted once before by the Gallery which failed to eventuate. In 2009 the Gallery persuaded Christian Witt-Döring and Paul Asenbaum, two of the great Austrian experts on the art and design of Vienna 1900, to become the main curators of the exhibition. Having worked on my book by then for six years, I became the exhibition's Australian guest curator.

One of the key pictures in the exhibition is the Klimt portrait of Hermine which has been lent by the National Gallery in London. For more than 30 years it hung in obscurity in a small Sydney flat. Now it is one of the banner girls of the exhibition. As you walk into the Gallery on St Kilda road, Klimt's portrait of Emilie Flöge from the Wien Museum – one of Klimt's most sinuous, seductive images – is on one side. Hermine is on the other. ■



Tim Bonyhady is an environmental lawyer and art historian. A former curator at the National Gallery of Australia, he is now director of the ANU

Australian Centre of Environmental Law and Centre for Climate Law and Policy. *Good Living Street: The Fortunes of my Viennese Family* has just been published by Allen & Unwin. The *Vienna: Art and Design* exhibition runs at the National Gallery of Victoria until early October.



# The air up there

New research on turbulence will enhance wind energy technologies and improve predictions on cyclone behaviour, writes **JAMES GIGGACHER**.

**T**urbulence is one of the last unsolved mysteries of classical physics. It is an irregular flow of fluid and its motion can be chaotic and random. It can also unpredictably change speed and pressure as it rips through time and space. It even exists in different dimensions, taking on both two- and three-dimensional flows. No wonder it has scientists confused.

But now an ANU breakthrough is bringing calm to the tumultuous swirl. The discovery was made by Professor Michael Shats, Dr Hua Xia and David Byrne from the Research School of Physics and Engineering, with Professor Gregory Falkovich from the Weizmann Institute of Science in Israel. By looking at how a vortex behaves, the group have shed more light on how turbulence can go from 3D to 2D.

A vortex is a mass of whirling fluid and includes

“**Cyclones lose less momentum and energy the stronger they get.**”

phenomena like whirlwinds and whirlpools. It can also be seen in the spout of a tornado or hurricane. Even the large red spot on Jupiter is a vortex.

Through a series of laboratory experiments the group found that through vortices, thick turbulent fluids can be spread out and made thin.

“Fluids tend to spread into layers which are much shallower than they are wide,” explains Shats, who

headed the research group. “For example, the Earth’s atmosphere spans horizontally over tens of thousands of kilometres, whereas its depth, the troposphere, is only 10km. Even weather patterns, which can reach hundreds of kilometres, far exceed the thickness of the troposphere.

“So the main difference between the two types of flows is that in 3D turbulence vortices have the ability to stretch vertically while in 2D flows they are flat as pancakes.

“Three-dimensional turbulence is observed universally and can be seen in things like water flowing through a pipe. In comparison, two-dimensional turbulent flows are much harder to observe. Strictly speaking, it does not exist in the real world.

“However, our laboratory experiments have revealed that sometimes turbulence behaves as if it were two-dimensional even in situations when it is considered impossible.”

In a year that has witnessed the devastating damage that tornadoes and hurricanes can cause, the breakthrough is welcome news. Shats says that it has the potential to address one of the most important questions in meteorology: how to better predict the behaviour of tropical cyclones.

“Tropical cyclones, which can be up to 500 kilometres in diameter, are damped by their drag over ocean and land,” he explains. “This drag was expected to increase with wind speed. However, meteorologists find quite the opposite – the stronger the cyclone the lower the drag.

“Our research shows that as a vortex moves it modifies turbulence beneath it. This reduces its drag as well as changes the turbulence so that it feeds a large vortex rather than dampening it.

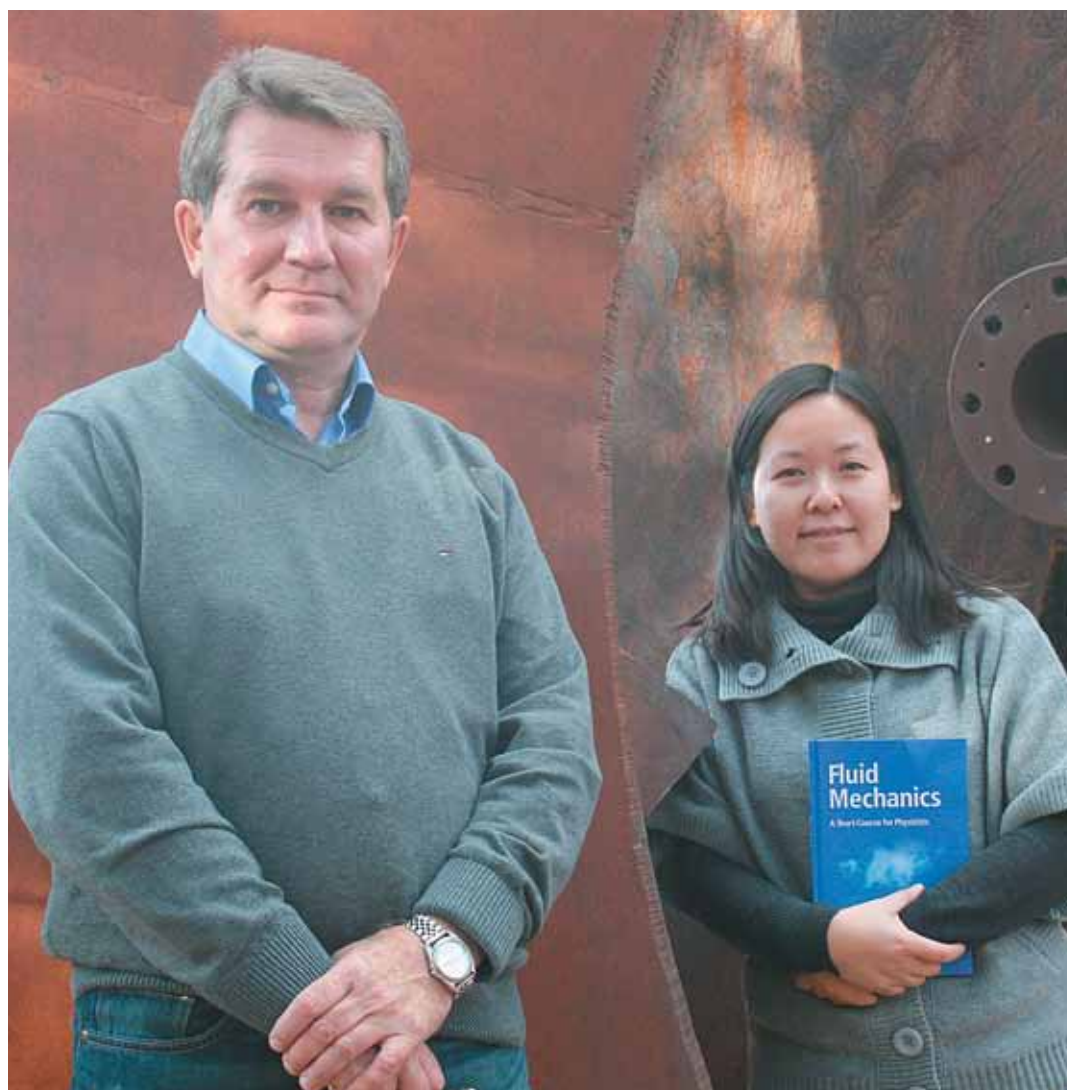
“In other words, cyclones lose less momentum and energy the stronger they get,” he says.

Dr Xia, who led the study, adds that the group’s breakthrough will also increase our understanding of atmospheric turbulence and can help enhance wind prediction at heights of 60 to 100 metres – an elevation range critical to the successful use of wind energy.

“To understand and to predict a system’s behaviour, physicists always ask ‘where does energy come from and where is it damped?’ Atmospheric winds are known to scale from tens of metres to tens of thousands of kilometres,” she says.

“It is not clear how winds in the intermediate scale of 10 to 1000 km are powered. Better understanding this range is important for weather and climate modelling and the application of wind-energy engineering.”

And for a climate-changed world, that is a breath of fresh air. ■



Professor Michael Shats and Dr Hua Xia. PHOTO BY JAMES GIGGACHER.



Dr Bentley James and Yan-nhangu children collecting ghost nets on the Crocodile Islands. PHOTO BY CHIARA BUSSINI.

# Time and tide

Bentley James spent two years undertaking research in the Crocodile Islands looking at local Indigenous knowledge, language and livelihoods, writes **JAMES GIGGACHER**.

**D**r Bentley James has been inescapably pulled in by the tide of the Crocodile Islands. The PhD graduate from the School of Archaeology and Anthropology has spent the last 17 years living there – working with the Indigenous Yan-nhangu people, the traditional owners of the group of islands located off the northeast coast of the Northern Territory.

During his time on the islands, James spent two years undertaking doctoral research which looked at change and continuity in Yan-nhangu marine identity as well as the people's cultural links with their homelands. It was the first time that someone had recorded the language, rituals, social customs, knowledge and recent archaeological pre-history of the islands' people.

"My research explored the enduring features of Yan-nhangu uniqueness within Yolngu, or northeast Arnhem Land culture," says James.

"I was interested in how the extraordinary social, mythological, ecological and linguistic relations of the islands' people have changed in light of historical and more recent engagements with the state.

"While doing this research I recorded, compiled and published the first Yan-nhangu dictionary; it's a project that I am still involved in," he says.

James says the Crocodile Islands are remarkable for

many reasons, including their dramatic beauty and changing colours.

"More striking, however, is the irreplaceable culture and language of the people of the islands, their links to their sea and to each other, and their ongoing struggle to remain on their ancestral homelands," he says.

It was the local people's struggle to maintain their relationship with their traditional culture, homelands and knowledge that inspired James to undertake his PhD research with the ANU North Australian Research Unit (NARU), based in Darwin.

"Seeing the people's struggle to save their language, culture and rights over marine resources, I felt duty-bound to change from observer to participant," says James.

"The knowledge, language and the unique cultural artefacts of the Yan-nhangu are in a precarious position because of a legacy of historical neglect, political fickleness and a continuing lack of foresight which has denied the people of the Crocodile Islands basic human rights.

"The decapitalisation of their homelands, denigration of bilingual education, and the administrative squander of their resources and opportunities

continues to put their children's cultural and linguistic futures at risk."

Bentley was welcomed into the locals' lives and homes and set about trying to make a real difference for their future. While living on the islands he launched three projects aimed at supporting and creating opportunities for the next generation.

"The projects help Yan-nhangu children manage their natural resources, learn their local Indigenous Ecological knowledge (IEK), learn their language, and encourage residence on their homelands," says James.

"I initiated the Crocodile Islands Rangers program (CIR), the Yan-nhangu Dictionary project, and Yan-nhangu 'language nests' for pre-school aged children.

"These projects are collaborative activities directed at promoting continuities and innovations in Yan-nhangu local knowledge and encouraging biological and linguistic diversity on the homelands."

The Crocodile Islands Ranger program provides practical contexts for continuities in Yan-nhangu language use with bio-security and coastal surveillance, ghost net patrols and turtle research. ■

For more information on Dr Bentley James' work see the NARU website [naru.anu.edu.au](http://naru.anu.edu.au)

# Keeping hope in the family

New research into the removal of children from their homes reveals that it is an experience often shared by multiple generations of the same family, writes **JAMES GIGGACHER**.

If home is where the heart is, 36,000 Australian children are today living without that warmth and security. A mounting number of kids live out-of-home, not by choice, but as a result of removal under child protection orders.

According to undergraduate researcher Sharynne Hamilton, the effects of child removal also impact on the lives of hundreds of thousands of extended family members. She is looking behind the numbers to try and find causes and possible solutions.

"The number of children being removed from their homes and placed into state care is increasing. Leading child protection researchers and authorities have expressed deep concern at the number of children entering and staying in out-of-home care," she says.

However, according to Hamilton, a third-year political science student from the ANU College of Arts and Social Sciences, it's not just the figures that are cause for concern. Currently, half the children who are taken into state care come from families where the adults in the household were also in state care as children.

"At the moment we're seeing that around 50 per cent of people with children in care have actually had experiences of out-of-home care themselves," explains Hamilton. "And in some cases this history of state care goes way back. There is evidence of fifth-generation child removal in Indigenous families and fourth-generation removal in non-Indigenous families."

Child removal is an issue close to Hamilton's heart. Before returning to Canberra – her hometown – to

complete her bachelor of arts, she spent 25 years in Western Australia. There she helped found the Family Inclusion Network of Western Australia – a branch of a national advocacy and support group for families dealing with the loss of their children.

This experience partly inspired Hamilton's recently completed year-long research project looking at the long-term dynamics and impacts of child removal. Hamilton's project on the dynamics of child removal was part of a new trial program offered by the Tjabal Indigenous Higher Education Centre at ANU. The program gives Indigenous students the chance to study topics of their choice related to their culture, communities and professional experiences. Using the concepts of hope and trust, Hamilton examined how both Indigenous and non-Indigenous families experience child protection systems.

"One of the key findings was that in many instances child removal is a multigenerational phenomenon," says Hamilton. "By looking at how disadvantage is transferred across generations of families, I found a clear and strong link between this disadvantage and child removal which occurs over multiple generations."

Hamilton's research showed that governments contribute to this cycle of multigenerational child removal. She says this happens through what she has termed a 'cycle of destructive hope'.

"It was clear to me that the way hope is shaped by child protection authorities is fundamentally flawed and significantly contributes to intergenerational issues in families. Both in Australia and overseas, parents and families, their support networks, including community

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**Around 50 per cent of people with children in care have actually had experiences of out-of-home care themselves.**  
”

workers and child protection workers, experience the process of child removal as a cycle of destructive hope.

"The end result is that many parents disengage from their children and those children go on to be lost to society, creating the next generation of children in state care. So I think there is, at the very least, a moral obligation on the state to deal differently with this particular group of families in order to provide them with every chance of breaking the cycle of child removal and maintaining family relationships."

This obligation involves the state rethinking its relationship with the family members of removed children. According to Hamilton we should view the state as a 'grandparent' to families of adults who grew up in care. She says this will help positively reshape child protection policy, practice and research.

"Although the concept may seem a bit 'out there', I think it's a very valid argument. Family relationships are life long. Parenting doesn't end when a child turns 18. When a child is removed and grows up disconnected from their family and kinship networks, then an obligation should remain with the state to provide care and support."

Hamilton says it's not only the reshaping of hope that governments can start doing differently. She argues that there needs to be greater honesty between child protection authorities and their expectations of families as well as independent advocacy and support networks for parents and family members to navigate the complex processes involved with child protection systems. She also says other strategies, like mandatory family group conferencing in all cases, should be enacted as soon as authorities become aware of problems in these families.

"In no way do I condone child abuse or mistreatment," says Hamilton.

"I acknowledge that sometimes there are very serious situations which call for children to be removed – particularly when children have been abused by their parents or are living in fear. However these cases are in the minority.

"In the main, child removal has devastating long-term effects on children and families and should be enacted as a carefully considered, last resort action. Whether families have adequate resources as well as fair and transparent processes to help them deal with the removal of their children is primarily a human rights issue.

"I've seen the damage that child removal has done to a lot of people that I've worked with and I've seen them re-traumatised by having their own children removed with no family and minimal support networks. In my mind this means we really need to think differently about how the state intervenes in the lives of families, particularly those who have grown up in state care." ■



Sharynne Hamilton. PHOTO BY DARREN BOYD.

# Sight and summit

Professor Ken Baldwin tells **LEANNE O'ROURKES** about two ultimate highs – reaching a Himalayan peak and a substantial fundraising goal for the Fred Hollows Foundation.

**T**he thrill of being the first people in the world to take in the view from the top of a previously unclimbed 6,547m peak in the Himalayas is breathtaking. An area that is exposed to some of the harshest elements known, it's a far cry from the familiar walls of the office and the computer screen that many of us are accustomed to.

But last November, a group of adventurous climbers from the ANU Mountaineering Club (ANUMC) and the Canberra Climbers Association set off on the ambitious Yangma Expedition, which saw them trek for 10 days in a remote region of north eastern Nepal to get to base camp.

Professor Ken Baldwin from the Research School of Physics and Engineering at ANU was among them.

"The Yangma Expedition was an amazing experience and a tremendous challenge that took us through some very isolated terrain, over ice and snow in an area never before visited by Westerners," he says.

"With enduring temperatures of below -20C, gale

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**Enduring temperatures of below -20C, gale force blizzards, extreme vertical terrain and the lung-bursting effects of altitude, we were pushed to our limits.**  
**”**

force blizzards, extreme vertical terrain and the lung-bursting effects of altitude, we were pushed to our limits."

Professor Baldwin's group included the CSIRO's Professor John Finnigan and ANU graduates Theo Hooy, Colin Cameron, David Barton and Tim Macartney-Snape, who was the first person to climb

Everest from sea to summit, as well as Canberra resident Keith Scott.

It was not the first time some of them had tackled the world's highest mountain range.

"It brought back incredible memories and was something of a reunion for a few of us from the ANUMC who were the first Australians to climb a major 7,000m Himalayan peak on the Dunagiri Expedition back in 1978," explains Baldwin.

"There's something truly inspiring about climbing that stretches your capabilities and takes you out of your normal comfort zone into the extremes of the natural world.

"Perhaps it's the mental discipline that's required to unlock the difficult puzzle of climbing a route or it might be because we spend a lot of our time at work in a relatively confined space – and the wild outdoors is a necessary escape."

When not scaling dizzying peaks, Baldwin develops new laser technologies for precision measurements that test quantum theories of atomic and molecular structure. These tests can be used to better understand energy balance and ozone formation in the Earth's atmosphere, and to produce new quantum devices such as gravity sensors. He said the joy he experiences through his work is vastly different, but equally rewarding.

Just as satisfying, the Yangma Expedition has raised thousands of dollars to fund two eye camps at remote villages south-east of Kathmandu. Run by the Fred Hollows Foundation, the first of the two-week clinics treated 463 patients and provided 67 sight-saving cataract operations.

"So far we have managed to raise nearly \$19,000 to help the Foundation in its work to restore sight, dignity and independence to those blinded by poverty alone," he says.

"It was the first time an eye clinic was opened in that particular region and the large number of people who accessed the service was very pleasing. It's amazing to know that for just \$25, someone can be given the gift of sight."

Back at work, Baldwin's screensaver shows stunning snow-covered peaks and dramatic valleys. But is he keen to take on the Himalayan challenge again?

"Himalayan expeditions are a bit like childbirth – the longer you wait the more the memories of the pain and hardship fade and the more likely you are to do it again. So ask me the same question next year." ■

Donations towards the second eye camp can be made at: [everydayhero.com.au/yangma\\_expedition](http://everydayhero.com.au/yangma_expedition)



Professor Ken Baldwin on the Yangma Expedition. PHOTO BY KEITH SCOTT.



Ben Treffers. PHOTO BY BELINDA PRATTEN.

# From pool to school

Undergraduate student Ben Treffers has successfully taken the plunge in both his university studies and international swimming career, writes **JAMES GIGGACHER.**

**B**en Treffers is lucky the world's not flat. On a surface which is 75 per cent water he'd be in danger of swimming over the edge and right off. The commerce student's first memory of water is a dip in the pool at the age of six months. As the son of two-time Olympian swimmer and three-time Commonwealth Games medallist Mark Treffers, it isn't surprising the water baby is now following in his father's wake. Since that first splash, 19-year old Treffers has churned through roughly 22,500 kilometres of water – the equivalent of swimming from Australia to the United States and back.

In 2008, at the age of 16, Treffers won gold in the 50 metres backstroke at the Junior World Championships in Mexico. He also took the silver in the 100 metres backstroke. Now his mantle piece is groaning with gold – in the 50 metres backstroke from the 2009 Mare-Nostrum series and 2010 Australian Short-Course Nationals.

Earlier this year Treffers went one better and qualified for his first Australian senior World Championship team after winning the men's 100 backstroke at the Australian Swimming

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**I find it a good balance to have study as a break from the constant routine of training.**  
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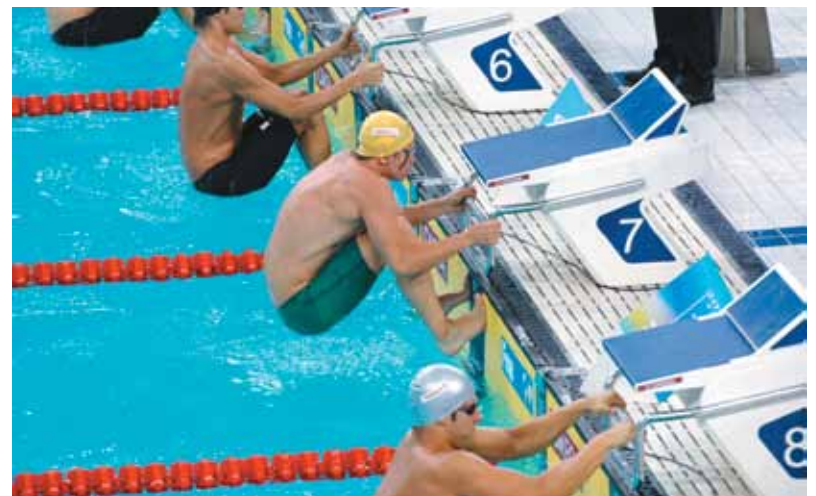
Championships, beating Olympians Hayden Stoeckel and Ashley Delaney.

But all this glory comes at a price. Some days the Australian Institute of Sport (AIS) scholarship recipient feels like he's living under water.

“I train six days a week, twice a day,” explains Treffers. “We do 10 sessions throughout the week which last from anywhere between two to four hours.

“My daily routine when in hard training consists of waking up at 6am and getting in the pool by 7am.”

Treffers is one of 15 young sporting talents who are currently studying at ANU in the national network of Elite Athlete Friendly universities. As part of the network ANU helps elite athletes balance their sporting and academic



Treffers, in lane seven, about to dive into another race. PHOTO BY MARK TREFFERS.

aspirations. Treffers says that, thanks to the program's flexible study and assessment options, managing the demands of an international swimming career and university study is possible – but it still requires a lot of hard work.

“I have to be organised and even though I am overseas I have to maintain my studies and complete and lodge my assignments on time. At times it's difficult to maintain the workload,

but on the other hand, I find it a good balance to have study as a break from the constant routine of training.”

And Treffers aims to push himself further by transferring to a combined commerce and law degree. But for now it is straight back into the pool for training.

“After all, my goal in swimming is to be the best in the world at my event,” he says. ■

# catch up

Been a while since you visited the ANU campus? That doesn't mean you should miss out on the many events taking place at the University.

Check out the latest podcasts at: [anu.edu.au/podcasts](http://anu.edu.au/podcasts)

Watch the latest videos at: [youtube.com/ANUchannel](http://youtube.com/ANUchannel)



## Michael Kirby: Paradoxes and Principles

Professor AJ Brown  
Griffith University  
Watch: [bit.ly/rep\\_kirby](http://bit.ly/rep_kirby)

*Michael Kirby: Paradoxes and Principles*, written by AJ Brown, is the first biography of The Honourable Michael Kirby AC CMG.

When he retired from the High Court in 2009, Kirby was Australia's longest serving judge. Kirby has been a leader in law reform and human rights and his legal and humanitarian contribution as a judge, both here and overseas, is unparalleled.

The book spans Kirby's life from his humble beginnings in Concord to his work as the first Australian to serve as a Special Representative of the UN Secretary-General for Human Rights. In this video, Kirby discusses his life and work with Brown.



PHOTO BY STUART HAY.

## Slavery at Thomas Jefferson's Monticello

Professor Annette Gordon-Reed  
Professor of Law and Professor of History, Harvard University  
Listen: [bit.ly/rep\\_reed](http://bit.ly/rep_reed)

Thomas Jefferson enslaved over 700 people over the course of his adult life. Most lived and worked at his famous home, Monticello.

This lecture examines Jefferson's complicated relationship with slavery, looking at what he wrote about it and how he lived with it at the plantation that now occupies an iconic place in American history.



PHOTO BY DARREN BOYD.

## Multiculturalism: success or failure

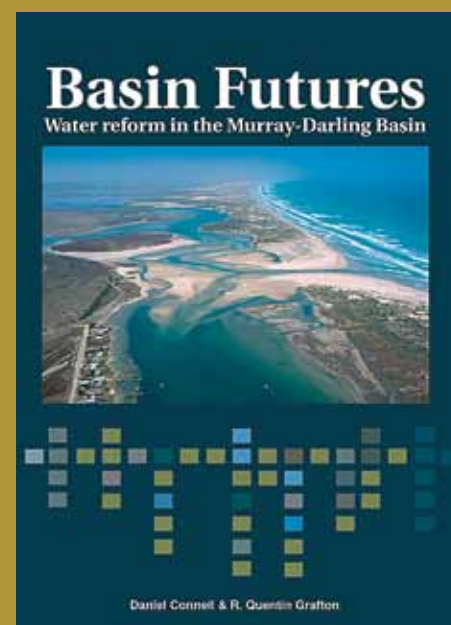
Dr John Hewson  
Former leader of the Liberal Party of Australia  
Watch: [bit.ly/rep\\_hewson](http://bit.ly/rep_hewson)

Australia's multicultural agenda has recently been in the spotlight. While migrants became an election issue, recent comments by European politicians about the failure of multiculturalism seemed to resonate with Australians.

In this video, economist and former Leader of the Opposition, Dr John Hewson, talks about Australia's vision of multiculturalism and whether we can create a government and policy structure that can succeed where others have failed.

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18 August–25 September

Curated by Terence Maloon and Paul Selwood

Michael Buzacott, Virginia Coventry, Paul Hopmeier, Roy Jackson, Jan King,  
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Image Paul Hopmeier, *Eckhardt*, 2010, steel waxed, 33 x 41 x 25 cm. Courtesy the artist and Defiance Galleries, Sydney. CRICOS #00120C 210711ANUR2



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