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Winter 2011

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# ANUreporter

THE AUSTRALIAN NATIONAL UNIVERSITY



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# ANTARCTICA CONFERENCE & MUSIC FESTIVAL

**25-29 June, ANU School of Music**

Celebrating the Centenary Year of the first Australasian Antarctic Expedition, the ANU School of Music is hosting five days of music, dance, antarctic sounds, photographic exhibitions and other events including the Antarctica - Music, Sounds and Cultural Connections Conference. Featuring international and national performers, artists and speakers.

[music.anu.edu.au/antarctica](http://music.anu.edu.au/antarctica)



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Governor-General of Australia, Her Excellency Ms Quentin Bryce AC, officially opens the ANU Gender Institute in March. Launched during International Women's Week, the Gender Institute aims to provide a cross-campus focus for existing research on issues of gender and sexuality, as well as act as a catalyst to develop and deepen those activities.

*PHOTO BY STUART HAY*

## New student digs opened

The latest addition to residential accommodation at ANU, Warrumbul Lodge, was officially opened in February by former Vice-Chancellor Professor Ian Chubb.

Professor Chubb said that Warrumbul, which means 'youth' in the Ngunawal language, will provide subsidised accommodation to students, with support from the Commonwealth and ACT through the National Rental Affordability Scheme.

"The new accommodation allows students to live close to campus and take an active role in the vibrant ANU community," he said.

## Immunodeficiency in the research spotlight

A new five-year project, worth more than \$15 million, will aim to shed new light on inflammatory and immunodeficiency diseases.



Professor Christopher Goodnow (pictured), Director of the Australian Phenomics Facility and Director of the Immunogenomics Laboratory, will lead the project, titled 'Molecular and cellular basis of inflammatory and immunodeficiency diseases'.

The funding is through the National Health and Medical Research Council (NHMRC) Program Grants and will support ground-breaking research by a multi-institutional team of eight chief investigators and more than 40 full-time researchers.

## Student builds a bridge of notes over troubled waters

Senior performance students and internationally acclaimed artists from ANU have performed together in a charity concert to raise money for victims of the Queensland floods.



*Music for Queensland*, organised by classical piano honours student Andrew Rumsey (pictured), sold more than 500 tickets and raised over \$10,000 for the Premier's Disaster Relief Appeal.

Mr Rumsey says that the success of the concert showed the importance of people helping others in need.

"Being a student at the ANU School of Music, there was no shortage of good musicians," he says. "So instead of cleaning mud out of people's houses, I thought I could do more by holding a concert and raising as much money as possible."

# word watch

The Australian National Dictionary Centre is a joint venture between Oxford University Press and ANU. Director **BRUCE MOORE** takes a look at our lingua franca – exploring the origins of the phrase Buckley's chance.

**B**uckley's chance (often abbreviated to Buckley's) means 'no chance at all'. The origin of the phrase, which was first recorded in 1895, has proved to be very puzzling. Various theories have been proposed, but there are really only two credible possibilities. First, there is the convict William Buckley, who escaped from custody at Port Phillip in 1803, lived with the Wathawurung Aboriginal people near Geelong for thirty-two years, and was discovered by John Batman in 1835. A second explanation links the phrase to the Melbourne firm of Buckley and Nunn, arguing that a pun developed on the 'Nunn' part of the firm's name (with 'none') and that this gave rise to the formulation 'there are just two chances; Buckley's and none'.

Both explanations have suffered from serious time gaps. William Buckley was rediscovered in 1835, but the phrase Buckley's chance does not appear until the mid 1890s. The Buckley and Nunn pun is not explicitly mentioned until 1945. Moreover, all the evidence from the 1890s for Buckley's occurs in sources published in Sydney, suggesting that the phrase, in its early use, was not closely associated with Melbourne.

The Australian National Dictionary Centre has recently come across some new evidence that helps to clarify the history of the term. This new evidence occurs in a newspaper account of the proceedings of the Victorian Parliament in November 1901:

*An indication of what prospect there is of getting the tariff through the House before Christmas was afforded yesterday.*

*After members, in a repentant mood, had metaphorically fallen on each other's neck and kissed each other ... they managed to dispose of three not highly contentious items. If items of great importance are not to be slumped through in the small hours, when most of the members are asleep, there is only one chance of getting through the tariff before Christmas, and that is Buckley's—or, according to the local adaptation of the phrase, it is Buckley and none.*

The speaker here knows the standard version of the phrase, Buckley's, but he also knows what he calls 'a local adaptation' of it: Buckley and none. This local or Melbournian variation is clearly the pun on Nunn/none, indicating that the original phrase (Buckley's chance or hope or show) had nothing to do with the Melbourne firm. It was only after the phrase had been established that Melbournians could formulate their own witty local variation, starting with the common ground of 'Buckley' and then varying the idiom with the addition of the pun.

The Melbourne-based Buckley and Nunn story is therefore a reinterpretation of an existing phrase (and this is now the earliest evidence for it), and an example of folk etymology. For the actual origin, we are left with William Buckley. It must be admitted that the time gap between Buckley's life and the appearance of the phrase remains a worry, but the story of William Buckley was one of the best known and most recounted of convict narratives. Of all the explanations on offer it is certainly the most likely. ■





Sébastien Willis. PHOTO BY BELINDA PRATTEN

# Virtual hall a reality

**C**ampus life at ANU now has an added dimension, with the opening of the non-residential Griffin Hall – the first of its kind in Australia.

Griffin Hall offers academic support and social engagement for all non-residential students at ANU. It also gives them access to a wide range of social, cultural and sporting events that are usually associated with established residential halls and colleges.

The new hall aims to replicate the advantages of residential life previously only available to students living on campus. Students in Griffin are assigned virtual 'floors' and community assistants are appointed to look after the welfare of the students in each group.

Members of the hall can also join sporting teams, allowing them to participate in inter-hall events and competitions alongside other ANU residential students. Up to 350 students are expected to become members of Griffin Hall in 2011.

Sébastien Willis, president of Griffin Hall Members' Association, says that the establishment of Griffin had been driven by students, with financial and staff support from the University.

"The idea is to create something for all non-residential students – whether they are local Canberrans living at home or away from home, or students from out of the area, including international students," he says.

"We have established something not seen anywhere else in Australia. Griffin Hall offers those non-residential students the opportunity to be part of a strong community, creating a more unified and diverse university campus."

Mr Willis adds, that from a student perspective, university life is about more than libraries and laboratories.

"Griffin Hall will bring together students living on and off campus, allowing them to form the sorts of social and intellectual bonds that lie at the heart of a rich and fulfilling university experience," he says. ■

## USA deal marks big step for space museum

The signing of an agreement in Washington DC between the Smithsonian's National Air and Space Museum and ANU has brought efforts to build a national space museum at Mount Stromlo one step closer to reality.



The agreement sets out the first steps for cooperation that will support the development of a museum to tell the story of Australia's contribution to space science and space technologies, as well as celebrate the special role Australian astronomers have played in the exploration of the cosmos.

The signing comes as ANU celebrates the 100<sup>th</sup> anniversary of the iconic Mount Stromlo Observatory (pictured). A number of key curatorial staff from Washington will come to Canberra in coming months to take part in a planning conference for the proposed museum.

## Award-winning research builds better virtual machines

A PhD graduate from the ANU College of Engineering and Computer Science has won the 2010 Australian Distinguished Doctoral Dissertation Award.



Dr Daniel Frampton (pictured), who is now a postdoctoral fellow, beat nominations from 12 other universities to become the first-ever ANU winner of the award. The award recognises his innovative work on virtual machines – the complex software that allows most of today's computer programs to work.

The award is presented annually by Computing Research and Education (CORE), and recognises the best PhD thesis in computer science finalised at an Australian university.

## Gum trees fire up history revision

Australian bushfires appeared 50 million years earlier than previously thought and probably contributed to transforming the landscape from rainforest into the country's dry eucalypt forests of today, according to a recent ANU study.

The study, led by Professor Mike Crisp of the Research School of Biology, sheds new light on the history of the landscape of Australia and indicates that eucalypts and bushfires are inseparably linked in Australian history.

"Our work suggests the ancient ancestors of the eucalypt moved out of the rainforest and into the woodlands that you see today, at about the same time as this adaptation arose," says Professor Crisp.

## Sunnier outlook for MS diagnosis

The Australian love affair with the great outdoors may have contributed to lower rates of multiple sclerosis (MS).

The Ausimmune Study, coordinated by Associate Professor Robyn Lucas from the ANU College of Medicine, Biology, and Environment, found that people who spend more time in the sun, as well as those with higher vitamin D levels, may be less likely to develop MS.

Associate Professor Lucas says that many people who experience preliminary symptoms of the sort that occur in MS – known as a 'first event' – go on to develop the disease.

The Ausimmune Study found that the risk of having a first event was lower in people with higher sun exposure – over the whole of their lives as well as in the months preceding the event, compared with unaffected people of the same age and sex and living in the same region of Australia.

## The numbers stack up for scholarship winner

Lashi Bandara (pictured) from the Mathematical Sciences Institute has won a Fulbright Postgraduate Scholarship to complete PhD research in the US over the next year.



Mr Bandara says that the scholarship offers a great opportunity to further his studies, which combine two very different fields of pure mathematics – harmonic analysis and differential geometry.

"I feel quite honoured to be named a Fulbright Scholar. It is not only an opportunity to work with some brilliant people at some remarkable institutions, but gives me the chance to engage with an interesting and unique culture," says Mr Bandara.

## Agreement brings ANU and Mongolia closer

Cooperation between ANU and Mongolia has been boosted after the signing of a new agreement.

As part of the agreement, the two countries' national universities will undertake joint education and research projects in archaeology, anthropology, human growth, nutrition and ecology and traditional Mongolian culture.

To mark the collaboration, the Prime Minister of Mongolia, His Excellency Mr Sukhbaatar Batbold (pictured), visited the University to witness the agreement's signing and to meet with ANU Mongolia scholars.



PHOTO BY DARREN BOYD

# life sentences

The Australian Dictionary of Biography (ADB) sits in the history program at the Research School of Social Sciences. A new project, *Obituaries Australia*, is transforming a card catalogue into an online database, writes **MELANIE NOLAN**.

When the Australian Dictionary of Biography project began at ANU in 1959, one of the first tasks of its assistant editor, Ann Moyal, was the publication of the *Biographical Register*, which had been started by Dr Laurie Fitzhardinge in the early 1950s to assist in identifying historical subjects for the future dictionary.

The register itself consisted of thousands of biographical citations about people, gleaned from newspapers, parliamentary debates, magazines and newsletters and handwritten on index cards. The first and eagerly anticipated copy of the *Biographical Register*, a 48-page roneoed booklet, was published in 1961.

In 1987 a two-volume copy of the *Biographical Register* was published. By then the register had grown to include over 300,000 index cards housed in 180 catalogue-card drawers. A few years earlier, staff had started entering all new citations into an in-house database.

In April this year, the University's Vice-Chancellor, Professor Ian Young, launched the latest incarnation of the register – a freely accessible, full text, online database called *Obituaries Australia*. The obituaries are being extensively indexed and linked to relevant digitised material held in cultural institutions and to items about the subjects in the National Library's digitised newspapers.

As well as continuing its former role of helping to identify future subjects for inclusion in the ADB, we anticipate that, over time, *Obituaries Australia* will lead to exciting research projects on the study of common characteristics of historical groups and the

analysis of the associational life of Australians over time.

Some of its potential can already be seen. Click on the link to 'World War I' and you will find the names of all those, in the database, who played some part in the war – as soldiers, Red Cross administrators, in the conscription debate, as well as those who gave up their stately homes for military hospitals. You will also find a list of those who were engaged in the major military battles and the roles they played, those who were killed in action (and in which battle if known) or who died later of war wounds. Go to an individual soldier's entry and you can read the soldier's war service record, digitised by the National Archives, as well as investigate the links to the obituaries of other family members, friends, and work and school mates.

We are interested in mapping all sorts of relationships. The obituary of bushranger Ben Hall contains links to people he robbed as well as to gang members, police officers who pursued him, the man his gang fatally shot, and also to the son of that man, who witnessed the shooting and went on to join the police force.

*Obituaries Australia* seeks to capture every published obituary of an Australian, subject to copyright rules. It is a mammoth task and we are seeking the public's assistance in helping us to find obituaries and to index them. ■

- If you wish to contribute to *Obituaries Australia* contact [ncb@anu.edu.au](mailto:ncb@anu.edu.au)
- You can access *Obituaries Australia* online at <http://oa.anu.edu.au>



Former ADB Biographical Register Officer Anthea Bundock stands alongside the 80 drawers of BR cards created by ADB staff between the early 1950s and 1983.

PHOTO BY PETER FITZPATRICK





# Society and the social network

The latest ANUpoll suggests that time spent surfing the Internet is not time wasted, and may have significant benefits for society. By **JULIET PIETSCH**.

**H**ave you ever wondered whether spending too long on the Internet is a good thing? For people with teenage children, in particular, fears of cyber-bullying, addiction, lost education and career opportunities are just some of the concerns which come to mind.

But the findings from the latest ANUpoll on *The Internet and Civil Society* show that, perhaps, all this time spent on the Internet engaged in social networking actually has positive benefits for civil society.

Political science research shows that a healthy and effective democracy relies on social forms of engagement. Without such engagement, it is often suggested, there will be a decline in social trust, tolerance and civic activity. While traditional forms of civic association may be declining, it is possible that the Internet may be transforming the ways in which people interact with one another.

To address this question, the latest ANUpoll looked at whether virtual interactions assist people to associate with groups and people who have shared interests (bonding associations) and with those from a different background (bridging associations). The results show that the Internet helps people participate in social groups that they already belong to and also to

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It seems that frequent Internet use does not necessarily lead to a more atomised or individualistic society.  
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interact with people from different ages, generations and countries.

This means the Internet is a medium that is conducive to building bonding and bridging forms of social capital. For example, 35 per cent of respondents said that the Internet had helped them interact with people of a different race and 54 per cent of respondents said that the Internet helped them interact with people from other countries. A relatively small percentage of respondents (15 per cent) felt the Internet helped them interact with people who shared the same political views.

Contrary to many concerns, it seems that frequent Internet use does not necessarily lead to a more atomised and individualistic society, but rather contributes to a healthy civic-oriented society where citizens are less fearful of strangers and willing to help those in need.

Some 70 per cent of those who use the Internet more than once a day felt that to be a good citizen it was very important to support people who are worse off than themselves.

Among the same group, 86 per cent felt that to be a good citizen it was very important to report a crime that he or she might have witnessed.

ANUpoll also looked at the extent of online and offline political participation in Australia and whether using the Internet more frequently was associated with different types of political participation.

The findings showed that those who use the Internet frequently are more likely than those who use the Internet sparingly to be involved in political activity through virtual interactions.

The general conclusion is that online political activity is complementing, rather than replacing, traditional forms of political activity. With increased Internet usage and improved technologies around the world, it is likely that there is to be a substantial increase in online political activity in the coming years. ■

**DR JULIET PIETSCH** is a senior lecturer in political science in the School of Political Science and International Relations. ANUpoll is a survey of Australian public opinion regarding issues of national significance.

The larger bronze-cuckoo has tricked the smaller bird into believing it is its chick.

PHOTO BY DANIEL KOH

# The parental arms race



Australian cuckoos are taking new evolutionary steps to ensure maximum chance of survival. By **LUCY WEDLOCK**.

**L**oud cries, late nights and early morning feeds. Being a parent is sometimes hard work and you could be forgiven for occasionally wishing that someone else could raise your baby.

That's not a possibility for most of us, but a new study has found that three species of Australian cuckoo birds have reached this goal, evolving to have their offspring look like a member of their enforced adoptive families.

Famed for their parasitic ways, cuckoos the world over lay their eggs in the nests of other birds, hoping that the odd extra egg in the nest will go unnoticed by the host parent. Cuckoos have developed two tricks to prevent the host from noticing the foreign egg. Some cuckoo species lay a 'mimetic' egg, which matches that of their hosts, and other species lay a 'cryptic' egg, which matches the nest lining and is difficult to detect inside a dark nest.

But in a parental arms race the unwilling hosts are fighting back. Unable to identify the cuckoos' eggs from their own, their primary line of resistance is to kill the cuckoos once hatched. That is, if the newly hatched cuckoo hasn't beaten them to the blood bath.

To avoid being recognised as alien young, cuckoo nestlings physically evict all host offspring, both hatched and unhatched, from the nest. This guarantees they are the only hungry mouths to feed, therefore ensuring maximum chance of survival.

According to Dr Naomi Langmore, lead author of the study, Australian cuckoos have taken this innovative approach to parenting a step further. Not only do they lay mimetic or cryptic eggs, but they have also evolved chicks that match the colour of the host young.

The researchers from the ANU College of Medicine, Biology and Environment focused on three species of Australian cuckoos: Horsfield's, shining and little bronze-cuckoos.

Their study found that these birds have evolved chicks that mimic the skin colour, mouth colour and down of the host young to avoid eviction from the nest.

"Host parents will kill a parasite hatchling within the first few days of its life. But by matching the colour of the host young, the cuckoos are accepted by their 'parents'," says Langmore.

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**Cuckoo nestlings physically evict all host offspring, both hatched and unhatched, from the nest.**

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Each of the three species of cuckoo has its own choice of host bird. In turn, they have each evolved to lay different coloured young. The scope of colours is diverse, with young cuckoos hatching with skin colours ranging from black to yellow to pink.

"The mimicry only lasts for eight days, which is long enough for the acceptance to occur. After that, the pin feathers appear on the body and the young cuckoos begin to look like their own species," says Langmore.

In just one week a complete stranger, of a different species, accepts another's baby as their own, an impressive feat achieved by these three Australian species of cuckoo. Next task, how to find someone else to tackle those teenage years! ■

Cuckoo hatchlings imitating their hosts at birth: from left (inset) a large billed gerygone, a yellow rumped thornbill and a superb fairy-wren and the cuckoo invaders.

PHOTOS BY NAOMI LANGMORE





Professor Chris Parish (left) and Dr Ben Quah in the lab at The John Curtin School of Medical Research. PHOTO BY BELINDA PRATTEN

# Sharing is caring

A radical idea about how immune cells interact has revolutionised conventional thought on the immune system, writes **JAMES GIGGACHER**.

**T**he term 'pathogen' combines the ancient Greek words for 'suffering' and 'to give birth to'. It is hardly surprising then that it is used to describe biological agents like viruses, bacteria and fungi that invade the body and cause disease.

Conventional wisdom says that the body responds to these infectious invaders with immune cells that can recognise infection and which rapidly multiply to combat it. This process, known as 'clonal selection', has one small hitch: it can sometimes be a case of 'too little too late'.

"Initially, very few immune cells exist that can actually specifically recognise, respond to and eliminate a pathogen," says immunology expert Professor Chris Parish.

"The current dogma in immunology is that the few cells that can recognise a pathogen rapidly divide and produce many replicas through clonal selection. The problem is this process takes many days," he says.

Now Parish and his chief collaborator Dr Ben Quah have turned conventional wisdom on its head. The researchers from The John Curtin School of Medical

Research have discovered that immune cells can overcome the clonal selection process by sharing their ability to recognise a pathogen with nearby immune cells.

This information sharing process is made possible by the transfer of cell membranes, the exterior wall of a cell, and messenger ribonucleic acid (RNA), a macromolecule and one of the main building blocks of life.

"We have called this process 'receptor sharing' as it involves immune cells passing on the receptors they use to recognise a pathogen with immune cells that cannot recognise and eliminate the pathogen," explains Parish.

"When this happens it expands the number of immune cells that can combat a pathogen by at least 20-fold within minutes.

"Our discovery revolutionises our understanding of how the immune system works. It indicates that there is much more communication and sharing of information between cells of the immune system than was previously thought," he adds.

Parish and Quah received the inaugural Marshall and Warren Award from the

National Health and Medical Research Council (NHMRC) for their discovery.

"I was thrilled to receive the award as it represents recognition by our peers for research that is very different to the mainstream," says Parish.

"Research on this project began over 10 years ago, although at the time we regarded the work as heretical.

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Our discovery revolutionises our understanding of how the immune system works.”

"Ben and I have been working together since 2003. It took many years for us to obtain sufficient data to convince ourselves that the phenomenon was genuine.

"Now there is no doubt that the sharing of information and abilities between cells of the immune system is genuine," he says.

The 'heretical' idea also has some potential applications which could greatly benefit patients in the future. According to Parish, using receptor sharing may lead to new ways to treat cancerous tumours as well as strengthen immunity in people with weaker immune systems.

"These findings can potentially be harnessed to expand immunity against pathogens and cancer," says Parish. "In the case of cancer, the number of immune cells in a patient that can recognise and eliminate the cancer could be dramatically expanded.

"Another obvious application of our discovery is in patients with decreased immunity. Again, this form of cell to cell communication could be used to expand the number of immune cells in these individuals that can combat opportunistic infections.

"Understanding when, why and how receptor sharing occurs and whether it can be harnessed to combat cancer and infections is the challenge for the future. We plan to use the NHMRC project grant we have been awarded to answer these questions," says Parish. ■

# The nature of things

New ANU Vice-Chancellor Professor Ian Young brings a wealth of academic and scientific expertise to the University. By **MARTYN PEARCE**.

If you ever really wanted an example of the complexities of Mother Nature, thinking about ocean waves is a good place to start.

Already influenced by the water's depth, the distance from land and, indeed, the waves around them, ocean waves also are both influenced by, and influence, ocean wind.

Trying to see patterns and make predictions about the behaviour of those waves is the stuff that would give most of us a headache to even think about. Yet what underpins the complexity are two key simple truths: ocean waves influence ocean wind, and ocean wind influences ocean waves. It's the simple and uncomplicated, within countless variability.

Professor Ian Young, the new Vice-Chancellor of ANU, has made a career out of understanding complexity and introducing simplicity. It's been a feature in both his roles as a Vice-Chancellor – he was previously at Swinburne University of Technology – and as a coastal and ocean engineer, his area of academic expertise.

His new role as the man in charge at the University is unlikely to see an end to that academic interest. Indeed, he recently joined a very select group of Australian Vice-Chancellors who have not only continued to practise their academic speciality, but continue to publish. In March a paper he produced on the global increase of ocean wave sizes was published in the prestigious *Science* magazine.

He says he's relishing the opportunity to apply his skills to another intricate, complex entity – ANU – and giving it a new direction following the retirement of former Vice-Chancellor Professor Ian Chubb.

"You don't want to psychoanalyse yourself too much, but I think I have the ability to put some clarity around complex processes," he says.

"ANU is a relatively complicated institution for a range of reasons, and that's the way that it should be. But I'd like to think that, despite that, I'll be able to give it a fairly clear vision that works for all those

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**Explaining why the work we do here is important to the general public is critically important. It's something I think I have a duty to get across.**

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different elements of the institution.”

He says that he's acutely aware of the special nature of the University.

"I researched the history of ANU before I came here because I think that the histories of institutions are really important. They shape the culture, they shape the people within them and the history determines the nature of the institution.

"The history of ANU explains a lot about where it is today – as arguably one of the top 50 universities in the world. I think universities are precious institutions. Sure, they need to be directed, but they need to be nurtured as well. I take that leadership role seriously, and I think it's a great responsibility," he says.

Responsibility is not something Young has shied away from in his career. His academic life following completion of his PhD began at the Max Planck Institut für Meteorologie in Hamburg before securing a role as a Professor of Civil Engineering at the University of New South Wales (UNSW).

More recently, his seven years in the hot seat at Swinburne were preceded by a role as Executive Dean at the University of Adelaide. He has also held positions as Chair of Education Australia and Director of IDP Education, as well as two years as a Member of the Australian Qualifications Framework Council.

But being a Vice-Chancellor is a high profile job which can be immensely challenging, even to someone

who relishes the opportunity to introduce clarity to complexity. So why did he take the job? Young says it appealed to him on two levels.

"I've always been interested in building institutions that have a focus on research and research quality. That doesn't mean that I'm not interested in the quality of education – I am. But I have always believed that to be a great university you need to have high quality research," he says.

"It struck me that ANU was an organisation where I could take my thoughts on building research quality and take them to another level.

"The other interest is the nature of this position. [Being ANU Vice-Chancellor] allows you to contribute to the broader public policy debate around education, research and development, and how those things influence our economy and society. I'm interested to play a role in those debates on the development of education policy and just where we might go as a knowledge nation."

To many in Canberra he may be a stranger, but Canberra is no stranger to him. In the late 1980s and early 1990s he lived in the city for 12 years while he worked at UNSW at the Australian Defence Force Academy. He barracks for the Raiders and he sings the praises of the city to anyone who asks, and many who don't. As he told the assembled media on his first day in the job, coming to ANU, to Canberra, was like coming home.

That familiarity with the place extends to the importance of the city to the University, as well as the University's role in Canberra.

"ANU is an important part of Canberra, both in terms of the impact that the University has on the city, but also the vital importance of the city on the University," he says.

"Around 60 per cent of our students come from Canberra, and we're the third largest enterprise in the city after the Commonwealth Government and



ANU Vice-Chancellor Professor Ian Young. PHOTO BY BELINDA PRATTEN

the Department of Defence. So I take very seriously the need to be able to engage with the people of Canberra and the many students who are Canberra residents."

But despite its place in the local community, Young believes that many outside the University have a skewed picture about ANU. It's something that he's keen to change.

"Externally, ANU is perceived with a lot of envy. I don't want people to envy ANU, I want them to respect it and to see it as a great resource for the nation.

"I think you could say ANU will have been successful in its mission if the general public, and our colleagues at other institutions, see it as a great resource for the nation, and something that contributes to the betterment of Australia and which is a great endowment for the future of the country."

He acknowledges that, for all the successes of the

institution, there are still things that it could do better – including improving communication about the work undertaken at the University.

"All my observations of ANU, both before I came here and since I have been here, have reinforced its status, position and the quality of what's happening here.

"I think what it could do better is conveying that message to the general public. That outreach, explaining why the work we do here is important to the general public, is critically important. It's something I think I have a duty to get across," he says.

But these are all challenges that mark the road ahead. For now, the immediate challenge is working with the University community to develop a new strategic plan and – here's that idea again – getting to grips with the complexity of the organisation.

"...I'm on a steep learning curve. I'm trying to fully understand the institution and how it's structured. Although it's a relatively complicated university, I certainly haven't come across anything which I've been unable to understand.

"But at the moment, I'm just trying to get out and communicate with as many people as I can, to broadly get an understanding and feel for what's critically important to the University," he says.

But like the waves, there's only so much that the underlying structure can tell you. Sometimes, the most valuable thing is the simple stuff – like experience.

"Some of that understanding you can get from the data and metrics and so on, but some of it you simply need to get by understanding the people, the culture and the history of institutions. That's a challenge that I'm enjoying already." ■

# Bloggger to blog

Raja Petra Kamarudin – RPK as he’s known – is a Malaysian political commentator and activist. The blog he started, *Malaysia Today*, has become a thorn in the side of both government and opposition parties in Malaysia, and is even considered to have played a role in toppling a prime minister. During a recent visit to ANU, he was interviewed by one of our best-known bloggers – **NICHOLAS FARRELLY**, Editor of *New Mandala*.

**How did you become interested in politics? What was the catalyst for you?**

In 1998 the then Deputy Prime Minister of Malaysia, Anwar Ibrahim, was arrested and put on trial for sodomy. I attended court every day, and when I saw the way the trial was conducted I thought there was something terribly wrong with the whole judicial system.

Then I got very involved with the [Malaysian] reform movement [and] before I knew it, there I was right in front of everything.

I got arrested and detained five or six times before I decided it was healthier for me to continue my operations outside Malaysia.

**It’s been many years since you took on the challenge of Internet activism. How did that start?**

In 1994 a friend of mine was running this email service and he persuaded me to sign up. I said ‘what am I going to do with email?’ and he said ‘you communicate with people’. And I said ‘yes, but who do I communicate with?’ Over two or three years my email network grew.

At that time I was writing for a government-owned newspaper. I was writing on cycling and motorcycling, those kinds of things, [because] of course, they wouldn’t touch any articles on social, economic or political issues.

So I built up my own mailing list and started sending out all my commentaries and views on social issues of the country. Eventually it grew.

In 1998 I set up a website – a simple thing, called *Raja Petra’s Website* – and I put all my views on there.

Before I knew it, everywhere I went people would say

‘hey, I read your website’. I didn’t realise that the reach was quite that wide.

[I] set up *Malaysia Today* in 2004 and all hell broke loose. [Through columns] I embarked on criticising the government on everything it does, and also criticising the opposition on what it should be doing if it wants to be the next government. I made enemies on both sides of the political fence.

I’m not aligned to anyone now – the government has arrested me and thrown me into jail, the opposition doesn’t want to touch me with a 10-foot pole – so I might as well create what I call a third force, and go for the throats of both sides. That’s where I am today.

**What have been the highlights of running *Malaysia Today*?**

We ran a series of articles revealing the shenanigans and goings on in the corridors of power.

In that series of articles...the conspiracies that we exposed became a sensation – a sort of *Peyton Place* of Malaysia.

We were accused of being the instrument for bringing down the Prime Minister. I don’t know whether that’s supposed to be a positive or negative, but I suppose that would be a highlight.

**Are there any particular challenges that you don’t think your online audience is aware of? What problems do you face with the site?**

It costs us a few thousands dollars a month just to host it and we have to host it in Singapore and the US.

We can’t host our website in KL (Kuala Lumpur) because within an hour the police would raid the place and confiscate the computers. My house

has been raided, maybe six times, and each time they’ve confiscated my computers and they’ve also confiscated all documents, CDs, everything they find they cart away. We have to be very far from the long arm of the Malaysian law when we operate.

For the last two years I’ve been operating it in the UK – I can no longer go back to Malaysia. You have to accept exile if you want to do this.

The other thing is that the website is constantly under attack, non-stop. Whoever is doing it must be spending a lot of money to bombard us with DDoS [Distributed Denial of Service – where thousands of computers demand information from a single website, clogging it and causing it to be non-operational] attacks daily.

We’ve constantly got to be on the run and it’s tiring. It’s practically as if we are working underground.

**Your new political movement focuses on civil liberties. Why does that matter for a country like Malaysia?**

People in the West take things for granted. In Malaysia we always tell the joke that we have freedom of speech, it’s freedom after speech we don’t have.

We’ve got laws like the sedition act, which they can use against you in the event they’re not happy with what you say. And if they can’t find any specific law, they’ll use the internal security act – the ISA – which is a cure-all law. All they need to do is issue the detention order on grounds that they believe you’re a threat to national security. Why do they believe? They don’t have to explain – as long as they believe that’s good enough.

We find that the government tries to stifle everything that you do.

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You have to  
accept exile  
if you want  
to do this.

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You now have a legendary reputation among many Malaysians. When all is said and done, what do you want to be remembered for?

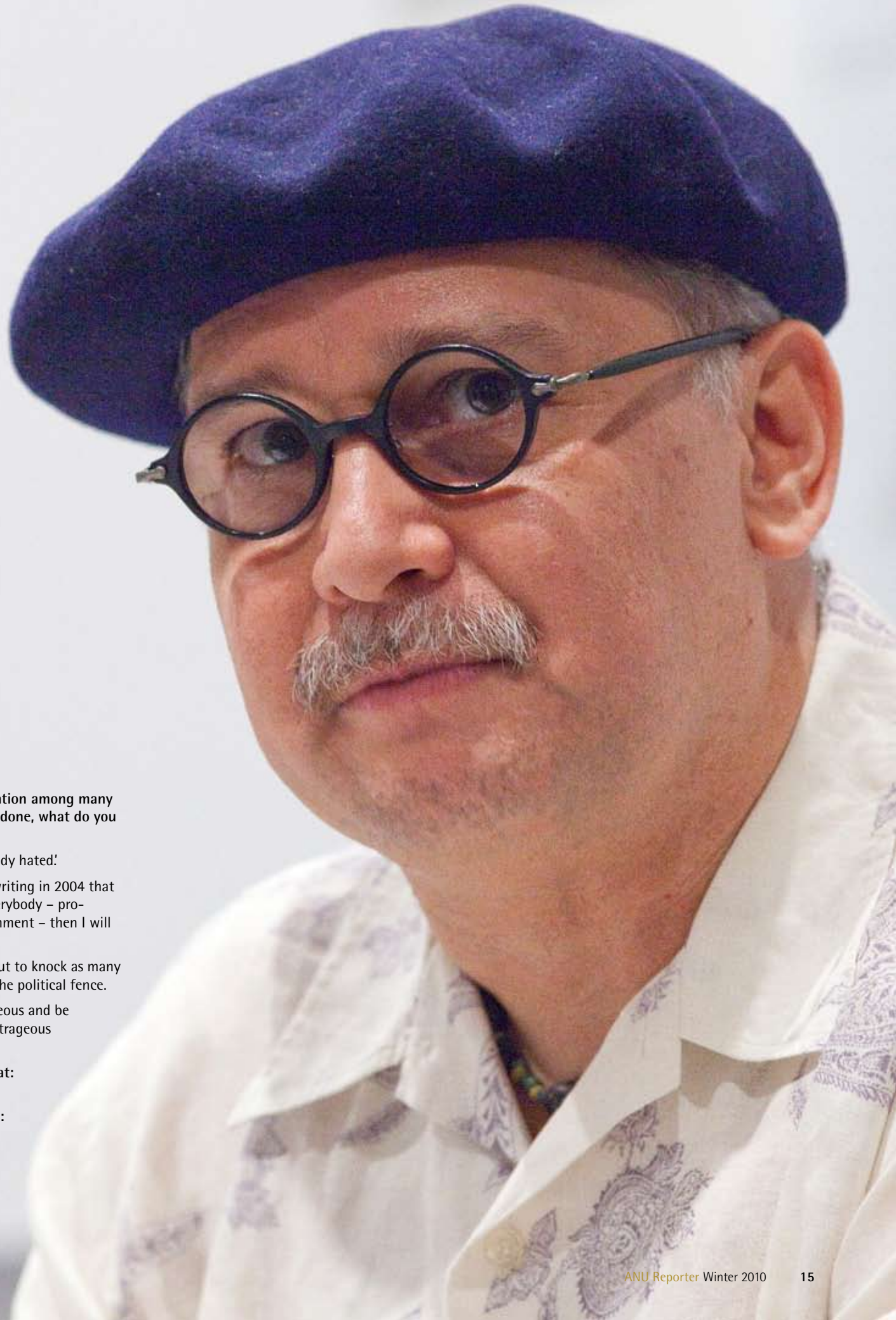
Probably [being] 'the man everybody hated.'

I always said when I first started writing in 2004 that if I can eventually be hated by everybody – pro-government as well as anti-government – then I will have achieved my objective.

My mission is not to be popular, but to knock as many heads as I can – on both sides of the political fence.

I suppose I just want to be outrageous and be remembered as being the most outrageous Malaysian that ever lived. ■

- *Malaysia Today* can be found at: [www.malaysia-today.net/](http://www.malaysia-today.net/)
- *New Mandala* can be found at: [www.asiapacific.anu.edu.au/newmandala/](http://www.asiapacific.anu.edu.au/newmandala/)
- The full version of this interview is on the ANU YouTube channel: [http://bit.ly/rep\\_rpk](http://bit.ly/rep_rpk)



# A tastier tippie

Dr Peter Solomon is tackling two critical issues – how to ensure that we protect crops from disease and how to make sure the wine in your glass tastes better. By **TEGAN DOLSTRA**.

**W**hen he's not busy solving the global food crisis, Dr Peter Solomon of the Research School of Biology at ANU is ensuring that your chosen tippie arrives in peak condition.

But how did a wheat disease expert come to publish a paper on wine shipping conditions? The idea grew from a casual chat with colleagues one happy hour, says Solomon.

"We talked, almost jokingly, about what would happen to wines [travelling] across the equator," he says.

The discussion (which, you guessed it, was held over a glass of wine) stemmed into a serious research project.

The study, involving collaborators at Murdoch University, CSIRO and the University of California, simulated wine shipping conditions based on previous findings that the ambient temperature of refrigerated shipping containers can fluctuate up to 13°C over a day.

To test what effect this might have on the precious cargo, the team stored a selection of red and white wines for three weeks at either 20°C (to reflect room temperature), 40°C (to reflect ambient temperature at the equator), or an alternating 40°C/20°C cycle (to simulate day and night). More unusually, the remaining bottles were stashed in the boot of a car and chauffeured around California for the same period.

Following this faux journey, an expert panel were enlisted to sample the wine. Their palettes were prepped with sensory standards, from typical red berry flavours to canned vegetable through cardboard, before assessing the real thing.

“**With wines travelling through the Suez Canal at 50°C air temperature, the bottles at the top are really going to cop it.**”

Although the red varieties weren't much affected by the higher temps, the whites wilted in the heat, says Solomon.

"The white wines in the 40°C conditions had significantly increased diesel, oxidised and burnt rubber aromas. At the same time, they lost that sweetness and fruitiness you'd associate with a good, crisp Sav Blanc."

Solomon thinks these findings are likely to cross over to the real world, especially given that heat becomes concentrated just beneath the sun-exposed roof of a shipping container.

"With wines travelling through the Suez Canal at 50°C air temperature, for example, the bottles at the top are really going to cop it. You could open two bottles of wine, one from the top, the other from the bottom, and they could be vastly different to the point that you think, 'My god, one of these is off.'"

The team also analysed the chemical composition of the 'gas' that emanates from wine and imparts most of the flavour. Through correlation of their results with those of the tasting panel, they have identified a few tell-tale compounds that can be tested for, ensuring that the bottle you pluck off the supermarket shelf is without that hint of burnt rubber.

It might not be so bad though, as Solomon – something of a wine aficionado himself – acknowledges.

"Some people may like the diesel; it all comes down to personal preference."

But something all wine lovers could agree on: what better companion to a glass of red than a fresh loaf of bread? This is where Solomon's main area of research comes in. He studies a fungal disease that decimates \$100 million worth of Australian wheat every year. With the global population set to boom (an extra 2.2 billion inhabitants are expected by 2050), the battle to beat crop disease is becoming urgent.

Until recently, this fungal pathogen, *Stagonospora nodorum*, was considered pretty simplistic; but thanks to Solomon we now know some of the clever tricks it uses to manipulate its wheat host.

"This particular fungus requires a dead or dying host: it needs to kill the host and then feed off the nutrients from the dying cells," he explains.

Once the fungus has infiltrated the leaf, it deploys a battery of proteins known as 'effectors'. These effectors trick the plant into killing off the infected appendage, providing the fungus with a nutritious, composted food source.

There is, however, more to the story. The

only way the invaders can trigger the plant's death response is by interacting with a corresponding plant protein known as a 'host susceptibility protein'. If the plant does not have this protein, disease does not occur.

This knowledge has led to important practical applications. Solomon now supplies commercial wheat breeders with purified effector protein to identify and exclude susceptible plants.

"By infiltrating the effectors into their breeding lines, they can identify the lines that are susceptible to disease and remove them. It's being seen as a very significant success," he says.

Intriguingly, these host susceptibility proteins seem to have no other function than to betray the plant by fraternising with the enemy. In an evolutionary sense, this is completely counterintuitive, says Solomon.

The explanation may lie in the fact that other fungal wheat pathogens require their host to be alive, he says.

"One way that plants have evolved resistance to pathogens that require a living host is to kill the infected area, depriving the pathogen of the [living] nutrients."

Hence, what are now considered susceptibility proteins may once have provided the plant with resistance to other fungi.

"*S. nodorum* has hijacked these proteins and said to the host 'Well, here I am, go and kill yourself'. The host does, thinking 'Ha, I've got you' and the fungus thinks, 'No, dead tissue is exactly what I want'," explains Solomon. "We're working on this theory at the moment and evidence is starting to stack up that this might be the case." ■





Dr Peter Solomon is helping ensure people drink their wine and break their bread.  
PHOTO BY BELINDA PRATTEN

# Cosmic Cluedo

After nearly 500 years of discovery, even to the keenest observer space remains a dark and mysterious place, writes **JAMES GIGGACHER**.

**T**here once was a time when we thought our small blue planet in the backwaters of a galaxy far from anywhere was the centre of the universe.

Such delusions of celestial grandeur have since been crushed, with five centuries of astronomical adventure putting Earth firmly in its place. Discovery after discovery has shown that our planet is but one tiny thread in the vast tapestry of the night sky.

Astronomers have shown that our galaxy, the Milky Way, is just one among 170 billion existing in a universe that is ever expanding. They have even managed to tune into the aftershock of the big bang which happened some 13 billion years ago. This tell-tale hum of the universe's birth, the Microwave Background Radiation, is in fact the static on your radio and TV.

Even though astronomers have learnt a lot about the universe over the last few centuries, unsolved problems remain. Dr Paul Francis, an astronomer and physicist in the Research School of Astronomy and Astrophysics, describes this as "a more refined form of ignorance".

"I remember once there was an article in the newspaper talking about how there had been this great big breakthrough and now astronomy was all finished," says Francis.

"All finished apart from a few minor questions like what is the universe made of, where did it come from, how big is it, where is it going, and is there life in space?"

"Then there are the less famous mysteries, like how did black holes get so big, where are all the dwarf galaxies and how do planets form anyway? According to the science they shouldn't even exist.

"But, oh dear, we seem to be standing on one."

When he is not helping students navigate the perils of first-year physics, Francis can be found at the University's Mount Stromlo Observatory – applying a keen eye to the heavens above. Besides looking at comets, quasars, and high redshift galaxies, he likes to think about the hardest problems in modern astrophysics.

He has already cracked one cosmic conundrum. A few years ago he led an international team which found an enormous string of galaxies 10,800 million light-years away and 300 million light-years long. The discovery has challenged existing theories on how the

universe evolved. Not bad for someone who grew up in London, unable to see the stars for pollution.

Francis says we will never know all there is to know about the universe; and even if we could "that would be too boring".

"The art of being an effective researcher is trying to find a middle ground where the problems are something that you can make some strides on but are still interesting.

"And of course there are many thousands of astronomers around the world and so, with all those astronomers making small steps, hopefully you'll find that what a few years ago looked utterly impossible is now looking remarkably easy.

"So, for example, you might not be able to find out if there is life in space but maybe you can find out whether life can exist on this sort of planet, or whether that sort of star can have planets, or whether planets can survive in this sort of star system," he says.

Whether we are alone or not is a question which Francis takes seriously. He says that one day it will be answered – but not in our lifetime.

"Whether there is life in space is a question which I think that we will probably answer," says Francis.

"We might find an alien footprint tomorrow, but I doubt it because I don't think there are any aliens in our solar system. This means we'll need to look outside our solar system and that requires rockets.

"And if we are sending rockets to other solar systems it is going to take a very long time. 500 years from now I am sure we'll know. 100 years from now I am not so sure."

But for Francis it is not always about analytical thought.

"There are two quite separate pleasures in watching space," says Francis. "One is to just lie outside at night, far from street lights, and look at the night sky, the Milky Way wheeling overhead and just think how big it is or look up with a pair of binoculars, count the stars and get a sense of the beauty, the size and the awe of it.

"For the professional, research is not actually like that. The closest thing to it I can think of is being a detective. You've got a murder mystery and you're trying to solve it. There are all these puzzles and they



An artist's conception shows a two-star system, HD 113766, where astronomers suspect a rocky Earth-like planet is forming around one of the suns.

IMAGE COURTESY OF NASA

## Where do the planets come from?

"The planets are supposed to have formed from a whole bunch of rocks orbiting around the sun," says Francis. "These rocks slowly stuck together so that small rocks formed bigger rocks and bigger rocks formed even bigger rocks and so on until you end up with the Earth."

The trouble is these rocks would have been orbiting in the middle of a huge disc of gas, says Francis.

"This friction between the rocks and the gas should have meant that all the rocks fell into the sun. Therefore planets shouldn't exist.

"So that's a little embarrassing at the moment and probably my personal favourite unsolved mystery."

don't all agree and some of the pieces are missing and the universe is lying to you.

"You stare and stare at the evidence and suddenly a new theory comes up and it explains one thing but it doesn't explain another. Until, finally, it all falls into place and you crack it!"

Just like a good game of cosmic Cluedo.

“

Whether there is life in space is a question which I think that we will probably answer; when exactly I couldn't tell you. But 500 years from now I'm sure we'll know.

”



Dr Paul Francis: astronomer, physicist and organiser of his children's school's science club.

PHOTO BY BELINDA PRATTEN



The Hubble telescope captures a black hole.  
IMAGE COURTESY OF NASA

## Unsolved: where did the universe come from?

**I**n terms of questions it really doesn't get much bigger than this," says Francis. "The answer is of course we don't know."

What is known is that 13.7 billion years ago the universe was much smaller than it is today and full of extremely hot gas. At this time the universe was also incredibly dense – all the matter which exists today was squashed into something the size of a peanut.

"How it got to that state, whether it was God who said 'let there be a small universe entirely full of hot gas,' or something else, we don't know," says Francis.

Francis says that scientists, using devices like the Large Hadron Collider, have managed to reproduce the behaviour of matter when the universe was about a billionth of a second old.

"So we have some idea of what was happening then. But what happened before that, say instead of one billionth of a second before the big bang but at one tenth of a billionth of a second or one hundredth of a billionth of a second before, well that we don't know, because energy was getting smaller and smaller and denser and denser. We

had the entire universe in the size of a grain of salt rather than a peanut, and before that the entire universe was in the size of an atom, and so on all the way back.

"And basically we can't experiment with that. We've got no experiments on Earth that can reproduce this condition so we have to rely on our theories; we have to think deep thoughts."

And this is where it gets even trickier. The two great theories of 20th century physics look at two very different things; relativity, which looks at really large things, does not speak to quantum mechanics which looks at the world of the small.

"Normally you never need to use both because you never have something that is incredibly massive and incredibly small," says Francis.

"Except for two situations which both occur in space. The first is the appearance of a black hole and the second is the time just after the big bang.

"The trouble is the theories don't mix. They are like oil and water and they predict wildly inconsistent and ridiculous things. And we are yet to come up with a unified theory which can explain both situations. So basically, we don't know."



Dark matter has revealed that the universe is older than astronomers previously thought.

IMAGE COURTESY OF NASA

## Solved: the case of the too young universe

**F** Francis says that a good example of a recently cracked problem was the mystery of the universe not being old enough.

"This was another one I was involved with 10 to fifteen years ago," says Francis. "Back then we believed that the universe was about 10 billion years old but we kept finding things that were older than that."

"For example, I discovered a galaxy that was about 10 billion light years away and seemed to be several billion years old. And you can't get that in a universe that was this young."

"And so the data kept building up and pointing out that something was wrong here but we couldn't understand it."

This was because the way people worked out the age of the universe was to look at how fast it is currently expanding then extrapolate that speed all the way back to determine when the big bang happened.

"So this was a puzzle for a long time and it was a puzzle that was actually solved by a new puzzle," says Francis. "Astronomers eventually discovered that the rate [at which] the universe was expanding was actually getting faster. So it started off very slowly and then got faster and faster and faster."

"And this was due to dark energy; and that's introduced a new puzzle – what the hell is dark energy? – but it also solved an old one. Because the universe was expanding very slowly early on it meant that it is actually older than we first thought."

"That's often how it works. You solve one problem and open up another." ■



A Red Shirt protester bruised and bloodied on the Bangkok streets last year. PHOTO BY NICK NOSTITZ

# Tracking the verge

An academic seminar in Canberra has become a *YouTube* hit and brought scholarly expertise to bear on dramatic unfolding events in our region. By **MARTYN PEARCE**.

**O**n April 21, 2010, many of the University's best and brightest on issues in Southeast Asia gathered for a one-day seminar tackling an issue dear to their hearts – the troubles in Thailand.

At the time, the anti-government Red Shirt protests were well underway and about to turn the streets of Bangkok into a battleground. Fittingly, the seminar called itself 'Thailand on the Verge'.

The assembled crowd of around 120 people heard presentations from Dr Peter Jackson on the nature of the Red Shirt protests, Professor Peter Warr on agricultural issues feeding into the protests and Senior Fellow Dr Andrew Walker, among others.

The event may have attracted a reasonably small crowd to see it on the day, but the video that was recorded of it has broken University records. Now, just shy of a year after it was recorded, it has been watched more than 50,000 times on the University's *YouTube* channel.

For an academic presentation, aimed at an academic audience, 50,000 is a very large number.

The phenomenal success of the video suggests that well-presented, relevant material can reach well beyond University walls to an international audience hungry for fact and intelligent analysis.

Surprisingly, the vast majority of viewers – by a ratio of about four to one – are from inside Thailand.

“

**At a time when dissident speech is under fire in Thailand, *Thailand on the Verge* made those critical inside the country feel as though they were not alone.**

”

*Thailand on the Verge* conference organiser Dr Tyrell Haberkorn says that she has been surprised by its reach into the country.

“During my recent two-month trip to Thailand I was struck by the range of people who had viewed the *Thailand on the Verge* video,” she says.

“Viewers included not only the usual suspects of university students and academics, but many people outside a university community as well. Used book vendors, lawyers and artists spoke of watching the video and talking about the ideas discussed in it.

“At a time when dissident speech is under fire in Thailand, *Thailand on the Verge* made those critical inside the country feel as though they were not alone.”

Walker suggests that its success also reinforces the

role that universities and academics can play in making sense of current affairs.

“Universities strive to find strong synergies between the core activities of research, education and outreach,” he says. “The success of videos like *Thailand on the Verge* shows that there is a real public interest in outreach activities that package research expertise in an accessible format.

“The experience shows that academic outreach can successfully move away from rarely visited static websites to dynamic and topical engagement with unfolding events.

“These video resources can be drawn upon by lecturers within ANU to provide flexible and innovative resources for teaching and learning.

“And given the increasingly draconian restrictions on free speech in Thailand, ANU can play a valuable role in promoting open discussion on issues that are central to Thailand's political future.

“The fact that the vast majority of viewers of this video have been from Thailand itself shows that we are tapping into genuine interest in academic analysis that speaks directly to local concerns,” he says. ■

The *Thailand on the Verge* video can be watched at [bit.ly/rep\\_thaiverge](http://bit.ly/rep_thaiverge)

# Can you feel the force?

It's misunderstood, distrusted and derided, but marketing can be a powerful tool for change. By **STEPHEN GREEN**.

**F**ormer Director of Communications for UK Prime Minister Tony Blair, Alastair Campbell once said that what in politics is called 'spin', in business is known as 'marketing'.

The statement is a combination of truth and distortion, like spin itself, but it highlights a popular misconception about the business of marketing. That marketing, like spin, can be seen as manipulative, distorting and, in some cases, downright deceitful.

Professor of Marketing, John Roberts describes himself as "a marketer who believes strongly in the social value of what I do," and he makes a strong case for the positive influence of marketing. He acknowledges that the discipline has negative connotations for many people, but argues that marketing is in fact a far more socially valuable activity than is generally understood, and has great potential for effecting beneficial change in society.

"Marketing can be done in ways that I would describe as socially adaptive, and it can be done in ways which are socially objectionable," he says.

"However, the simplest and most effective method of getting sales is by understanding customers and using that understanding to harness the resources of the firm so they are well focused on meeting customer needs. I would argue that is a very socially adaptive process."

He adds that, in most cases, the marketing choice most beneficial for a firm is the one most beneficial to the customer.

"If there's not an alignment between the firm's offerings and the customer values, there are three things it can do to obtain a perceived match: try and persuade the customer that they want its product; pretend there is a match, and lie; or change what the firm does so it does meet the needs of its customers.

"The first two are not particularly socially desirable or adaptive, but the third is an incredibly useful thing to do – the community's resources are being focused on delivering to the community what it values. Even though two of these three are bad, the fact is that 95 per cent of marketing is about adjusting firm activities toward an understanding

of customer needs – not because we are nice people, but because it's easier. The best way to make money is to work out what people want and give it to them."

On the face of it, it's a simple equation – get the marketing right and you satisfy both the customer needs and the business goals of the firm. But in a broader social context, the choices that consumers make can have a massive impact on society as a whole. So what influence can marketing exert here to effect change?

In 2010, Roberts, together with Professor Pam Morrison, embarked on a project looking at marketing's role in achieving sustainable outcomes.

The research project investigates ways in which choices between current and future consumption can be framed to maximise voluntary consumer choices for sustainable futures. It looks at the psychology behind what marketers term 'discount rates' – measuring trade-offs between current pleasure against future pain, or vice versa – one of the key drivers of consumer choice.

"It's about how we help decision

makers, both business and consumers, make decisions that really reflect their values," says Roberts.

"There are ways to help consumers understand. Once consumers understand the psychological processes that are preventing them from making decisions that they would [themselves] regard as being in their long-term interest, it's much easier for [them] to address these things."

The research is nearing the end of its first phase in which the researchers



Professor John Roberts.  
PHOTO BY BELINDA PRATTEN

have looked into the interaction between developing options for a sustainable planet and how to understand consumer acceptance of those options.

The second phase will involve behavioural laboratory experiments.

"We put options to business people and consumers to see how they make trade-offs between their other objectives, such as profit maximisation for a company, or just pleasure, utility or wealth for the consumers."

The final stage of the project, scheduled for 2012, will involve work in the field, making policy changes and observing the reaction of different consumers to the change.

Roberts is quick to say that this approach is not manipulation.

"We're not trying to take away any of their [consumers'] rights or choices. We're trying to help frame those choices in a way that they'll say they're pleased they're taking those choices. I don't see that as manipulative."

An example of the kind of schemes that could be put in place is to ask consumers to opt out of clean energy sources, rather than to opt in. Roberts says similar schemes have been shown to be highly effective.

"If you put the healthy food in the school cafeteria at eye level, sales of it go up by 30 per cent. Organ donorships in Austria are about 99.98 per cent and about 12 per cent in Germany. Why the difference? Because in Austria you opt out and in Germany you opt in."

Effecting substantive change in consumers' habits to secure a sustainable future will only be achieved by the interaction of supply-side, regulatory and demand-side solutions.

"None by itself can address the problem," says Roberts. But marketing can and should play a pivotal role, he argues.

"I think the tools of marketing complement the tools of technology and the tools of economics and regulation very well." ■

# Solutions through service

Australia's future prosperity requires the best in public policy. Professor Adam Graycar tells **JAMES GIGGACHER** how the Australian National Institute for Public Policy will help the country rise to the challenge.

**A** changing climate threatens our water and food security and our cities are creaking under the strain of sprawling suburbs and swelling crowds. The engines of industry are slowing as our mothers and fathers age and the workforce shrinks. In a complex global world, the nation must navigate the rough waters of international financial markets and a changing of the guard in world power.

These are just a few of the challenges that those charged with running the country face. But as daunting as this list may seem, Professor Adam Graycar knows how they can be solved – the public service.

"The biggest and most complex policy

issues in our world are resolved in the public sector," says the Professor of Public Policy. "If you're in the private sector, you have some very hard decisions to make, but the bottom line can be fairly easily measurable.

"If you are charged with working out how we can allocate the water that flows from Queensland to South Australia so that industry, agriculture and households all get a fair share without damaging the environment in the process, they're not things you can measure with a simple bottom line."

Graycar is quick to point out that the public service can't do it alone. It is essential that they are given the best knowledge, ideas and research in order

to find solutions to these problems and translate them into real-world outcomes. Enter the Australian National Institute for Public Policy (ANIPP).

The newly established teaching and research institution draws together the public policy expertise available at ANU. It is a place where public servants and others working on policy for Australia can engage with the country's leading researchers and educators from across a wide range of disciplines.

As Dean of ANIPP, Graycar aims to use his 22 years of experience in government to help enhance the policy capacity of the Australian Public Service (APS).

"ANIPP is a strategic partnership with the APS, which will translate the knowledge, skills and research of ANU experts into realistic public policy," says Graycar. "It will give public servants the ability to deal rigorously and creatively with the big issues of our time as well as to anticipate the issues of the future.

"Over the next few years, hundreds of public servants will forge strong links with ANU, through professional short courses, degrees, seminars and symposia and tapping into research of the highest standard.

"ANIPP will also offer a practitioner-in-residence program linking public servants with researchers on the ANU campus.

"On top of this, ANIPP hosts the HC Coombs Policy Forum, a think-tank and translation unit that will turn ANU research into plain English policy solutions. It provides a key national interface between academia, the public service and the broader community by using the University's distinctive role in Australia.

"Through the forum, ANIPP will aim to map out policy themes that include Australia's governance challenges; diplomacy and international affairs; and securing long-term prosperity.

"We're not going to take any one of these issues alone, but start to look at how they are related," says Graycar.

"So, if we are looking at an ageing population, we will also examine the demographics of ageing, the industrial issues that deal with older workers and retirees and also the food and nutrition issues that might go with an ageing population."

Graycar says it is all about creating a public service which, through enhanced public policy teaching and research, can build a solid foundation for Australia's future.

"After all, good public policy is something that governments do, that has an impact on peoples' lives and makes peoples' lives better," he says. ■

Find more information online at [publicpolicy.anu.edu.au](http://publicpolicy.anu.edu.au)



Professor Adam Graycar, Dean of the Australian National Institute for Public Policy. PHOTO BY JAMES GIGGACHER





Professor Alan Rumsey. PHOTO BY BELINDA PRATTEN

# The poetry of Papua

In the highlands of Papua New Guinea one of the world's oldest forms of verse and song can be heard, writes **JAMES GIGGACHER**.

**N**ew Guinea, the world's second largest island, is home to some 1,000 native tongues, or one-sixth of the world's languages. This extreme diversity is matched by another amazing linguistic phenomenon. Across a broad, east-west band of central Papua New Guinea, there exist ways of telling ancient stories using special intonations and rhythmic patterns which differ from everyday speech. The mists of the island's highlands echo with the captivating rhythm of these 'sung tales'.

Professor Alan Rumsey, an anthropologist in the ANU College of Asia and the Pacific, has been trekking up the dizzying heights of Papua New Guinea's highlands to listen to, record and study these stories since the 1980s. From 2003 to 2006 he led a project looking at genres of sung tales. He says they represent one of the most striking forms of verse in the world.

"The highlands of Papua New Guinea are one of the areas of the world where ways of telling highly poetic and verse-like stories developed completely unrelated to writing," says Professor Rumsey.

"Elsewhere in the world, measured verse tends to have developed within or alongside a written tradition which results in more regimented sorts of poetry.

"This stuff is completely orally composed and performed, so there's a kind of process of composition

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**It is a living tradition which has responded really well to modern situations.**  
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in performance. Sort of like a jazz musician, performers improvise within a set of themes and a set way of saying things.

"It's nothing like everyday speech. It's more like singing. And it's not something that everyone can do. It's a very competitive game in which there are only a few really good players," he says.

Some performers are so good that they have been enlisted by Papua New Guinean politicians to help them get elected. Recordings of their chanted endorsements are blasted from PA systems rigged to the backs of trucks that cruise through hotly contested campaign grounds. A popular story tells of a young man courting a young woman – which is used as a metaphor for winning the people's vote.

"It is a living tradition which has responded really well to modern situations," says Rumsey.

While it is almost impossible to put an exact figure on how old the tradition is, Rumsey says that the spread and diversity of these tales in the highlands suggests it has been around for a very long time.

"It certainly started long before Europeans got there," he says.

"The most comparable thing to it is *The Iliad* and *The Odyssey*, which were composed and performed about 3,000 years ago by the ancient Greek figure, Homer."

And, like all good oral traditions, Rumsey says that the success of a sung tale is not only about the story but also about the performer.

"I suppose it's like when a fairly simple pop tune can be taken by a jazz musician and turned into something that sounds great," he says.

"So I guess I have my favourite performers more than favourite stories – but I shouldn't say who they are because that would be undiplomatic." ■

Professor Rumsey's book *Sung Tales from the Papua New Guinea Highlands* will be released in June this year through ANU E Press. It will be accompanied by 20 audio samples and available online at <http://epress.anu.edu.au>



# A quiet revolution

Tired of waiting for government to step up and plan for a future with global warming and diminished oil supplies, communities around the world are taking adaptation into their own hands. Visiting Fellow at the Centre for Deliberative Democracy and Global Governance **JOHN BARRY** analyses the worldwide emergence of the Transition movement.

**W**hen faced with the enormity of the challenges of climate change, many people do one of three things – they think that 'technology will provide a solution'; that the government will find a solution; or they try not to think about it too much since it can be depressing to do so. Or, they'll think of some combination of all three.

What they all share is a sense that 'business as usual' and our existing ways of life can continue in a climate changed world. There are, however, other responses to climate change (and its flip side, peak oil) that do not share either the belief that technology or the government will find a solution, nor that our current lifestyles will or ought to continue unchanged as we make the inevitable transition to life in a climate changed, carbon constrained world.

These responses promote the idea that communities can think and organise for themselves, and that different ways of life from our current ones can be better and enhance our wellbeing. One such movement is the Transition movement which began in the Irish seaside town of Kinsale in County Cork in

2005 and was pioneered by permaculture teacher Rob Hopkins.

Since then it has become the fastest growing environmental movement in the global north. There are currently 343 official Transition movement initiatives worldwide, 358 communities 'mulling it over' in 31 countries around the world from the UK, Ireland, to Australia, New Zealand, Canada and many more countries. In Australia there are transition initiatives in Maroonah, Brisbane, Sydney, the Sunshine Coast and even one starting right here in Canberra.

In Totnes, Devon, the Transition process has resulted in the creation and success of its own local currency – the Totnes pound. In Fife, Scotland, it has led to the 'Fife diet' – a grassroots initiative to encourage people to eat in season as much as possible and from locally grown food.

The Transition Towns network is a fascinating and significant grassroots response to the converging ecological, economic, cultural, developmental and wider geo-political/security crises of the coming century. All the more interesting is that it has

emerged largely under the radar of the mainstream campaigning organisations.

The Transition movement starts from two premises. Firstly, the reality and implications of rapid and potentially catastrophic climate change; and secondly the reality of 'peak oil' – an imminent, permanent shortfall in oil supply, increasing year on year with massive geo-political, local economic and social consequences.

While supporting efforts to reduce emissions and to develop new energy technologies, the Transition movement leaves climate change protest to existing environmental campaigning groups, NGOs and activists oriented towards a global civil society.

The Transition movement sees its role as grassroots bottom-up, local activism that could potentially prepare the way for more directly political action at the level of national government. That is, those involved in Transition Town initiatives are not waiting around for the government or some other outside agency to help them prepare for what they see as the inevitable transition to life in a carbon constrained, climate changed world.



John Barry. PHOTO BY BELINDA PRATTEN

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**Transition Towns are not waiting around for the government to help them prepare for what they see as the inevitable transition to life in a carbon constrained, climate changed world.**  
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In contrast to most other groups concerned with sustainability, the Transition movement can't be described as a protest movement, though of course it is not unique in this. With an orientation that is resolutely non-confrontational, upbeat and positive, Transition Town communities are seeking to take charge of their own destinies. In many important respects the Transition movement is an example

of practical, solutions-orientated 'sustainable communities' in the making.

Those involved in the Transition movement, while not apolitical or against political activity, do nevertheless represent a decisive 'pragmatic turn' within the politics of the transition to sustainability. Focusing on very practical issues such as skills and re-skilling, food, energy, transport, land use and cultivation and above all community building, the transition movement could be seen as a form of hands-on, 'DIY politics' which may have the potential for actual transformation of local communities and preparing them practically for the adapting to the twin challenges of peak oil and climate change.

Metaphorically, one can view the Transition movement as a strategy of 'circling the wagons' as local communities learn, practise and experiment their way towards creating a more sustainable future for themselves, without waiting on the state or some other outside agency to come and help them.

From a 'peak oil' perspective, increased material and transportations costs will guarantee a massive reduction in global and national flows of people,

goods and (eventually perhaps) information. In the long term, this chronic energy shock could encourage a much more localised pattern of economic production and consumption.

For transition advocates, responding to climate change and peak oil will involve an integrated and seamless transformation of family, community and economic life – a paradigm shift captured by the notions of 're-localisation' and the creation of 'sustainable communities' and the creation of 'low carbon, high quality of life' forms of localised living.

The Transition movement is an odd kind of social movement – perhaps best considered less a protest movement or a campaign against globalisation, than a quiet and determined preparation for a retreat from globalisation towards a re-localisation. It's also one which does not look to or expect the nation-state to play a prominent role in this inevitable transition. These communities aren't looking for state permission or support; they're taking their future in their own hands, something that should (I say respectfully as a visitor to Australia) appeal to the 'Aussie Battler' spirit. ■



# The world is a stage

One ANU staff member is using her creative and collaborative skills to explore new spaces and stages for cultural and artistic connections, writes **JAMES GIGGACHER.**

**K**irsty Guster is living three lives at once. As development officer in the ANU School of Music, she manages the Streaming Sounds and videoconference music teaching and performance programs. She also runs Acton Walkways, a series of guided walks and 'behind the scenes' tours of Canberra's Acton precinct and adjoining ANU campus. And on top of all this, she is completing her PhD on the intangible aspects of classical piano performance. Unsurprisingly, Guster says she has learnt to "work in her sleep".

Yet no matter how hectic and chaotic things may get, the three main threads of her life are bound by one constant theme. All the projects she is working on have something in common – they are expanding creative potential and exploring new spaces for musical and cultural interaction.

"I'm interested in how musicians make the transition into being artists. Much of my research is about how pianists access and express their own creative potential," she says.

"My work also aims to expand the opportunities for musicians – and artists – to be able to communicate their work and insights to the public, and that includes finding more ways to expose the public to art and culture."

To help her do this Guster has tapped into the virtual

world, finding and employing technology that connects artists and audiences all over the world. Guster says that in the information age the use of videoconferencing technology by the School of Music promises an exciting new era for music performance, teaching exchanges and outreach.

"It's not just a two-way street. It is a multilane expressway," says Guster. "It enables our musicians to connect with international artists but it also enables regional and remote areas to connect with the artists we have here at the School of Music.

"And then you can extend that: people in remote areas, through the School of Music, will be able to connect with great musicians in New York or Europe. That's an extension of outreach that several years ago we couldn't have dreamed of."

Guster's drive is not just about combating the tyranny of distance. She's also inspired to expose students to some of the musical and cultural experiences she has had since graduating from the School of Music with her bachelor's degree.

Guster went on to complete a Masters of Music as a Fulbright Scholarship winner at the Manhattan School of Music (MSM) in New York. Since returning to Canberra she has worked with the Head of the School of Music, Professor Adrian Walter to build a relationship between the two institutions, leading to



Kirsty Guster. PHOTO BY BELINDA PRATTEN

the recent signing of a distance learning partnership. The agreement will see ANU and MSM work together on a range of projects, utilising leading edge videoconference technology for one-on-one lessons, master classes, virtual staff and student exchanges, and collaborative research into music performance and education over long distances.

"It was a great pleasure to see the partnership officially launched, not only as the manager of videoconferencing at the School of Music, but as a graduate of both institutions," says Guster. "Both institutions share an appreciation of the exciting opportunities this technology provides for distance learning."

"Many of our staff and students have braved the look and feel of this new performing and teaching 'stage' and it is always a joy to witness the technology disappear after a few minutes and see the intimate music making taking place."

A walk around Lake Burley Griffin in 2009 inspired Guster to explore yet another alternative stage for creative interaction and collaboration. The idea gave birth to her Acton Walkways project, which aims to promote the local area's rich history and natural beauty, as well as its many cultural and artistic attractions.

"Acton Walkways is about cultural engagement," says

Guster. "It was inspired by my time in New York and Paris; two very creative cities which I found hard to leave."

"I resisted moving back to Canberra for quite a long time I have to say. I think the creation of Acton Walkways was a way for me personally to get a sense of place here and to feel part of the community, but also to raise awareness of this beautiful, natural and cultural landscape we have here in Canberra."

Collaboratively sponsored by ANU, NewActon, the National Film and Sound Archive and the ACT Government, in 2010 Acton Walkways hosted 82 walks with over 1000 people attending. It is a recent recipient of an ACT Heritage Grant to tell the 'Sunken Stories of Old Acton'.

"It's exciting to continually see new people appear on these walks, and be able to share with them hidden sculptures, heritage buildings, or beautiful parts of the landscape – like the amazing gardens and grounds that we have here at ANU," says Guster.

"It's all about highlighting things that people wouldn't normally stop to look at or see from their cars when they are driving home from work."

This is what truly drives Guster. She believes people should be open to inspiration in as many ways as possible.

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The creative or the inspirational for all of us, whether we're artists or not, is about cultivating a sense of curiosity for the world around us.

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"My PhD research is about trying to find words for the inspirational and intangible in our lives," says Guster. "And I wouldn't say there is any one word but I think the creative or the inspirational for all of us, whether we're artists or not, is about cultivating a sense of curiosity for the world around us."

"For example, there is a lot of discussion about how a training in music gives you so much more than just the ability to play an instrument. The term is transferable skills, I suppose. And I think I've really experienced that phenomenon in the last two years across all the projects that I am involved in."

"I often find myself, especially with Acton Walkways, which is not specifically musical, looking at the world as a stage. And it's such a thrill to be creative with that stage and find new ways for various people to perform on it."

"So whether they are professionals or passionate community members across a range of subjects, they get to bring their expertise to that stage and share it with the public – which is after all exactly what musicians do." ■

For walking maps, event details and more information about Acton Walkways see [www.actonwalkways.com](http://www.actonwalkways.com)

## Songs in cyberspace: streaming sounds at ANU

The Streaming Sounds program began in July 2009 in an effort to engage local, national and international communities through open online forums for creative exchange and collaboration.

The series' first concert, *Clarinet.Ballistix*, was performed to a live audience in Llewellyn Hall and live-streamed online. This was followed up in 2010 by *The BigGig: A Singing Odyssey*, a concert presented by the ANU Music Education Program featuring over 1200 ACT school children singing in Llewellyn Hall.

- For more information see [www.music.anu.edu.au/streaming-sounds](http://www.music.anu.edu.au/streaming-sounds)

# Avoiding armageddon

How likely is it the earth will be struck by a large asteroid?  
The Catalina Sky Survey is on the frontline of early warning  
against 'deep impact', writes **TIM WETHERELL**.

The idea of a large asteroid colliding with the Earth has formed the basis of a number of movies such as *Deep Impact* and *Armageddon*, but is such an event purely a Hollywood fantasy? The chances of it happening may be small, but if it does come down to protecting the Earth from a massive impact, a large part of that precaution will be the Catalina Sky Survey.

The mission of the Catalina Sky Survey is to contribute to the inventory of Near-Earth Objects (NEOs) or, more specifically, the Potentially Hazardous Asteroids (PHAs) that pose an impact risk to Earth and its inhabitants.

Because the Northern and Southern Hemispheres each see a different region of the sky, it requires an international effort, using two instruments – one in Arizona and one at the ANU Siding Spring Observatory, NSW.

So how exactly does the search for potentially dangerous asteroids work?

Asteroids are comparatively small and made of dark material, a combination which makes them incredibly dim. To make matters worse, the sky is filled with billions of stars of similar brightness and it's impossible to tell one from another by simply looking through a telescope, even at high magnifications. In fact, the name asteroid literally means 'star like'.

The only practical way to detect asteroids is to take a long exposure image of a section of sky, then wait a while and take another image. Because bodies like asteroids and comets are much closer to the Earth than the background stars, they appear to move over time. If you can identify objects that move and map their position against the background stars, you can compute their orbits and predict the likelihood of them colliding with the Earth.

However, aside from the complex mathematics involved, there are two major practical difficulties.

Firstly, asteroids have variable brightness depending on how far from the Earth they are at the time. This means that all but the largest ones may be completely undetectable for the major part of their orbits, which can last several years.

The second difficulty is the size distribution of asteroids. There are relatively few planet-sized ones but thousands that are a few kilometres across, millions in the tens of meters range and countless trillions of smaller ones.

Tackling all these difficulties is Siding Spring astronomer Rob McNaught, who is an astronomer with the Catalina Sky Survey's southern arm. Along with fellow astronomer Gordon Garradd, McNaught spends many nights collecting data and analysing it to identify bodies in orbit close to the Earth.

"We can't hope to catalogue every asteroid out there, so we have to focus on those that have the potential to do most damage, which are the ones that are at least one kilometre across. We have identified 815 of these so far, which come within relatively close proximity to the Earth," McNaught says.

"However, significant local damage can be caused by asteroids right down to around 30 metres in size. While the smallest asteroids we've discovered are around three metres across, these represent only a tiny proportion of those out there. Realistically, current surveys are inadequate to seriously identify any significant proportion of asteroids in the tens of metres range."

However, you have to start somewhere, and NASA take the threat seriously enough to have funded the Catalina Sky Survey until at least 2012. But having identified a potentially dangerous asteroid, the next step is what to do about it.

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We can't hope to catalogue every asteroid out there, so we have to focus on those that have the potential to do most damage.

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It's probably impractical to try to destroy the asteroid. However, soft landing a space probe on its surface and using something like an ion thruster to apply a small but very prolonged thrust may provide a practical method of deflecting the asteroid and is theoretically possible using our existing technology.

The key to success would be having sufficient warning to prepare such a mission, which is where Catalina, and the work of McNaught, comes in. ■



Comet McNaught in the Evening Sky. Inset: Rob McNaught and the Uppsala telescope.

PHOTOS BY TIM WETHERELL



# Tomorrow's leaders

Aziz-ur-Rehman. PHOTO BY JIM HOLMES

Hafiz Aziz-ur-Rehman is part of an AusAID program aiming to help developing nations help themselves through educating their citizens. He tells **PHIL LYNCH** about his linguistic skills, experience of Australia and hopes for the future.

**M**any a first meeting in this increasingly multicultural world tends to begin with the question: "How should I refer to you?"

In the case of Hafiz Aziz-ur-Rehman, a recent PhD candidate and AusAID scholarship holder at ANU, the answer leads only to further questioning and fascinating revelations.

"You can call me Aziz.... Hafiz is a title," he explains. "It's a title which is given in the subcontinent to someone who memorises the Holy Quran completely by heart."

Incredibly, he did this by the age of nine.

Armed with a degree from the International Islamic University in Islamabad and a Masters in International Law from Stockholm University, Aziz was awarded an Australian Development Scholarship (ADS) in 2007 to commence work on a doctorate at the ANU College of Law.

His special field of interest is intellectual property and patent law – in particular, its impact on delivery of pharmaceutical medicines to the developing world, focusing on neighbouring India, a producer of cheaper medicines to the poorer countries of Africa. He has recently completed his studies, and taken up a position as Assistant Professor (Law) at the International Islamic University, Islamabad.

He is one of 140 postgraduate Pakistani students who have attended university in Australia on a development scholarship, one arm of a much broader assistance package that improves basic services like

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**The Islamic banking and finance system is not based on interest. Instead, it is based on sharing in benefits and in loss.**

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health care, provides education, boosts agriculture and rural economic development, and gives humanitarian assistance to displaced people.

Aziz plays down his prepubescent accomplishments in Islamic study. But consider this. Not only did this Urdu-speaking youngster master the Quran, chapter and verse, around the same age many children are reading their first book, he did it after learning Arabic.

During his time in Australia, Aziz detected a growing interest in the Islamic banking and finance system.

Shariah finance is a fast-growing sector of the global financial system with several key differences from traditional western practices, as he explains.

"The Islamic banking and finance system is not based on interest. Instead, it is based on sharing in benefits and in loss. You will be engaged in a partnership with a bank and by the end of the day you will be engaged as a partner in profit or a partner in loss," says Aziz.

Shariah also prohibits investment in goods or services considered contrary to its principles.

"For example, gambling is absolutely prohibited in the Islamic financial system, so all gambling-based practices, which includes a lot of stock market practices, they are not allowed in the Islamic system."

Similarly, any business involving the sale of alcohol is not condoned.

Despite the interest, economics, finance and public health law are unlikely to define the long-term future of Hafiz Aziz-ur-Rehman. His real passion is for politics and a future as a legislator.

"I would love to do that. It's a role most close to my heart," he says.

The Australian Government's development scholarship program, the Australia Awards, aims to foster leadership and equip scholars with the skills and knowledge to become leaders capable of dealing with the challenges facing developing nations. Here is a man who appears headed in that direction – highly educated and one in a cohort who could help strengthen an economy, develop civil society, teach children, provide health care, govern effectively, care for the vulnerable and poor, and make important, informed decisions to generate change.

There is a growing list of influential leaders around the world who have been educated in Australia on development scholarships; Aziz could soon be joining their ranks. ■



# Northern exposure

Medical student **TOM GLEESON** writes of his recent six-week placement in the Northern Territory, lending a helping hand in some hard-hit Aboriginal communities.

**T**he poetic roughness of the outback setting in Tennant Creek is juxtaposed against the dangerousness of the place after dark. The town is plagued by social problems, including alcohol and drug abuse, domestic and sexual violence and chronic unemployment.

During my six-week placement I spent time at the small emergency department of Tennant Creek Hospital, where the majority of the patients were Aboriginal. The medicine was very different to what I had experienced in Canberra. Often we had a mix of febrile, dehydrated and malnourished children being brought in from the remote communities.

The adult presentations ranged from boils and sexually transmitted illnesses to injuries resulting from drunken assaults. I was astounded by just how much alcohol played a part in those turning up for treatment. The regular Friday night preference seemed to be for a carton of beer for the women and two cartons for the men, along with plenty of rum. Sooner or later they would come into the hospital following violent incidents.

I also travelled hundreds of kilometres to the remote Aboriginal communities of Elliott and Lake Nash (also known as Alpururulam) to assist with the Healthy School Aged Kids (HSAK) screening program. The program targets all children aged up to 15 years and screens for a range of diseases, including trachoma (a cause of blindness), ear drum perforations, dental problems and skin sores. The Child Health Nurse and I saw about 140 children over two weeks of screening in Elliott and Lake Nash.

Elliott is a small town about 300km north of Tennant Creek. It has a school, health clinic, pub, roadhouse and a few houses for the mainly non-Indigenous school teachers, nurses and other local workers. The Aboriginal people in the community mostly live a few hundred metres outside the town. While the housing had been quite recently built, it was quite run down. Mangy dogs walked through streets that were strewn with rubbish.

Lake Nash, about 600km east of Tennant Creek, is home to a very isolated community. Community electricity is provided by eight diesel-powered generators, and water comes

from bores sunk into the Great Artesian Basin. Over 700 Aboriginal people live in the community, mainly from the Alyawarr language group.

Lake Nash has had considerable problems with alcohol abuse and marijuana smoking, with some recent outbreaks of petrol sniffing. It is one of the 'prescribed' towns under the Northern Territory National Emergency Response, known as 'the intervention'. The intervention involved changes to welfare arrangements, law and order and other measures in response to claims of extensive child sexual abuse in Northern Territory Indigenous communities. The Lake Nash community is now 'dry' and so it is a serious offence to bring alcohol into the town. The 'sniffable' fuel has also been replaced with the non-sniffable Opal fuel.

The town's children seemed to be happy and healthier than others that I had seen in Elliott. There were, however, a few with rheumatic heart disease and badly decayed teeth. I was amazed to see 'healthy choice' signs placed in the soft drinks fridge. There were few truly healthy choices available, but highly processed sugary and fatty foods were abundantly available.



Screening for middle ear disease in Elliott, NT.

I will not forget my experiences in Tennant Creek and the surrounding remote communities. It was a very interesting time for me, in terms of the variety of medicine which I saw, the people whom I met, and the stunning outback country through which I travelled. Resuming life in Canberra has not been easy, but I know I will return to the Northern Territory before too long. ■



# Organic garden takes root

The ANU organic garden aims to bring students and staff together to work on real-life sustainability issues. By **LUCY WEDLOCK**.

**F**ive years ago a group of ANU staff and students dreamed of building an organic garden on campus. A place to not only grow vegetables, but a space in which to build community and teach people about the benefits of sustainability.

With business proposal in hand and a team of dedicated volunteers, the group secured a patch of land next to the Heritage Early Childhood Centre on Lennox Crossing.

At the time the site was home to old playground equipment left to rust. The long unused sand pit became the first garden plot, filled with compost and fenced with chicken wire to protect it from neighbourhood pests.

The team then enlisted the help of a permaculture designer to help develop a long-term plan for the garden involving rotation of plants to maintain soil health. Students also built raised garden beds into the sloping land with help from ANU Recycling which donated the hundreds of old phone books used to create three terraced retaining walls.

And thus, thanks to the efforts of volunteers donating countless hours of manual labour, the garden was born.

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For me, the garden provides an escape right here on campus.”

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Jennifer McMillin, Environment Officer with ANUgreen, the University's environmental management program, has been a key figure behind the garden's creation.

“Today, the garden extends well beyond the original terraced beds,” she says.

“A six-bed vegetable garden provides volunteer workers with fresh, organic produce, and vegetables have been sold on consignment through the Food Co-op.

“We also hold weekday and weekend workshops which have allowed for the addition of a herb spiral, compost heap, berry patch and a small orchard.”

In 2009 the garden had a delicious addition, an outdoor pizza oven.

The oven, constructed with the help of local pizza oven expert, Maryke Henderson, has been used at garden functions, Harvest Festivals and open days.

In the same year the team won a grant from the Australian Open Gardens Scheme which they used to buy, and home, a family of four chickens. Volunteers built a pen out of recycled materials with the frame



Jackson Carr and the garden's family of chickens. PHOTO BY BELINDA PRATTEN

constructed from the old swing-set that was originally on the grounds.

As well as offering a steady supply of fresh eggs, the chickens have added an educational dimension. The children from the neighbouring childcare centre go there every day to see the animals, learn about food production and see where eggs come from.

Student coordinator of the organic garden, Jackson Carr, would like to see more people at ANU get involved with the garden.

“For me, the garden provides an escape right here on

campus, where I can be among friends and nature, be productive and be active. The garden provides me with a great place to unwind when uni gets stressful,” he says.

“If people want to improve their lifestyles by getting more physical activity, being socially active, learning life skills and eating healthy, fresh and organic vegetables while reducing their impact on the environment, then they should get involved in the garden.

“It's the perfect place for anyone who needs a bit of soul food.” ■

# 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: [www.anu.edu.au/podcasts](http://www.anu.edu.au/podcasts)

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



Egyptians celebrate the ousting of President Hosni Mubarak. PHOTO BY JOSEPH HILL  
[WWW.FLICKR.COM/PHOTOS/NEBEDAAY/](http://WWW.FLICKR.COM/PHOTOS/NEBEDAAY/)

## Egypt and the politics of change in the Arab world

Adjunct Professor Robert Bowker  
Centre for Arab and Islamic Studies, ANU  
Watch: [http://bit.ly/rep\\_bowker](http://bit.ly/rep_bowker)

For the first time in modern Arab political history, established authoritarian regimes have been overthrown by popular opposition in Tunisia and Egypt. Reflecting the significant changes that have taken place in Arab societies, economic and political culture over the past three decades, the popular expectations created by these revolutions are being felt across the entire region.

Former Ambassador to Egypt and Libya, Professor Robert Bowker reviews the recent developments and examines their implications for the regional outlook and for external engagement with the region.



PHOTO BY DARREN BOYD

## A more secure world

Professor Andrew Mack  
Director of the Human Security Report Project, Simon Fraser University, Canada  
Listen: [http://bit.ly/rep\\_mack](http://bit.ly/rep_mack)

According to some media pundits the world is becoming an increasingly dangerous place. Recent conflict research data and analysis appear to lend support to the media's pessimism. But Professor Andrew Mack argues that, while developments like the increase in armed conflict, insurgency and political instability do indeed provide a cause for concern, the pessimist view fails to take into account some remarkably positive changes in the global security environment.



PHOTO BY DARREN BOYD

## Economic leadership in times of crisis

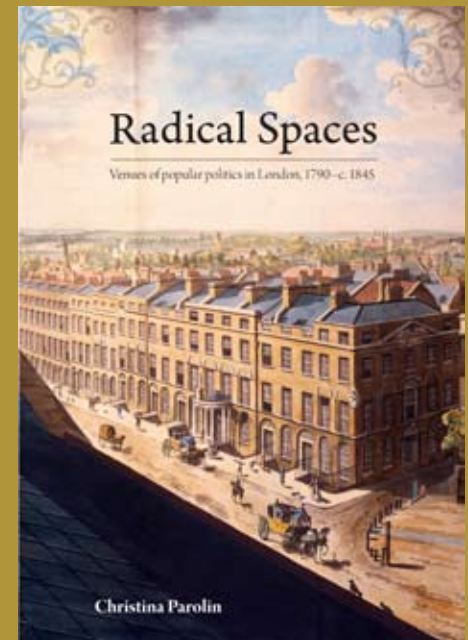
G Edward DeSeve  
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