THE AUSTRALIAN NATIONAL UNIVERSITY

reporter

Pacific Specific

New major makes waves

Neo-paternalism

NT intervention examined

Criminal Minds

Why do hackers hack?

News from The Australian National University Summer 2008

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reporter

Profile 22
From Hollywood to ANU

Research 24
Obesity in the spotlight

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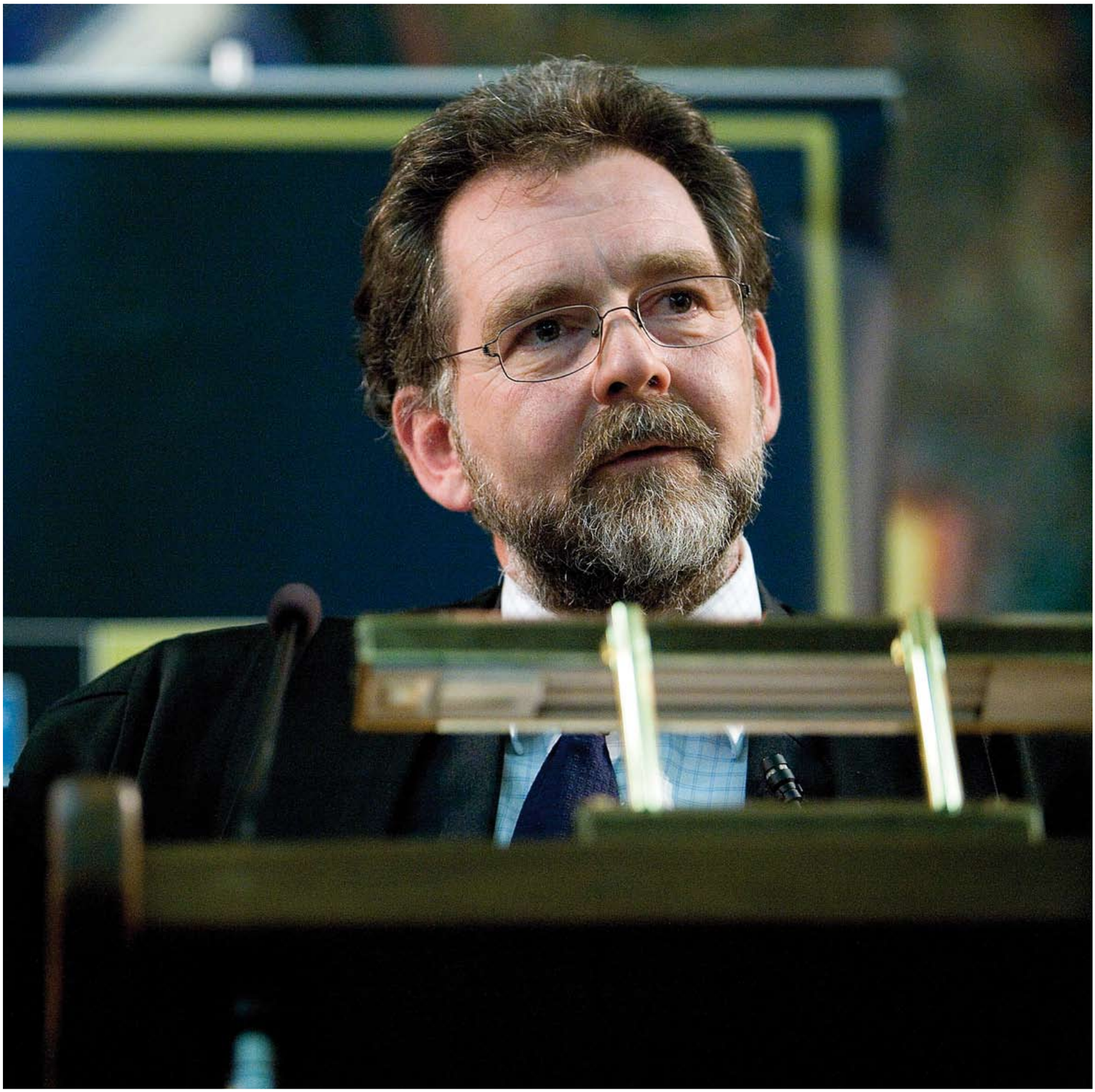
From the Vice-Chancellor's desk

xx.

Professor Ian Chubb AC
Vice-Chancellor and President

A snapshot of life at ANU



The Last Lecture at ANU is a tradition in the making. Each year students vote for their favourite lecturer, who must then deliver an address at University House. In 2007, Professor Hugh White, Head of the Strategic and Defence Studies Centre, spoke on Australia's future in the 'Asian Century'. Read the speech in Last Word on Page 34. Photo: Stuart Hay, ANU Photography

LIFE SENTENCES: RONALD GRAINER & *DR WHO*

The Australian Dictionary of Biography **is part of the History Program in the Research School of Social Sciences at ANU. The 17th edition covering Australians who died between 1981 and 1990 was launched late last year, and will soon be online at www.adb.online.anu.edu.au Below is an edited entry.**

GRAINER, RONALD ERLE (1922-1981), composer, was born on 11 August 1922 at Atherton, Queensland, son of Ronald Albert Grainer, storekeeper, and his wife Margaret, née Clark, both born in Queensland. Educated at Mount Mulligan and Cairns state schools and at St Joseph's College, Nudgee, Brisbane, Ron learned to play the violin, achieving success in regional eisteddfods and music examinations.

In 1939 while enrolled (for one term) in the faculty of science, University of Queensland, he took piano lessons with Percy Brier. His initial forays into composition began at this time and included a rhapsody written for performance at Brier's piano master-class.

Enlisting in the Royal Australian Air Force on 30 December 1940, Grainer served in Australia as a wireless operator mechanic. After the war Grainer studied under Frank Hutchens and Sir Eugene Goossens at the New South Wales State Conservatorium of Music, Sydney, graduating in 1949 with a diploma in performance. Back in Brisbane, he worked as a freelance musician. On 17 September 1952 he married 41-year-old Marjorie Boyce Adolphus, née White, a divorced businesswoman.

Moving to London, and again freelancing, Grainer found regular employment in a variety act. Work as a rehearsal pianist for television led to the opportunity to compose the theme for the 1960 series *Maigret*. Cleverly capturing the Gallic flavour of the series through unusual and evocative instrumentation that included banjo, harpsichord and clavichord, the composition won an Ivor Novello award in 1961. A second Ivor next year for his *Steptoe and Son* theme ensured regular commissions. At the BBC Radiophonic Workshop in 1963 he composed his most striking work, the enduring theme for the series *Dr Who*.

Grainer's heavy work commitments began to affect his health. A bout of temporary blindness attributed to working in poor light prompted him to move to southern Portugal in 1963 in search of sunlight.

In 1964 he won a third Ivor for outstanding score for a stage musical with *Robert and Elizabeth*. Grainer continued to write music for television and for films, including *A Kind of Loving* (1962), *To Sir With Love* (1967) and *The Bawdy Adventures of Tom Jones* (1976).

Divorced in 1966, on 19 August that year at the Marylebone register office, London, Grainer married 21-year-old Jennifer Marilyn Dodd, a singer.

Survived by his son, he died of cancer on 22 February 1981 at Cuckfield Hospital, West Sussex, and was cremated. Despite early recognition and support, he had felt neglected by the Australian music fraternity.

JADE JEWELLERY REVEAL VAST TRADE ARENA

Ancient jade jewellery from South East Asia.

Analysing the origins of jade used in ancient jewellery has revealed a trading arena that was active for more than 3,000 years and sprawled over 3,000km in Southeast Asia – possibly the largest such network discovered in the region to date.

An international research team led by ANU archaeologists used electron probe microanalysis to examine jade earrings excavated from sites all over Southeast Asia, and were able to pinpoint the origin of the precious stone to a source in Taiwan.

"People have noted the widespread use of jade in Southeast Asia since the early 20th century, so one of the big questions has been about where the stone was sourced and how it was distributed," explained research leader Hsiao-Chun Hung, a PhD student in archaeology.

Archaeologists have long thought that the earrings were made from local jade by Austronesian peoples as they migrated and traded across Southeast Asia – but the researchers have now shown that much of the stone was sourced from Taiwan and then transported in raw form to places like the Philippines, Borneo, central Vietnam and southern Thailand – up to thousands of kilometres by sea from its source.

Ms Hung is studying the migration of Austronesian people throughout the region to Australia's north between 5,000 and 3,000 years ago. The researchers say their work suggests that Austronesian people, who shared a common language and resembled contemporary Southeast Asians, had a vast, complex system of trade and transportation.

SLIME-OOZING FISH SHEDS LIGHT ON EYES

A primitive fish that oozes reams of slime could help explain how the human eye evolved.

The scientists compared the eyes of the eel-like hagfish and its lamprey cousin to show that the eye gradually evolved over millions of years.

"The primitive hagfish diverged from our own evolutionary line around 530 million years ago," said Professor Trevor Lamb, head of the ARC Centre of Excellence in Vision Science. "They behave as if blind, though they have a primitive eye-like structure beneath a patch on either side of the head."

Professor Lamb and his colleagues discovered that the hagfish 'eye' has all the signs of being an evolutionary missing link. They argue that hagfish did not degenerate from lamprey-like ancestors, but are instead the remnants of an earlier sister group.

JUDGES OVERWHELMED BY WRITERS' ENERGY

A first-year international relations student is $6,000 richer after winning the first short story competition organised at ANU and sponsored by the Uni Pub.

Kirani Carlin was selected from a field of 155 ANU students who entered the competition.

The second prize of $2,000 was won by Stephanie Wang. Eight further finalists received $100 vouchers.

These generous prizes were provided by the owners of the eponymous pub on University Avenue, which also hosted a lunchtime presentation for all ten finalists and their guests at the Uni Pub on 27 November.

The competition was coordinated by the Office of the Dean of Students, Professor Penny Oakes.

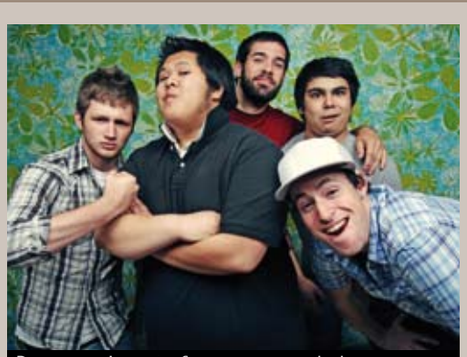
The two winning stories for 2007 are to be published in *The Canberra Times* this year.

WORD WATCH

Dr Bruce Moore is the Director of the Australian National Dictionary Centre, a joint venture between Oxford University Press and ANU. In this column, he takes a lexicographical look at our lingua franca.

Twenty years ago dictionary makers scoured through their dictionaries looking for man-compounds that were sexist because they were not inclusive and proceeded to emasculate them. Thus, in definitions, a term such as 'mankind' became 'humankind', and 'man-made' became 'artificial'. Lexicographers, unlike some compilers of style guides, did not enter the cloud-cuckoo land of banning such terms as 'man-eating lions', 'no-man's land', and 'manhole' (person-eating lions, no-person's land, and personhole). One of the results of the sexist language debate was that there was a great reluctance to create compound terms containing 'man', whether or not sexism was involved.

But the man compounds are back. Some of them are certainly not complimentary. 'Man flu' is the common cold transformed into a disease of life-threatening proportions. A 'man stand' is the pose adopted by a male who waits outside a shop while his female partner is shopping inside, nonchalantly pretending that he is not there, while every gesture or eye movement gives him away. 'Man boobs' describe the flabby breasts of an obese male.



Bromance is part of a new man-cabulary.

Some more positive terms are registered on urbandictionary.com. We know we are in a post-metrosexual age when terms such as 'man date' and 'man crush' appear. *Urban Dictionary* defines man date as 'an occasion when two straight men get together' or 'an outing in which two men engage in normal male-female date activity'. A man crush is more intimate, but still crossing no sexual boundaries. *Urban Dictionary* gives the definition "when a straight man has a 'crush' on another man, not sexual but kind of idolising him", and adds the illustrative sentence: "Many straight men end up having man crushes on Johnny Depp (I don't blame them)."

I wondered if these were exclusively American terms until I came across an article in the travel section of the *Sydney Morning Herald*, which extolled the advantages of 'mancations' and 'mancursions', holidays when two blokes, or a group of blokes, go off on a holiday together and do blokey things.

'Mancation' (= man vacation) and 'mancursion' (= man excursion) are 'blends', or what Lewis Carroll called 'portmanteau words', after the luggage case that opened into two parts. Humpty Dumpty explains that slithy is a combination of the two words lithe and slimy: "You see, it's like a portmanteau–there are two meanings packed into one word". Blends were very rare before the twentieth century, but they are now one of the most popular ways of creating new words. Man boobs soon moved from a compound to the blend 'moobs'; Borat has made the 'mankini' (= man bikini) the unthinking metrosexual's fashion accessory; and 'manscaping', the removal of excess body hair, is the necessary preparation for the mankini parade.

And then, of course, there is the bromance! If in doubt, consult urbandictionary.com.

ANU ANNOUNCES NEW CLIMATE ADAPTATION CENTRE

ANU and the ACT Government have together committed $5 million in capital funding to press ahead with the formation of a climate change adaptation research centre at the Fenner School of Environment and Society.

The announcement means ANU can continue to work with the Universities Climate Consortium in its national effort in climate adaptation research.

Its establishment will further the work of the Universities Climate Consortium – a team of internationally renowned researchers from ANU, Monash University, the University of Melbourne and the University of New South Wales – after the group missed out on Federal funding for a centre.

"This is simply too important for Australia not to have some of the nation's best scientists working together on climate change," Vice-Chancellor Professor Ian Chubb said. "A significant group of scientists formed the base for the original consortium and none of us want that energy and talent to dissipate.

"Adapting to the inevitable climatic changes impacting on Australia over the coming decades is one of the biggest challenges facing the nation. As the national university, we need to take the lead in producing the high-quality knowledge needed to underpin effective adaptation."

GARNAUT ADDRESSES CLIMATE CHALLENGE

Australia stands to be a "disproportionate loser" from climate change because of its reliance on fossil fuel industries, but is also poised to be a world leader in clean and renewable energy technologies, an ANU economist has foreshadowed.

Professor Ross Garnaut from the Research School of Pacific and Asian Studies was commissioned by the state and territory governments earlier this year to conduct a review of Australia's approach to climate change.

He presented some of his research-backed recommendations at the inaugural S T Lee lecture on Asia at ANU.

The economist warned that climate change is the inconvenient truth of current global prosperity – which he termed the Platinum Age.

"We are currently enjoying a Platinum Age, which has been great for alleviation of global poverty, for security in the Asia-Pacific region and for Australian prosperity. But sitting alongside that is an accelerated growth in greenhouse gas emissions," Professor Garnaut said.

"The challenge is to reconcile the longevity of the Platinum Age with effect and efficient mitigation of climate change, and adaptation to the change already occurring."

Australia's reliance on the coal industry for its power was singled out as a major challenge for the nation. But Professor Garnaut said the country had much to gain from a comprehensive global emissions regime because it could turn its competitive engineering, geological and management skills base from the resource industries to an advantage in new energy technologies, which he described as "the key to the new economy".

Professor Ross Garnaut

Photo: Darren Boyd

Professor Garnaut stressed that the solution to the climate change problem would only come from collective global action, so Australia should take a lead role in negotiating a new international agreement. He also said the nation should work with its regional partners to fight the problem.

The S T Lee lecture on Asia and the Pacific honours distinguished Singapore national Dr S T Lee, whose endowment to ANU will fund an annual address from various experts on the Asia-Pacific region.

CRIMINAL MINDS

Why do ordinary people break the law for little personal gain? Dr Sigi Goode set out to crack the minds of software crackers.

A recent survey of software adoption and use indicated that software piracy accounts for 35 per cent of the worldwide market and costs the technology industry almost 40 billion dollars per year*. For those who know where to look, thousands of websites offer free downloads and peer-to-peer (P2P) file sharing for everything from Windows Vista to CD burning programs.

Copyright laws aside, duplicating and accessing pirated software is a simple task for an end user. But few people give thought to the difficult work of the software cracker that comes first. After hours of effort to remove the copy protection, crackers usually receive no tangible benefit, cannot reveal their identity and face a serious risk of prosecution. With so many negatives and no obvious benefits, what makes them break the law?

It was this question that Dr Sigi Goode from the ANU College of Business and Economics set out to answer in 2006. "I just found it so interesting that, despite the massive penalties attributable to these sorts of endeavours, it continues," he says. "With something like the heroin trade that has massive penalties, you can make a lot of money. But when you crack a piece of software, you don't make any money and it takes time and skill you could easily use somewhere else."

Proving just as perplexing was the problem of how to approach and survey criminals who did not want to be found and could not be asked to admit to illegal activities. Previous research into software piracy had focused largely on end users and their motivations, using student sample groups. A unique approach was needed to find the original crackers and their motivations.

With former ANU Honours student Sam Cruise, Goode developed a questionnaire survey about crackers' motivation and justification, with an option to provide demographic information (while remaining anonymous). "We went to newsgroups, we spoke with people we knew who had been in this sort of environment in the past and we posted some calls for participation in online discussion boards."

A total of 28 people replied and 26 survey responses were received, of which 24 were deemed usable. "The participation wasn't huge, but it wasn't insignificant," Goode says. "At least several respondents saw the very close relationship between what they were doing and what we do as researchers – exploring things, finding out how things work and then telling other people about it and making it easy to understand."

The survey results overwhelmingly indicated that the challenge raised by the difficulty of removing copy protection is the principle motivating factor for software crackers, which Goode says is a tricky Catch-22 for software companies. "They're trying to make it more and more difficult to break the copy protection but in the eyes of these people that just makes it more attractive."

There was little suggestion from the cracker respondents that tangible benefits motivated their efforts and some quite vehemently rejected the idea of receiving money for their work. When asked for a view on those who seek payment for cracks, one respondent said, "Such people are lamers and parasites. Furthermore they should be jailed".

The desire for social status and the personal need for free software also rated as factors, but much more difficult to determine were the crackers' justifications for their illegal activities. "Some people develop very complex ways of neutralising moral barriers that ordinarily prevent this kind of behaviour," says Goode. "The theory goes that, depending on circumstance, just about all of us do it at some time or another."

In the 1950s the social scientists Sykes and Matza proposed a new perspective on deviant behaviour based on five techniques of neturalisation: the denial of responsibility, the denial of injury, the denial of the victim, condemnation of the condemners and the appeal to higher loyalties. Goode and Cruise analysed respondents' justifications within the bounds of these five techniques and found, in particular, that the denial of injury or victim was a strong factor.

"Some of them believed that there was no victim, or no significant victim, or no victim that didn't already deserve to be harmed," says Goode. "Some of the crackers even felt like they were doing something good by helping the software companies identify problems. In some situations they felt they were in fact helping the use as well by fixing or improving pieces of software to make them work better."

Goode believes there is more to be done in this area of research, particularly in getting answers from those crackers who previously refused to take part in the initial study. "No matter what we said, there were some people who were convinced that we were law enforcement. There is an element of paranoia at play there and it's possible that these people have different perspectives to bring.

"Because they're massively paranoid, but still crack the software, maybe they've fashioned these techniques of neutralisation down to a real fine art. They understand there's a big problem here, and they wrestle with it, but they still do it. I think they may have found a way of neutralising these ideas in their mind in a very advanced way."

And beyond the software cracking, Goode believes the research framework can be applied to any number of types of deviant behaviour. "We're interested in using the same method to explore other situations where other people may want to hide their identity. Few people will say they break the law except in situations without personal cost, which is what we can provide. For my money, right now, that's the big thing to move forward."

*Source: Business Software Alliance, Fourth Annual BSA and IDC Global Software Piracy Study

Sigi Goode says software cracking and academia have some things in common: "Exploring things, finding out how things work".

THE BLACK ART

The designers of a new composting initiative at ANU are aiming to produce 150 tonnes of rich organic material in its first year of operation. But as David Salt writes, the project that's coloured more loamy black than green also has scientists pondering how compost happens in the first place.

Green initiatives are a big deal these days, but one of the greenest isn't really green at all. Over the last decades, the practice of composting – taking organic waste material from kitchens and gardens and converting it into rich, dark soil conditioner – has moved from the fringe to the mainstream. And it's not just homeowners getting in on the act, as even major corporations are keen to compost.

At the start of last winter, the University's environmental office, ANUgreen, began an ambitious 12-month trial of an industrial-scale compost facility called the HotRot. The idea is to turn much of the University's waste stream into valuable, sweet-smelling compost, and in the process cut down our greenhouse gas emissions and save a lot of money. Early results have been promising. But it's been realised that at the core of the industrial compost process there's a big scientific black hole on what's driving the waste transformation.

The numbers are so compelling it's a wonder that other organisations aren't setting up their own composting factories. Around a third of the waste generated at ANU is in the form of food and other organic material. It amounts to several hundreds of tonnes of stuff that has to be carted to the tip and disposed of each year. This has traditionally cost over one hundred thousand dollars each year in petrol, handling and tip fees, but there's also a lost opportunity in exporting organic waste while importing topsoil, fertilisers and compost for use in gardens.

Enter the HotRot 1512 – a 12-metre by two-metre metal tube that can take over two tonnes of organic waste every day. The raw waste material is fed in at one end and is mixed with a carbon additive to provide an appropriate moisture content and porosity. The waste is then moved through the system using an auger that mixes and aerates the material throughout the decomposition process. Microbial activity in the vessel pushes the temperature up to 60 degrees Celsius.

Typically, it takes two to three weeks for material to be processed. Raw organic waste goes in one end, and a strong ammonia-smelling pre-compost mix falls out of the other. The output is then allowed to sit in a heap for a few weeks while it cools, and it's then mixed with other garden waste to create a high quality mixed mulch that's stable, toxin free and contains none of the pathogenic microbes present in the original waste.

"The trial is still in its early days," says Barry Hughes, the Waste and Recycling Coordinator at ANUgreen. "The recipe of what we mix with what is the tricky bit, and we're still experimenting.

"One of the variables we have to deal with is Canberra's cool climate in winter. That means that the food waste we receive often hasn't rotted as much as it might in warmer times. In effect the cool temperatures serve to keep the waste relatively fresh."

Adding science to the mix

Rotting is what drives the whole compost transformation. The HotRot tank is merely an empty vessel engineered to maximise the activity of a diverse community of microbes that actually drive the process of decomposition. And here's where everyone got a bit of a surprise: despite the fact that composting is as old as history, little is known about the community of microbes at its centre.

"Despite the growing importance of these composting technologies, relatively little is known about the microbiological processes and community dynamics that drive them," says Dr David Gordon from the School of Botany and Zoology. Gordon, together with Dr Gwen Allison from the School of Biochemistry and Molecular Biology, has been in discussions with ANUgreen about establishing a research program to investigate the microbes at the core of HotRot.

"The engineering of these [composting systems] and their operation is largely based on manipulation of physical factors that can potentially enhance microbial activity such as the particle sizes of materials entering the system," he explains. "This ensures that there is adequate aeration and mixing of the material, and maintaining temperatures that are within the range that will yield effective pathogen reduction and microbial metabolic activity.

"Until recently, classic microbiological methods were only able to investigate a small fraction of the total microbial diversity in a community – those that could be cultured in vitro [artificially].

"More recently, nucleic acid-based molecular techniques have enabled researchers to characterise the composition and activity of a variety of microbial communities by targeted analysis of particular genes, for example, the species-specific region of the 16S rRNA gene, and those genes involved in sulphur reduction. This has facilitated a better understanding of the microbial community and functional dynamics.

"While there have been a few studies of the composition of the microbial community of compost, these studies have focussed on laboratory-scale and not industrial-scale composting systems, and are largely descriptive in nature. It's surprising that little research has been directed at understanding the microbiological community that drives the composting process, because this knowledge is essential for the rational manipulation of industrial systems enabling improved efficiency and economy."

Dr Gordon believes the HotRot facility offers an excellent opportunity to dig deep into the microbiology that drives the process.

"Commercial composting is a growing industry with enormous environmental and economic potential," he says. "However, growth in this industry is limited by many factors, including a lack of understanding of the basic microbiological processes. We know of no attempt to understand and modify the microbial community of industrial composting facilities, which is a bit surprising because commercial systems like HotRot offer a golden opportunity for experimental manipulation that is not possible in many other microbial systems.

"It takes two to three weeks for the decomposing material to pass through HotRot, and the microbial communities will obviously change enormously as the material moves through the tube. These changes will occur as a consequence of changes in nutrient availability and temperature, both of which will be driven in part by the absolute amount of microbial biomass. Our goal is to monitor changes in the microbial community using a nucleic acid-based community level analysis and viable cell culturing for enteric and other gram-negative bacteria.

"The primary question to be answered is whether variation in the microbiota of material entering the system, or the 'seed' community, affects the downstream efficiency of the composting process.

"In these systems, material is added at one end and comes out the other – everything flows in one direction. We hypothesise that the composition of the microbial community that is freshly added to the system will vary enormously from day to day. Initially, this variation may not matter, as the resources that will be first exploited will be those that are most easily digested, such as the simple sugars. However, as material proceeds through the system it becomes increasing resistant to decomposition and successful decomposition will depend on particular microbial species being present. These species may not always exist in the material entering the composting system."

Access all ports

The researchers have been taking samples from the HotRot system over the intervening months, analysing the kinds of microbe that are active at different stages in the composting process. They'll also be looking at the chemical makeup of the decaying matter to get a sense of how it alters as the composting takes place.

The HotRot system is also set up to record temperature at a number of points along the length of the tube. ANUgreen also keeps careful records of the mass and type of materials being fed into the system. This data will then be interpreted together with the microbiological and chemical results to determine if and how variation in materials entering the system changes the composting process. Data analysis and interpretation relevant to 'composting outcomes' will then be discussed in collaboration with R5 Solutions, the manufacturers of the system.

"This is the first large-scale food-waste composting trial undertaken by any institution in the ACT," says Dr David Carpenter, Sustainability Manager at ANUgreen. "It's capable of diverting between 250 and 950 tonnes of food and other organic waste from land fill every year. In so doing it will create substantial savings in transport, water, topsoil, fertilisers and greenhouse gas emissions. It's estimated we could be saving up to around 500 tonnes of CO_2 being emitted each year."

The HotRot project is already being recognised as one of the best in the country. Late last year the project won the Resource Recovery Award in the 2007 ACT NoWaste awards, granted by the ACT Government. Hughes is keen to emphasise that this award recognises the system of composting that culminates at the HotRot facility, but which has its tentacles in many of the cafes, halls of residence and offices around the campus. He says that as more people become concerned about how the growth in greenhouse gasses could be adding to global warming, they're more prepared to take a little extra time sorting items at the rubbish bin. Hughes says one of the next challenges will be to capture more of the food waste on campus, but also to get people thinking more about what goes into their food in the first place. A highly salted food, for example, can increase the salinity at the composting stage and hinder the action of those hungry microbes. Part of the challenge is to dispel some of the negative ideas around the smell of compost.

"Throughout the process the HotRot gives off a low, mushroomy smell that pervades the air about the machine," Hughes says, adding that inbuilt biofilters deal with many of the more pungent aromas. He says the product that first emerges from the HotRot is still powdery and dry. But, after a month out in the open mixed with some garden waster, the material is transformed into something that's "beautiful, blooming marvellous", giving off a pleasant "earthy smell".

So HotRot looks like being a winner from every direction. And with a little science added to the mix, the black art of composting might become an innovation we see taking off all around the country.

From garbage to good stuff: even heavy-duty kitchen waste becomes great compost in the HotRot.

PACIFIC

Australia has a high level of official engagement with the Pacific, yet most Australians know little about the region to its north and east. A new program could cure the nation of its Pacific blind spot.

For Katerina Teaiwa, the Pacific is as much a personal passion as it is a field of study.

SPECIFIC

What is the capital city of Samoa? How much did Australia spend on aid for Pacific Island nations last year? And how do you correctly pronounce the name of rugby union champion Lote Tuqiri?

If you answered Apia, $460 million and 'Lo-teh Tun-gear-ee', then congratulations. You're one of the few Australians with a detailed knowledge of the Pacific region and the smaller nations within it. If you failed to get any of these right, don't panic. You're not alone.

Magellan christened the world's largest ocean 'Mare Pacificum' because of his smooth passage across it during the 16th century. The name makes one think of long, pristine beaches, fringed with palms, gently caressed by crystalline waves. It's the perfect mental space for a hammock, really. But something of this languid air seems to have infected the attitudes of many Australians towards their neighbours. We love the coast, true, and many of us seek out Pacific proximity during summer holidays. But few of us know very much about that vast realm which begins out beyond the breakers, even though Australia has had strong official and strategic links to the Pacific region for over a century. If certain academics at ANU have anything to do with it, this is about to change.

This year the University will begin offering Australia's first integrated Pacific Studies major for undergraduate students. Leading the program is Dr Katerina Teaiwa from the Faculty of Asian Studies. Born and raised in Fiji, Teaiwa says she is often exasperated by Australian's blind spot for the Pacific and its peoples, even though many prominent sporting people and artists originate in the region. She says this apathy can even be found among people of Pacific Islander descent living in Australia.

"From rugby league to rugby union, to *Australian Idol* and *Big Brother*, Pacific Islanders are contributing to the expansion and diversity of Australian popular culture," Teaiwa says. "But unlike in New Zealand, a country that now describes itself as a 'South Pacific nation', prominent Pacific people here are rarely identified by their island heritage.

"There are plenty of potential role models in Australia, but if heritage holds no social cache, it doesn't help young people struggling with identity issues. A young woman I spoke to in Sydney, concerned with her Fijian boyfriend's snobbish attitude to all things from the land of his heritage, described this to me as the 'Anglosise Me' syndrome."

It's not just in the field of pop culture that Pacific nations aren't being paid their dues. The issue extends into the international relations arena, particularly around questions of aid. Submissions to a 2003 Senate inquiry into Australia's relations with its Pacific neighbours charged that many development initiatives tended to be ahistorical, seemingly ignoring the unique historical and cultural contexts of aid recipient nations, and particularly their past and present links with Australia. A recurrent theme in submissions was that as Australia's general interest in and knowledge on the Pacific declined, so too does the nation's relationship with the region.

That same Senate inquiry made several recommendations to recover "lost ground in Australia's intellectual engagement with the Pacific", including introducing a new curriculum for secondary and tertiary institutions. It warned that "the price of ongoing, seemingly increasing, ignorance of the Pacific and of Australia's role and responsibilities in the region will inevitably be a dramatic loss of Australian influence in the region, an increase in threats to Australia's interests resulting from regional instability, and probably the bemused contempt and justified criticism of our major friends and allies".

The new Pacific Studies major at ANU will introduce students from all backgrounds to the histories, politics and cultures of the nations scattered across the world's largest ocean. Dr Teaiwa says the program of study will draw on existing graduate education and research strengths in Pacific Studies at ANU, which has one of the greatest repositories of expertise and information about the region in the world.

But she said the course will also have a transdisciplinary focus to allow students to access the rich cultural and artistic legacies of Pacific cultures via video, art, dance, and song, and to think creatively about regional challenges such as global climate change and rising sea levels that threaten many Pacific islands. Those who would prefer postgraduate coursework get a look in too, as Masters students will be able to take a new specialisation in Pacific Studies starting this year. The focus on education around Pacific Studies is intended to foster a new generation of young people with a deeper appreciation of the region, who can then take that knowledge into diplomatic work, into business, towards further research or into the cultural sphere.

Movement versus the mind

Learning about cultural practices from the Pacific is of particular interest to Dr Teaiwa, especially if it has to do with dance. The anthropologist is also a keen choreographer and one of the founding members of the Oceania Dance Theatre at the University of the South Pacific. She says she started dancing at such a young age that she can't even recall her first turn about the floor.

"The first thing my mum made us do when we were able to walk is dance. When I think of movement, whether it's walking or anything, I'm always thinking in dance mode – choreographing and imagining myself dancing in space. It's something that is very much a part of who I am and how I operate in the world.

"What makes sense to me is that embodied knowledge is a complement and a balance to conceptual knowledge. Dance is something that balances me, and complements the constant cerebral process. It allows me to let go and be in my body."

Aside for dancing for pleasure, Teaiwa says the practice also connects her to her roots. In general, she says that embodied knowledge such as dance or sports is central to many Pacific cultures, even constituting an alternative way of interpreting and communicating things to do with the environment, social relations or past events. The centrality of dance, music and oratory can even linger when Pacific Islanders attempt to make a new life in a foreign culture.

Teaiwa argues that many Pacific Islanders in Australia feel pressure to assimilate and forego their cultures in exchange for acceptance. The choice impacts particularly on young island men as stereotypes of the violent, unruly and ADD Polynesian male continue to circulate in the popular imagination. She points to the anti-social character of Jonah in the popular ABC comedy series *Summer Heights High* as a prime example. But even a fictional character such as this illustrates some of the ways in which Pacific Island cultures develop in the diaspora.

"In the sixth episode [of *Summer Heights High*], the Polynesian Appreciation Day featured a rather dodgy and ambiguous Pacific dance followed by a rap video illustrating two of the strongest forces shaping young Pacific migrant lives: tradition and African American popular culture," Teaiwa says. "One force is rooted in the strength of culture back in the home island. The other is a strategy for maintaining a sense of efficacy and pride in the urban metropoles that continue to attract Pacific families searching for better opportunities.

"What is striking about Pacific Islander migrants and the strategies that help them thrive in the diaspora, is the way in which they can build on tradition. Jonah isn't just obsessed with dancing because he's too stupid to learn. Most Islanders come from strong oral and embodied cultures and so excel at sports and the arts for good reasons."

Dance as a mode of survival

It was her interest in dance that led Teaiwa to a project on family history that soon ballooned into a story that spanned nations. Although she was raised in Fiji, her father originally came from Banaba. This small, oyster-shaped island on the western periphery of Kiribati was home to a population of Micronesians up until early last century. At that time the Banabans were forcibly relocated to the island of Rabi, part of distant Fiji. In order to retain their unique identity in this foreign place, the people developed special dances and songs that reinforced and developed their culture.

These performance pieces grabbed Teaiwa's attention when, as a Masters student at the University of Hawaii, she began to explore aspects of Banaban history. She learned that a recurrent theme behind the dances was the sorrow that Banabans felt at being evicted from their home island. Digging deeper, she learned how the story of her ancestors was linked to the growing fortunes of Australia and New Zealand in the 20th century.

The Tongan scholar Epeli Hau'ofa is a big name in Pacific Studies circles because of his seminal work which took the Euro-centric view of Pacific islands as distant, dispersed and tiny and turned it on its head. Instead of this disempowering view of the Pacific as a vast emptiness dotted with miniscule outposts, Hau'ofa wrote of the ocean as a linking force, connecting cultures and peoples into a vast network.

Writing in 2005, Teaiwa picked up on this conception, comparing the ocean to a "metaphoric highway for canoes, bodies and a variety of marine and plant life". If this was the case, she writes, "the ocean was literally a highway for the British Phosphate Commission".

"Formed in 1920 as a partnership between Britain, Australia and New Zealand, the hundreds of vessels chartered by the British Phosphate Commission, or BPC, traversed the Pacific Ocean on regular routes carrying millions of tons of phosphate from the islands to fertilizer manufacturers in all three countries.

"This constant movement of what was essentially indigenous land, at least for Nauruans and Banabans, temporarily formed a vast network of rock, capital, labour and technology for a good portion of the 20th century. This was a heavily trafficked 'sea of islands': specific Pacific islands.

"In August 1916, the New Zealand Farmer Stock and Station Journal ran a story on the discovery of phosphate by Albert Ellis, and declared that if they 'could get something of that kind in New Zealand it would be better than all the gold mines in the country'. The importance of phosphate to antipodean agriculture cannot be understated, and it is telling that very little research exists on the subject. The BPC, at least, was a highly protected industry, its records unavailable until long after the company had been dismantled. It was set up not for profit, though much accrued to its directors and member countries, but to secure cheap fertilizer for farmers and build a solid agricultural base for New Zealand and Australian development."

Banaba and Nauru were once home to some of the highest grade phosphate on the planet, Teaiwa says. Phosphate is essential to farming industries as a fertiliser, being the first step before the wheat, the grain, the sheep and the cattle. Over the 80 years that phosphate was mined from Banaba, the BPC extracted 20 million tonnes of the stuff for use in Britain, New Zealand and Australia. There are pictures of the islands taken after the cessation of mining that depict the once tropical spaces as moonscapes, pocked with craters and jagged ridges. Teaiwa likens the result to "a skeleton of the land, where the flesh has been taken away". It's doesn't require much empathy to realise how devastating this process must have been for the original inhabitants of Banaba.

"When they were relocated to Rabi (pronounced 'Rambee') in Fiji, the Banabans used music and dance as way to recreate their identity, to compensate for a loss of land and heritage," Teaiwa says. "I started with the dance, trying to interpret what was being communicated through various movements. It can all be traced back to the experiences of mining and displacement, loss of land and loss of identity, and trying to feel strong again in an environment where you're not in the majority. Banabans had to start again from scratch and dance became a mode of survival."

Teaiwa's research is also uncovering just how important the flow of phosphate from the Pacific was in the view of Australian authorities. But those same authorities had a poor track record when it came to compensating those who had suffered because of the mining. When the Banabans tried to sue for compensation in the British courts in the 1970s, Australian officials stressed that Australia needed to find "immunity" from such claims. Teaiwa says this kind of response characterises the way Australian policy makers have traditionally seen the nation as being quite separate from the Pacific, while perhaps ignoring its historical obligations to the region.

Academia beyond books

Teaiwa says her research into the history of phosphate mining in the Pacific was transformed when she discovered in the National Archives of Australia the rich photographic records kept by the BPC over the course of its operations in Banaba and Nauru. How could she work these pictorial testimonies into a thesis, which tradition dictated should have been largely text based?

"Why would I take 80 years of incredible photography, film and expressions of culture and compress it into a text?" the researcher asks. "The form of your data should also shape the form of your scholarly production. Why shouldn't academia pay attention to new forms of media?"

In this way, Teaiwa's PhD project became a rich multimedia work, complete with text, pictures, sound and video. She connects this rich mix back to her own Pacific heritage, where forms of expression such as music and dance are so central, and able to integrate with such weighty topics as politics, history and geography.

This urge towards integration which emanates from Pacific cultures will also inform the new Pacific Studies major. The program will consist of two cores, the first of which will look at how scholars can bring in information from a range of disciplines and sources to fully illuminate their subject. In the second core, students will be able to use their new gathering skills to harvest knowledge from the long history of people in the Pacific, whether it's reaching far back into the early migration of humans from island to island, or closer to the present in the era of colonialism and its decline and the threats of political instability or global warming.

All the while, students will have access to some of the leading thinkers on Pacific issues who are based at ANU. Teaiwa describes it as having expertise on call, even to the point of having a special 'topics' course dedicated to sampling a wide range of ANU research. "At other universities you might just read scholars' articles or books," Teaiwa says. "Here, you can interact and ask questions of these people who are also being consulted by governments around the world."

Culture on display

Inspired by the work of Dr Katerina Teaiwa, the Museum of New Zealand Te Papa Tongarewa decided to tell the story of phosphate mining through Banaban dance. The permanent exhibition includes a male Banaban dance costume and is accompanied by the following interpretation:

This costume is worn during an annual dance drama that retells the history of Banaba Island (also called Ocean Island and is part of Kiribati) and its people.

A key part of this dance depicts New Zealander Albert Ellis discovering phosphate on Banaba in 1900 – and managing to buy mining rights to it for a mere 24 pennies. (The discovery led to a combined New Zealand, Australian, and British operation that stripped Banaba of its phosphate to make fertiliser for farms. Those countries prospered from this. Banaba was left barely habitable.)

Another part of the dance depicts the Japanese occupation of Banaba in World War II, during which many people living there were executed. It also tells how, after the war, the British relocated the islanders to Rabi Island in Fiji. The drama ends with a celebration of the Banabans' enduring faith in their survival on a new land.

Besides the dance costume case is a video screen with a six-minute film about the story of phosphate exploitation on Banaba, the long-term impact of this on the island and the subsequent relocation of an entire population from their homeland to Rabi Island in Fiji. The film ends with a reference to the Banaban dance drama that retells this history. The story is told through interview comments by Dr Teaiwa and archival footage of phosphate mining and life on Banaba.

With thanks to Kolokesa Māhina-Tuai, Curator Pacific Cultures at the Museum of New Zealand.

Female Banaban dance costume. Photo: Norman Heke, Te Papa Museum.

Banabans in *Rouia* (Sitting Dance) costumes with Banaban-style wigs. Postcard C. 1910. Photo courtesy of Ken and Stacey King.

Banaban dancer with TeKaranga Pole-Skirt-Frigate Bird Headpiece - Circa1910 Doutch Collection. Photo courtesy of Ken and Stacey King.

The future of Australia in the Pacific

Professor Margaret Jolly is one of the architects of the new Pacific Studies major at ANU.

Anthropologist and Head of the Gender Relations Centre in the Research School of Pacific and Asian Studies, Jolly is also the Vice-President of the new Australian Association for the Advancement of Pacific Studies (AAAPS). In other words, she's passionate about the Pacific. Jolly says that ANU has been strong for decades in Pacific studies research and graduate education, and is now translating that expertise into the area of undergraduate education. She describes the new offering as "distinctive" and "innovative", but also as sorely needed.

"This is not just an ANU need. This is in the context of a profound national need. In general, most of us [Pacific scholars] are quite disturbed by the dissonance between incredible official engagement in the Pacific on the part of Australia, particularly in the Southwest Pacific, and the lack of general knowledge about the countries which are so vitally involved in our aid and development programs."

Jolly says the AAAPS is seeking funding for a report into the 'de-skilling' of Australia's Pacific engagement, which she argues is comparable to the decline in Asian languages being taught around the nation.

"There's a very strong sense across Australia that there isn't the deep knowledge of cultures, histories and of languages necessary to have people understand who it is they're dealing with when, for example, they're put into posts like RAMSI in the Solomon Islands, or working in development in Vanuatu.

"We're trying to establish cross-cultural sensitivity but also foundational knowledge for Australian and overseas students to really be high fliers in the area." Jolly observes.

To this end, Teaiwa, Jolly and colleagues set up a Pacific Studies Reference Group including representatives from government departments, major national institutions, NGOs, business, churches and the media. These people will advise the University and help shape the curriculum of the new Pacific Studies major by giving a sense of what non-academics feel is needed.

But she's also keen to point out the long and healthy practice of Pacific research and graduate education at ANU, which she says has traditionally been concentrated in disciplinary areas like anthropology, history, linguistics, geography, politics and economics.

"You can walk down the hallways, look in a seminar room and see photographs by distinguished professors of anthropology who were doing important work in places like Papua New Guinea and Samoa from the 1960s," Jolly says. She says ANU attracts Pacific scholars from all over the world, and is home to many prominent academics who will be feeding into the new major by offering courses and guest lectures.

Jolly says the new program will cover all the islands of Oceania, including Pacific rim places like Japan, North America and our own nation.

"Australia has a very important connection to this part of the world because of its long history of influence," Jolly says. "There were moves around the time of Australia becoming a federated country to annex certain parts of the Pacific. What is now Vanuatu, there was a movement to make it part of Queensland. There were moves to make Fiji a part of New Zealand. There's long been a history of powerful connection that has gone along with colonial relationships.

"I would dispute the traditional geopolitical rankings of nations (based on sheer size, development and economic significance) and say the Pacific is incredibly important to Australia's future."

NEO PATERNALISM

Reflections on the Northern Territory intervention

The federal government's intervention in the affairs of Indigenous people in the Northern Territory in 2007 was framed in the context of a national emergency. More than six months on, Professor Jon Altman, Head of the Centre for Aboriginal Economic Policy Research, writes that the real emergency was decades of government neglect.

History will look back at the federal 'national emergency' intervention of 21 June 2007 and see it for what it is: a bizarre moment in Indigenous policy making without precedent since 1967, and an event that I hope will never recur.

The reference to neo-paternalism in the title of this essay refers to the return of an approach from an era 40 years ago, when assimilation proved a failure for both Indigenous Australians and the nation.

How this national emergency came about will, with time, have many interpretations. *The Little Children are Sacred Report* by Pat Anderson and Rex Wild was completed at the end of April and released in mid June. The most recent of many reports in the past 18 years provided a horrific and very moving account of cases of child sexual abuse in many Northern Territory communities. There have been a number of rationales provided for why the Australian government made this 'national emergency' intervention:

- frustration that the NT government did not move quickly enough in implementing the Anderson/ Wild report
- a desire by an ambitious and passionate Minister to cut through political and bureaucratic inertia
- electoral and political opportunism based around wrong footing the ALP (the wedge)
- taking an initiative in the run up to an election, using concerted sensationalized media focus on NT negatives as a populist aid
- the existence of 'territory powers' that allow such intervention.

In their book *No, Prime Minister,* political scientists James Walter and Paul Strangio suggest that the NT intervention was an example of John Howard's frenzied instinct to control as he contemplated power slipping away. There was also a suggestion that Howard was genuinely moved by a radio interview that Noel Pearson gave on Monday 18 June advocating for Cape York reform.

In the days following the national emergency intervention there was a frenzied level of media attention on Indigenous affairs, even during the federal election campaign; and frenetic policy making on the run, increasingly based on blind faith defence of the intervention by politicians and their agents usually based on unstated, but very evident, ideology.

There is a view that the NT emergency intervention was concocted in a few days, which it was: mainly by Howard, Indigenous affairs minister Mal Brough and two very senior bureaucrats. But it did not have a virgin birth; in fact it had a considerable policy history that accords with the PM's long held ideological preconceptions around 'normalisation' for indigenous Australians. This goes back a long way and was evident in his very skeptical approach to the existing policy framework on election in 1996 – reforming Indigenous affairs was a core ideological issue for the new PM evident in a series of 'antis': anti ATSIC, anti native title, anti reconciliation, anti the rights agenda, anti apologizing to the stolen generation in 1997, anti land rights and anti the diverse intercultural institutions of Indigenous Australia.

Howard tried to dilute and demolish many Indigenous institutions but was largely unsuccessful (bar the NTA amendments of 1998) because of a hostile Senate. But as Walter and Strangio note on core ideological issues neither evidence nor public

opinion would dissuade Howard, he just bided his time waiting a better climate

The better climate came in 2004, first when owing to accidental bipartisanship between then Opposition Leader Mark Latham and the PM, the Aboriginal and Torres Strait Islader Commission (ATSIC) was abolished. Then there was the unexpected Senate majority from 1 July 2005, which delivered the Howard government an unexpected bonus: for the first time since 1996 it was unfettered in Indigenous affairs.

After the abolition of ATSIC the central terms of policy were changed from something loosely termed 'self determination' to such phrases as 'mutual obligation', 'shared responsibility', 'mainstreaming' and 'normalisation', concepts borrowed from international social policy developments in other neoliberal states.

At the same time, the nature of public expenditures in Indigenous affairs was changed: with the abolition of ATSIC, Indigenous-specific programs were moved to mainstream agencies, and Indigenous specific allocations were shifted gradually from more settled to more remote regions.

In Indigenous affairs, the Howard government had set what I have previously termed the NT 'trap' or 'pincer'. Their policy focus was increasingly on only 66,000 out of 517,000 Indigenous people or 13 per cent of the total Indigenous population. The Australian Government's public views were increasingly defined in terms of the remotest living Aboriginal people. This focus on remote communities was justified by a fiction that this is where things were really really bad, especially on emotive issues like child abuse, although this is not supported by the data.

The core neoliberal ideology of assimilation also gained momentum in the post-ATSIC period, with right-wing think tanks enhancing their attacks on Indigenous difference, sometimes because remote communities were deemed to have too many customs that were incompatible with neoliberalism, sometimes because these customs were deemed to be too broken down and consequently resulted in unacceptable lawlessness, a potential threat to the state and capital and Indigenous people themselves in remote regions. The Australian government was very comfortable with such attacks.

At the same time there was an abandonment of consultation with Indigenous people, little use of available statistical and research evidence and increased marginalisation of experts especially if their views diverged from 'the leaders', who were increasingly thinking too narrowly about very difficult policy problems and consequently making poor policy decisions.

The NT Intervention

The NT emergency intervention started with an unclear focus, but settled eventually on 73 prescribed communities with populations of over 200. It is unclear how these communities mesh with the 640 discrete Indigenous communities in the NT or with Aboriginal-owned land that covers 600,000 square kilometres of the territory.

The intervention consisted of 11 broad measures, with a twelfth, and without doubt the silliest, being the abolition of the Community Development Employment Projects (CDEP) scheme, added a month later.

Much of the ensuing public and policy debate has focused on the fact that despite the suspension of critical thinking owing to invocation of a 'national emergency' crisis, a number of the measures appear to have no link to the issue of child sex abuse. They also seemed to lack any coherent logic or consistency, and could be clustered into the following three areas: Those that sought to discipline Indigenous people and their ability to earn a living; those that sought to dilute land rights and free up Indigenous-controlled land for commercial development; and those that sort to depoliticise democratic Indigenous organisations and impose external control.

On 16 August these measures were enshrined in Australian law, when acts totalling 500 pages were rammed through parliament in a week with scrutiny by a senate committee that was convened for just one day (and received 154 submissions in the available 48 hours). This was a return to the negative bipartisanship that saw the abolition of ATSIC. It is unclear if the ALP acquiesced because of their fear of being 'wedged' on the emotive issue of child sex abuse or whether they were duped by 'national emergency' protocols. Only two minor parties challenged this suspension of due parliamentary process.

The glib phrase 'Stabilise, normalise, exit' coined by Minister Brough on 21 June capture well the militaristic humanitarianism embodied in the emergency intervention. Soon it became apparent that the 'stabilisation phase' was for 12 months; and normalisation (undefined but let's assume it means practical reconciliation or statistical equality) was to occur over the following four years, to then be followed by 'exit' – a term that hardly seems appropriate given that it is largely state failure that generated the social dysfunction crisis that many had predicted for some time.

On 21 June the 'national emergency' was about child sex abuse, but it quickly came to focus on the issue of dysfunction. On 29 August, in his first visit to the 'national emergency jurisdiction', the PM indicated that the intervention was actually about mainstreaming remote living Indigenous Australians.

Several months after the intervention began, I collaborated in some informal consultations with colleagues in five prescribed communities to see how the process was tracking.

It seemed to me then that the intervention was proving unsuccessful in meeting its own, not Indigenous, goals for two main reasons.

First, the committed resource and timeframe were unrealistic. Initially the PM said that the intervention would cost tens of millions, a view vigorously defended by the Minister for Finance Nick Minchin, but by August this had grown to hundreds of millions, and in September it reached $1400 million. My own estimate was $4 billion over five years, and I think it was conservative as it didn't take into account the evidence that much of the expenditure was focused on intervention administration rather than delivery of additional or new services to Aboriginal people like bricks and mortar housing or schools.

Second, it appeared unworkable as it was unplanned in terms of Commonwealth capacity to deliver, bearing in mind that the Commonwealth has been delivering programs to remote NT for decades. It is also seemed unworkable because of its dependence on local on-the-ground personnel and expertise and organizations to implement, yet these were the very organizations that had been financially neglected, demeaned as failures and that were now being alienated, dismantled and depoliticised.

Soon after it began its task, the Commonwealth started to realize both these problems as it moved

Above and left: Notices from Maningrida, an NT community. Photos: Jan Altman

beyond simplistic mantras and passionate rhetoric and crunched up against hard reality. We saw early evidence of attempts to walk away from responsibility for implementing the intervention. In August when in the NT, the PM criticized the Martin government in the NT, while at the same time the Commonwealth provided substantial new resources to the NT government and delegating delivery responsibility including to new areas like outstations that historically have been a Commonwealth responsibility.

The NT government itself would then look to cascade program delivery down to local, community-based organisations: but where was the capacity to deliver after the abolition of the CDEP? Despite the existence of a bilateral agreement between the Commonwealth and the NT signed in 2005 the two levels of government seemed to work against each other with different approaches to implementing the Little Children are Sacred report. Indigenous people were the inevitable victims of such inter-governmental bickering and program delivery buck passing.

Also on theoretical and comparative historical, national and international grounds, the overall approach seemed like a recipe for disaster: because it was neo-paternalist and imposed from the top down; racist and non discretionary; disempowering and unsupported in its totality anywhere, although some people want to cherry pick sensible parts, like access to adequate housing, schooling and police; and because the whole of the package was probably far worse than its parts.

Despite the government's emergency framing efforts and associated attempts to discredit any contestation of its approach and measures, there were criticisms from day one.

It is interesting that some saw positives in the intervention, but overall, the negatives appeared to outweigh the positives, bearing in mind that in some communities many of the measures have not yet been implemented.

I too was challenged to outline if I have found any positives in the intervention, and at the risk of being accused of 'me-too-ism' I do see some big picture positives that can be compared to community perspectives:

- it created an unprecedented national focus on Indigenous affairs, unfortunately mainly in the NT and mainly negative
- it led to funding realism about the extent of the historic backlogs and what it will cost the nation to meet them
- it fostered an emerging re-politicisation of the Indigenous sector in the aftermath of ATSIC's abolition
- it fed a slowly growing awareness of Indigenous diversity, livelihoods and cultures, but also in terms of perspectives about approaches to development
- it provided some evidence of emerging alliances between social justice legal practitioners and Aboriginal land owners and organisations evident in the High Court case challenging the constitutional validity of key aspects of the intervention; the legal system might yet provide one means to reclaim politics from leaders, poorly advised and with personal ideological agendas.

"Some people talk about 'policy failure' or 'failed states' in remote Indigenous Australia, I just ask what have we learnt as a nation in the last 40 years that makes us so blind as to revisit past failure?"

Are neo-paternalism and Indigenous development compatible?

Are neo-paternalism and Indigenous development compatible? This question may appear oxymoronic, but one has to remain open to the possibility that mainstreaming might be the preference for some.

For sustainable Indigenous development in all its diversity to occur, I have consistently tried to highlight the following five requirements, if we are to see some progress in the NT. These requirements are not based on rocket science or some extremist ideology, but on basic notions of bottom up participatory development:

- at the broadest level, it is imperative to recognise Indigenous diversity and difference that benefits the Australian nation, rather than as something just to be tolerated
- there is a need for partnerships with communities and the establishment of appropriate elected or nominated channels to formally hear Indigenous aspirations
- there is a need for realistic local and regional investments, in catch up to close the gaps and to enable local opportunity that may not be in today's economy, although it can be, but might be in tomorrow's economy taking advantage of the richness of the environmentally intact and biodiversity rich land holdings owned by many living in remote situations. This enablement will require abandoning periodic loose and degrading talk about closing down unviable black communities, using a culturally constructed and selectively applied notion of 'viability', while privileging some non-viable sections of the broader community
- there is a need to build local intercultural organizations and institutions and capabilities, investing in making imperfect organizations better rather than perfect, but ensuring 'good enough governance' for local control
- there is a need to plan at the local and regional levels for sustainable outcomes at realistic levels that are clear about livelihood possibilities, undertake some rigorous needs-based analysis, and put some negotiated evaluation frameworks in place.

I note that a paternalistic state project of assimilation was tried before, about 40 years ago, and failed. It is being tried again under a different paradigm of neo-liberalism and it will fail again – there were already early signs during the 'stabilisation' phase that existing development gains were being jeopardized. Some people talk about 'policy failure' or 'failed states' in remote Indigenous Australia, I just ask what have we learnt as a nation in the last 40 years that makes us so blind as to revisit past failure? The 'national emergency' will peter out, if it has not already, but there are dangers inherent in this for Aboriginal people and the nation if it fails: we risk a loss of national goodwill; a waste of hundreds of millions of dollars, and the dismantling of some robust and important development institutions built up over the past 40 years.

Ultimately, as a nation, we face deeply rooted, difficult, arguably intractable Indigenous development problems in the NT and beyond. In 2007 we saw bipartisanship in embracing the 'national emergency'. I suspect that in 2008 we will see renewed bipartisanship in abandoning this expensive and misguided adventure. Perhaps in 2008 we might see the collaborations and the creative hard thinking and the financial commitments that will all be needed to address the most difficult issue of Indigenous disadvantage that we face as a nation.

This essay is an adapted from a speech delivered by Professor Altman at the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) Conference 'Forty Years On: Political transformation and sustainability since the Referendum and into the future' in November 2007. The work was based on pre-election research. Together with Melinda Hinkson, Professor Altman edited Coercive Reconciliation: Stabilise, Normalise, Exit Aboriginal Australia *– the only book to date on the intervention.*

IN CONVERSATION: WHALE WATCH

Professor Don Rothwell from ANU College of Law

Ms Katherine Curchin of the Research School of Social Sciences

The hunting of whales is a hot political topic in Australia, which takes the hardest line of the anti-whaling countries at the International Whaling Commission. But with the focus on Japanese commercial and scientific whaling, are we missing some of the bigger picture? *ANU Reporter* sat down with Professor Don Rothwell, Professor of International Law at ANU College of Law, and Ms Katherine Curchin, a PhD candidate in the politics program at the Research School of Social Sciences, to delve deep into the whaling debate.

Katherine Curchin: I have a series of case studies looking at the general question of 'is it wrong to criticize other cultures?' and how should people deal with cultural practices that they have a moral objection to. Is it okay, for instance, for feminist activists to be campaigning against gender roles in some other society far away from their own? One of my case studies is about the Makah tribe in Washington State, who've recently been trying to restart their whaling tradition as part of a larger cultural revival they are undergoing. They had some whale hunts in the late 1990s, and actually killed a whale in 1999. There was massive opposition to their whaling ambitions and they had huge numbers of protesters descend on their part of Washington State, and try and get boats in-between the whaling canoe and the whale, blasting sound into the water to try and scare the whales off, people yelling at the whalers, lots of racist insults. A massive media campaign as well.

Don Rothwell: They don't have a quota do they?

KC: They do now. They got a quota in 2007 for 20 whales over a period of five years, and I think in 2002 they got the same deal. There was a meeting in 1997 and they were trying to get a quota at that meeting, but there was no real consensus from the International Whaling Commission (IWC) as to whether they should get a quota. But the Indigenous people in Russia have a quota to take Grey Whales and there was some agreement between the US and Russia that the Makah could take a few from the quota that the Russians had. The Russians weren't using the whole quota.

DR: At the Anchorage meeting [of the IWC] this year there was a lot of discussion and debate about the Alaskan Inuit. There was a huge stoush over Bowheads for the Greenlanders and also the Caribbean quota. The quotas under the IWC for aboriginal subsistence whaling is seen as an enormous anomaly. It was really, as I understand it,

partly a response to the fact that the Americans came on board very much supporting a complete prohibition on whaling and of course the Indigenous people, certainly the Alaskans, were saying, 'Well we actually take whales as part of our culture'. That started the movement and so there is this interesting little sideshow that exists within the IWC about an Indigenous quota, and it's very, very carefully reviewed to see whether or not it's really commercial whaling in the guise of an Indigenous take.

KC: Certainly the anti-whaling activists were trying to say that there is no real cultural tradition here; this is just a pretext for commercial whaling. They were extremely cynical towards what the Makah leaders were saying about their culture. But I think there is quite a lot of evidence that there is a genuine cultural revival and whaling was a huge part of rituals, spirituality and social structure of the tribe. Whaling was the main way of gaining wealth and prestige and status in that community, because you could get such a large amount of food in one day. It was also such a difficult thing to do – if you only have a cedar canoe that's 30 foot long, and have to wrestle with the whale until its dead, it's quite a feat of endurance.

Reporter: Do you think that the sideshow about Indigenous whaling gets wound up in the controversy about commercial whaling, which for Australia seems to settle around Japanese whaling practice. Do these two things have a bit of an effect on each other?

DR: I think for Australia, from what I can observe, it creates a significant tension where there is a clear sense that this is really a commercial activity that is being undertaken. So I think countries like Australia, New Zealand, the UK, the US and many of the Europeans, whilst I think they are sympathetic to the cause of Indigenous whaling , they are very careful to make sure it's genuine subsistence whaling. This has been a contentious question within some Western developed countries – the Canadians withdrew from the IWC because of this very issue. They felt that they couldn't legitimately be part of a convention that didn't at the time make appropriate accommodation for their own Indigenous people in the North. Now it's not been a significant issue in Australia but there is that sort of dimension to it.

Reporter: Katherine, you've looked at how NGOs have reacted to this issue, and do you think the two issues become confused with that particular set of interests?

KC: Very much so. The people who were out in force protesting against the Makah whaling were saying, 'We're here to stop a precedent been formed. We're against the idea that anyone can have cultural rights to whaling'. They made very few exceptions to that – maybe the people who from the very beginning of the IWC had been allowed to continue whaling, but argued that everybody else, regardless of historic connections to whaling or the importance of whaling to their culture, should accept a moratorium on whales. They were arguing that if we start letting people in Washington State revive their culture, link back into their history and rediscover their roots, then the Norwegians will want to do the same thing, and the Japanese will do the same thing, and everyone will use it as an excuse.

DR: I think it's the cultural revival argument that has created the most angst, because, for the Inuit of the Artic, there has never been a cultural revival argument – this [whaling] is just what they have always done. But for those, for example, in Washington State and the Caribbean states, there has even been an argument that the Tongans and others might have some kind of cultural revival argument, and then you move into the mainstream whalers: Iceland, Norway and Japan. So there is a bit of concern that if you make too many concessions then that's the thin end of the wedge, and it gives the Japanese another basis [to request whaling rights]. At the Anchorage meeting this year the principal issue of contention was Japan's argument for allowing a quota for small coastal type whaling, which they argue was to be seen as slightly different to Indigenous whaling, but reflected the fact there are certain small coastal communities which basically have a traditional whaling, in places like Okinawa. So they argued that this inshore whaling was something that should be revived, but that was the subject of an absolutely fierce battle in Anchorage, and the Japanese eventually withdrew their resolution because they could see that they weren't going to succeed. In fact, in very dramatic events at the of the Anchorage meeting, the Japanese actually threatened, yet again, to walk out of the IWC because they felt they weren't getting any recognition of their cultural tradition of whaling.

KC: It's a really interesting question because there is a moral question about whaling as well as a conservation argument. Of course, all the fisheries in the world need to be managed so that people don't deplete the stock so badly so that the fisheries can't continue. There is an argument like that with whaling – that whale stocks should be managed. But then there is also an argument that whaling should not happen at all because whales have rights, whales are these beautiful, magnificent creatures and it's actually morally repugnant to be hunting them.

Reporter: This is of course complicated by the fact the big whaling countries do have a cultural connection to whaling.

KC: Yes, and its just not seen as disgusting or as awful as we see it in Western countries.

Reporter: And then there is the argument that Australia is just as bad because we eat kangaroos.

DR: To which my response always is: 'well there is no international convention on the protection of kangaroos'. So I give a strictly legal response to that. And it's true, if the international community was so concerned about the protection of kangaroos, they would develop a convention to protect them. And kangaroos, other than Great Reds, are not endangered. If we were eating koalas, that might be a bit different. But there is this inherent difficulty then that, for example, the Japanese argument with respect to Minke whales. The Japanese have referred to Minkes as the 'cockroaches of the ocean' because they appear to be abundant. And all of the signs do seem to suggest that there are many Minkes out there, so I think the Japanese, with some justification, ask why is there a complete prohibition on all whaling when in some cases, some species are more than abundant and can be subject to some commercial hunting in much the same way tuna are, without significantly impacting on their stocks.

KC: That is somewhat similar to what the Makah say about the Gray Whales. In their history they also hunted Humpback whales and that was a substantial proportion of their diet. Apparently Humpback whales taste better than Gray Whales. But they are not campaigning to hunt Humpbacks, because they haven't had the recovery in population that Grey Whales have had. The Grey Whale population is more stable and it is possible to take five a year without threatening the survival of the species.

DR: I think from Australia's perspective, Australia is considered to be one of the most hard-line countries in the world in terms of having a complete opposition to all forms of whaling, both commercial and scientific. The only exception that Australia is prepared to accept is in relation to some very limited form of Indigenous whaling, but even then, Australia will very carefully scrutinize whether or not that form of whaling is sustainable. On all other bases, Australia is implacably opposed, and one wouldn't assume with the change of Government that is going to alter.

KC: Do you think that reflects the opinion of the majority of Australians? Do you think the strong support by our Government for the moratorium on whaling just reflects the way Australian's think about whales?

DR: Well, not initially, because the Frost inquiry into whaling was conducted 30 years ago, and it recommended two things. One was the shut down of the Australian whaling industry, and secondly that Australia take a more conservationist perspective, and so over time that has evolved to become a very hard-line conservationist perspective.

KC: But at the beginning it was quite different to what it is 30 years down the track.

DR: Yes. I think that what you've got now is a much more educated population in terms of understanding about whales and connecting with whales in a way that they have become an icon of the oceans. I'm really surprised when you travel around the country, how many places offer whale watching tours, and you see designs and drawings that celebrate whales. Now that isn't surprising when you travel to coastal communities in various parts of the world. Here whales are very much seen as an icon of the ocean, and I think there has been a sea-change in attitudes by the Australian population.

LORD OF THE FRAMES

Around the world on the back of some of the most successful films of all time, Paul Kirwan has landed back at ANU where it all started.

April 1912. The unsinkable *Titanic*, the ship of dreams, sets sail into the north Atlantic for its maiden voyage. With no vision of the tragedy that awaits them, passengers take to the decks as the smoke stacks steam into the air, birds dive and circle as if joining the celebration, and Leonardo DiCaprio climbs to the bow to proclaim he's the king of the world.

It's a familiar scene for Paul Kirwan from the School of Art at ANU, as he spent months as a compositor crafting the images to which millions of cinema goers flocked in 1997. A compositor's role is to integrate the different elements of visual effects shots – both filmed and computer-generated - so that the viewer believes that what they are seeing is real. Kirwan uses the example of a sound engineer who assembles the guitar, percussion, keyboard and vocal tracks of a pop song, to create the illusion that the band were all playing in the same room at the same time; a compositor does the same thing, but with images instead of sound.

Kirwan's work on the visual effects in *Titanic* included that iconic scene of the ship first being taken to sea. "We took the film of the 45-foot model of the ship, the digital ocean and the computer generated (CG) passengers and layered them with the CG smoke from the smokestacks and birds flying by," he says. "You know that the ship wasn't actually real but I don't think people realized the full extent of the work that went into it. And that's the work that I'm most proud of – when you don't even know I was there."

The deck of the *Titanic*, even the small-scale model, was a long way from Canberra in the late 1980s. Kirwan grew up in the nation's capital and studied at ANU with little idea of what the future would hold for him. A self-confessed nerd, he completed a Bachelor of Science with majors on Computer Science and Mathematics in 1990. After a short stint in the public service, he returned to a Master of Arts (Electronic Arts) at ANU.

"I'd always been a bit of a computer graphics aficionado," Kirwan says. "I just used to dabble but I went through a major phase in fractals and chaos theory. I found it fascinating that you could use this branch of mathematics to illustrate forms of nature that previously had been very difficult to describe. Patterns of turbulence, clouds, the way smoke moves and the way water flows."

In 1996, still working through the Masters degree, he received a job offer that was too good to be true. Digital Domain, director James Cameron's visual effects

company in Los Angeles, had just finished working on *Apollo 13* and offered Kirwan a 12-month contract. Upcoming projects included *Titanic, The Fifth Element* and *Dante's Peak*.

Kirwan put his studies on hold for a year so he could work with the team that he says were gods in his eyes. "I was just in the right place at the right time and I had learnt the software at university. It was a fringe, procedural, physical animation package that not many people knew. A version of it is still used by the ANU supercomputing facility."

After an intense year working on three major feature films, Kirwan returned to Australia in 1997. He finished his Masters and worked in Australia on George Miller's *Babe: Pig in the City* as well as commercials and TV projects.

"In this industry, about 80 per cent of the work is either commercial or broadcast design; about 15 per cent is actual television shows and only five per cent is film," says Kirwan. "I kind of went straight to the top end in a sense, and when I came back I was almost over-qualified. It was funny to go from the Hollywood cutting edge to dog-food commercials and flying logos. It's the majority of the industry work available, but it wasn't really what I wanted to do."

But from talking animals, Kirwan's career took him to work on two of the most successful films of all time. Two years in Wellington with effects facility Weta saw his talents go to work on *The Lord of the Rings: Fellowship of the Ring* and *The Two Towers*.

"I worked on some great shots, including the beginning of the battle of Helm's Deep in *The Two Towers*. The characters are looking out from the walls of the keep, and all you can see of the approaching army is a sea of torches. Then there are a couple of bolts of lightning and it starts to rain, and there's the idea that the storm is breaking just as this huge conflict is beginning. That's still some of the work I'm most proud of. I also did some work with Gollum, the first true central character to a film who was completely virtual."

Kirwan was leading teams of compositors by that time and after two years in Wellington and a joint share in another two Academy Awards (his first was for Titanic), returned to the US where he worked on the first *Pirates of the Caribbean, Master and Commander, Zoom, Stealth* and *Transformers* before he finally returned to his home town and ANU in 2007.

"I'd been trying to come back to the University for some time but we'd always been like ships in the night. There had been times when the ANU had contacted me about an opening, but I was right in the middle of a project. And there were times when I had approached them, but there were no opportunities available."

Now back where it all started, Kirwan says he is indulging himself with a PhD which will see him build some procedural software tools and use those to explore generative art – a process of creating images where the mechanics of the creation is at least as interesting as the results themselves. He's also teaching courses in Digital Video and is preparing for the University's new Masters program in Visual Effects, which has its first intake of students this year. The course will combine components of the existing Digital Video course with animation and compositing. It will be quite specialized but has had positive interest right from the start.

"In Australia at the moment there are short courses you can do in software techniques, or in short film or animation. But currently there's nothing at this level in this more specialized area," Kirwan says.

"Being back at ANU is fantastic, because it gives me the opportunity to move into a more academic and artistic role, without feeling that I'm losing the benefit of all those years of hard work in industry. And I'm looking forward to passing on some of that experience to our students."

THE SEVEN DEADLY SINS OF OBESITY

Those who think that dieting is the simple answer to Australia's obesity problem should think again. It turns out that our environments and lifestyles are crucially connected to weight gain.

In the 1990s *Absolutely Fabulous* hit our TV screens, presenting us with two women poles apart on the body image spectrum – thin, former model Patsy who claims not to have eaten since 1973, and Eddy, constantly dieting yet failing to lose her extra pounds.

Eddy's conundrum will be familiar to many women unwilling to go to Patsy's extremes. Despite Eddy trying myriad diets, her city lifestyle, car reliance and penchant for exclusive restaurant eating may be adding to her weight worries, and those of many men and women of the modern world. This is the view of two ANU academics who have published a book on the subject.

Dr Jane Dixon and Professor Dorothy Broom have edited *The Seven Deadly Sins of Obesity*, an examination of the environmental factors contributing to the increase in obesity around the world.

While Eddy's weight problems could be attributed to her overindulgence and natural physique – her ex-husband quips, "She could eat air and put on weight" – some aspects of her life – like too many 'experts' confusing the public about health and weight, car reliance and city living - may be adding to her weight burden.

Broom and Dixon from the National Centre for Epidemiology and Population Health believe many people like Eddy, from different socio-economic groups, are more likely to struggle with excess weight for a variety of societal, political and economic reasons.

While the one-liners about weight, or lack thereof, had audiences rolling in the aisles, obesity is no joke. It's the source of an increasing number of health issues and affecting many more of us than ever before.

Australians are getting fatter. This country now produces some of the highest numbers of obese youth in the world and the adults aren't doing too well either. But is it all down to lack of willpower, or does the world in which we live contribute to the increasing bulges on our collective waistline?

The two academics argue it's not just temptation we need to be led away from, but a number of environmental factors that are making it harder for people to keep obesity at bay.

Dixon and Broom highlight seven modern world 'sins' that add to the obesity problem. The book explores how aggressive marketing, time and parenting pressures and the obsession with economic growth all add to our life burden, and our weight burden.

The book does not absolve individuals like Eddy from personal responsibility for weight gain, but considers contributing factors that didn't exist in our great-grandparents time that are leading us to a fatter existence.

"The idea of the 'obesogenic environment' been around for about 10 years, but this was a paradigm shift in understanding obesity and population," Dixon says. "Our book is trying to tease out the particular elements of that environment which add to obesity problems."

At the start of the 20th century people used trams, rode bicycles or walked everywhere. Food was dug up from the garden, cooked from scratch and eaten around a dinner table – not collected by car, from a supermarket, and heated rapidly in a microwave to be served in front of the television.

All of these things, Broom and Dixon say, are hard to avoid and liable to add inches.

Another notable difference between past generations and those today is the impact socio-economic status has on weight. It used to be poor people who were thin, but now obesity emerges most commonly in low socio-economic groups. One reason for this is the ease of access to and the low price of energy dense foods, but there might also be elements of time stress and parenting pressure, according to the researchers.

"A solo parent with three children on a low income is concentrating on controlling the things she or he can control," Broom says. "They are living day to day, so if they

can make their kids happy by giving them a burger when they ask for it, why wouldn't they do that?"

Another issue making it harder to be thin when you're short of money is where people with lower socio-economic status live and work – usually in areas with limited public transport options and where the environment is less pleasant, has fewer parks and playgrounds and is less likely to be considered safe. This means parents don't get out and walk, and are reluctant to let their children play outside.

Then there is the plethora of conflicting diet and exercise advice, now even more freely available on the Internet. The researchers point to the "proliferation of scientists, charismatic individuals and businesses dispensing conflicting advice about what constitutes a healthy diet and appropriate exercise", before discussing how this cacophony of self-help can in fact be a major hindrance.

The authors also point out that this 'marketplace' of health and diet advice is least useful to the less educated and less wealthy in our society.

But the middle classes and their children aren't always doing much better. Many of these parents, concerned about children's safety, don't to allow their kids to walk or cycle to after-school activities so the spin-off benefits of travel-related exercise are lost. Also free play involving physical activity – like taking off for a long cycle ride with friends – a memory that many people who grew up as recently as the 1980s would be familiar with – may be disappearing.

Yet if positive change is to occur, say the researchers, it's the educated middle classes who need to lead it.

Historically, social acceptance of diet change has been led by educated women, as they are the ones who traditionally cook for their families and manage the family diet. An example of this was the shift away from mass butter consumption in the 1970s as a result of increased heart disease and the move to eat more chicken as opposed to fatty red meat.

Burying our collective heads in the sand, like Eddy, solves nothing. "The more I love myself, the more I will be loved," the character said. "The more I love myself, the more I will be loved. I will be thin and fabulous and live life every second to the fullest. This is not my fat. It has followed me from another existence. It is not the fat of now."

"A solo parent with three children on a low income is concentrating on controlling the things she or he can control. They are living day to day, so if they can make their kids happy by giving them a burger when they ask for it, why wouldn't they do that?"

"It takes an educated public to take leadership," Dixon says.

But the solution will not be found in the latest fad diet, a phenomenon that the researchers dismiss as not useful. "Practically every woman alive has dieted, probably many times. If dieting worked there would be no fat women," Broom says. But what she and her colleague advocate isn't a national diet change, it's a conversation about what's making us fat and what's making it hard to be thinner.

For *Absolutely Fabulous*' Eddy, finding the magic bullet to weight loss was almost an obsession, despite her daughter asserting that eating a balanced diet and exercising are easy. Broom's response is to agree that it should be that easy, but there is much in our world that makes it in fact very hard.

So what's the cure? Neither academic is waiting for the emergence of an anti-obesity pill that will reduce our diets or increase our metabolism as the answer to the problem.

"We are trying to understand what an obesogenic environment means in more specific terms," Broom says. "We are dealing with this from a societal level, as opposed to how can individuals be motivated to change their behaviour."

"We don't claim to have the solutions, but we hope our work can be part of a constructive discussion involving everyone concerned – policy makers, researchers, professionals and ordinary citizens. Ultimately we think that's the way to arrive and realistic and effective solutions."

THE SEVEN DEADLY SINS OF OBESITY

- **Consumption obsession**
- **Time pressure**
- **Parenting pressures**
- **Technology**
- **Car reliance**
- **Marketing of unhealthy food**
- **Confusing advice**

Time pressure – Three decades ago, the time devoted to paid work in US families averaged 45 hours per week. Now, with two parents working, average time the time devoted to paid work (from both parents combined) averages 82 hours per week in the US. In Australia the figure is closer to 70 hours per week.

Car reliance – An Australian study showed that people who drive a car to work are 13 per cent more likely to be overweight or obese. The dominance of the car makes it more difficult for people to travel using 'active transport' (walking, cycling, public transport), makes our lives harried, and underpins numerous other health and sustainability problems.

Too much and contradictory advice – Australian experts have told us that people are feeling anxious about who to trust to give them advice about a healthy diet and what is the best exercise. GPs and government health education campaigns vie for attention with celebrities like Ian Thorpe or Jamie Oliver promoting products. In the US Ronald McDonald is giving advice to schools on leading an active, balanced lifestyle. Who to believe is a huge issue, and confusion on this matter leads people to adopt fad diets and exercise routines, and to lose confidence in their own common sense approaches.

Pressured parenting – Parents are usually blamed when their children become overweight. What happens within the family unit is indeed vital to children's health but the family is not isolated from external societal forces. Parents are subjected to a myriad of pressures ranging from expert advice on childrearing to the provision of material, and emotional goods and security. Many of these expectations are contradictory and make it difficult for parents, particularly when socially and economically disadvantaged, to raise a child of healthy weight.

OFFERING OPPORTUNITY

A new ANU traineeship program is giving Indigenous Australians the chance to find a career.

When people ask Rob Wighton about his job is at the Chifley Library he jokingly tells them the he wanders amongst the books and students with a big sign that says 'Ssshh.'

Until June of this year, the last time the softly spoken 37-year-old Queanbeyan resident had stepped foot inside a library was when he was at school. Now, five months into his a two-year traineeship, he's on his way to a long-term career.

Wighton, originally from Condobolin, is one of eight participants in the University's new Indigenous Workplace Preparation and Experience Program which sees Indigenous people offered traineeships in a wide range of areas across the campus.

It's an opportunity that Wighton is relishing although he never saw himself working in a library.

"I worked for nine years in the taxation office before getting redundancy, plus I did security work and worked for the department of transport," he says.

"With this program I'll get to do a Certificate III in Library/Information Studies, so hopefully I'll get a full-time job out of it. I'm really enjoying it."

Wighton's was one of 28 applications received for the first intake under the program. After sifting through the applications, the successful were invited for a week's intensive training and to get a taste of life on campus.

But nothing could have prepared him for those first-day anxieties on the job. "The first day was pretty intense and scary," Wighton says.

"The last time I was in a library was when I was at school, so I was on the back foot."

Now, almost a quarter of the way through his traineeship, he has settled in to the challenges offered on a daily basis.

"I get in around 7.40am and there is a list of activities for me for the day. I could be working on the counter or dealing with fines – there were a lot of fines paid in the last week once people had graduated. You're certainly not doing the same job every day."

But the job isn't the only thing that he enjoys about the program – he also appreciates that it allows him to form friendships with other Indigenous Australians.

"There are two people from Queensland, one from Bourke, one from Arnhem Land and two from the local area," he says.

"We get to listen to their stories and hear about their different culture, plus it's good to see Indigenous people working together and we've grown closer as a group.

"At one of the meetings I was asked what my job was. I told them that I walk around all day with a big sign that says 'Ssshh' – so that's what they think I do now," he jokes.

As well as on-the-job training and undertaking the Certificate III qualification, Wighton enjoys the regular meetings with the other trainees and a mentoring program that ensures any issues he may have in adapting to his new role are easily and quickly dealt with.

"We have one day a month where we (the group) get together with elders and mentors and talk about what's going on. There are always issues to address," he says.

The combination of support from the group and backing from the work area and supervisors is crucial to the program's success, according to Mary Sharf. A Senior Consultant in the Staff Development Branch of the Central HR Division, Sharf has been working with another of the trainees who has been doing an administrative support role.

"The program is a great idea and it's great that they also have the additional support of being part of a group," she says.

"There is a lot to learn but we've been mindful (with our trainee) about what we give him to do and we don't just throw him in at the deep end.

"As an employer we're giving people the opportunity to find where they're best suited as they get to work in different areas. It's nice to see that you're growing somebody into the organisation."

For Wighton, taking part in the program is something that he would recommend to other Indigenous Australians.

"It's a great opportunity. Because of this I now know what I'm doing, I have a future.

"I'd tell people considering applying to go for it. It's a great way to get your foot in the door and could lead to anything."

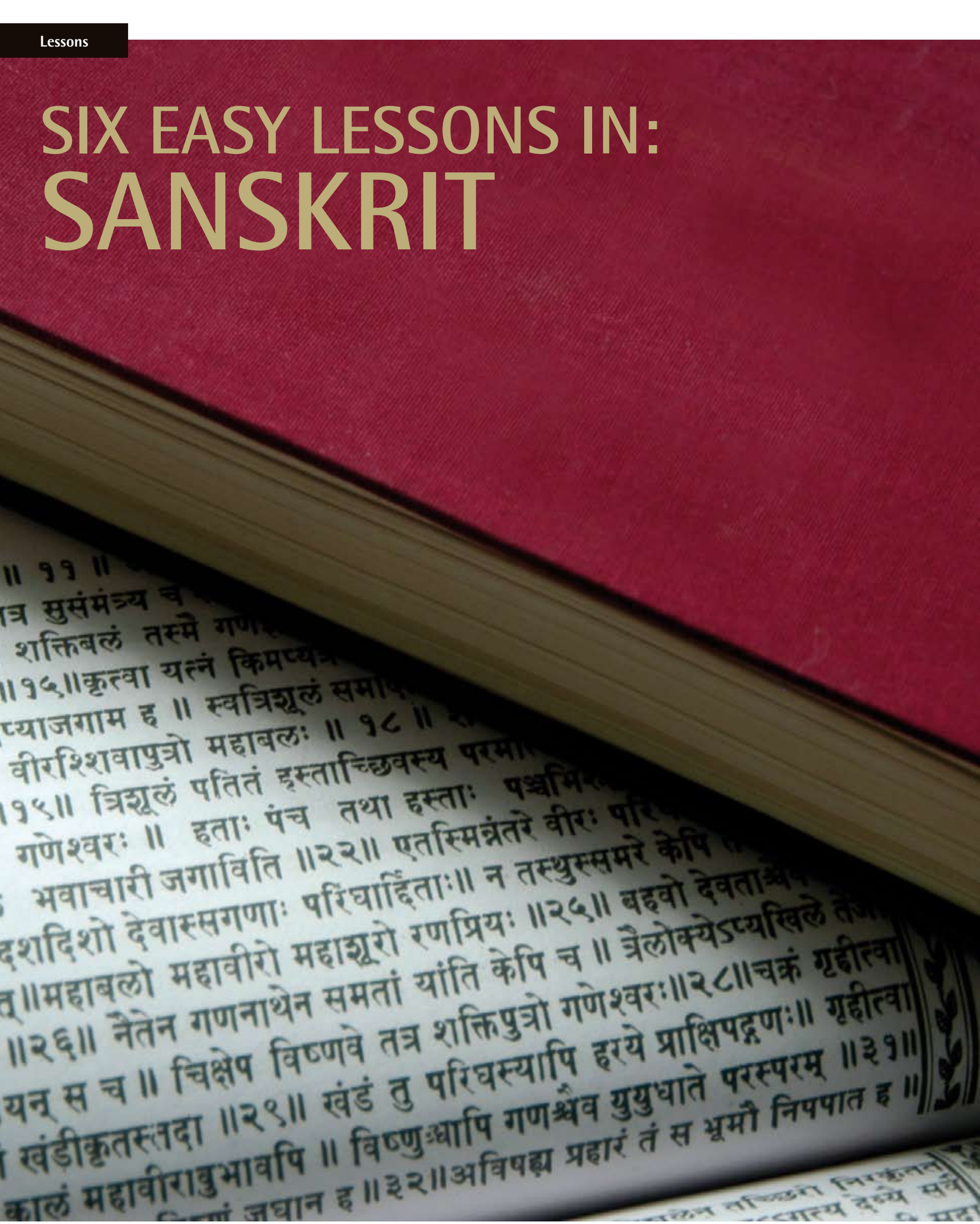
And his favourite part of his new job?

"The ladies in the library come and have a yarn with you and you get to meet a lot of people when you're working on the front counter. I'm not a real big talker, but I'm okay with the one-liners," he says.

More:
To find out more about the Indigenous Workplace Preparation and Experience Program contact Lindsay Stanford on 02 6125 5981 or
E: Lindsay.Stanford@anu.edu.au

Rob Wighton has found a new career path amongst the books of Chifley Library.

SIX EASY LESSONS IN: SANSKRIT



Few people would think a 3,000-year-old language would be the perfect lingo for the future. But that doesn't bother Dr McComas Taylor, linguist and head of the South Asia Centre in the ANU College of Asia and the Pacific. Taylor is an expert in Sanskrit, the classical Indian language which is still intoned each day by millions of Hindus. His interest in Sanskrit grew out of his earlier work in Chinese languages. An encounter with the *Mahabharata* epic has now sprawled into a lifelong challenge – coming to grips with the complex language whose name literally means 'perfection'. Taylor tells *ANU Reporter* about his work and passion for Sanskrit.

What is Sanskrit?

Sanskrit is an Indo-European language and the key to classical Indian civilisation. It could be argued that every great or profound thought and utterance in India before the Year 1000 was probably thought and recorded and transmitted in Sanskrit. We're talking about the cultural, spiritual and intellectual output of about one quarter of humanity.

Sanskrit is not a natural language, in that it was never spoken in the marketplace. It was an artificial system for elite scholarly and spiritual discourse. All languages are artificial of course, but this language was self-consciously constructed as a way of conveying the most sublime, spiritual and intellectual beauty that the human brain was capable of creating, and it does it with extraordinary subtlety.

When did it originate?

The origins of Sanskrit are lost in the mists of time. A collection of texts called the Vedas probably date from around 1000BC. The remarkable thing is that the language in the Vedas is largely recognisable today. But the rules for classical Sanskrit were probably laid down about 300BC by the great Indian grammarian Panini. From then on it hasn't changed. It is said that the language defined by those rules is the perfected language. The word for perfection is *samskrita*, which means 'made perfect', so the name of the language already suggests perfection. And if you have devised a perfect language, why would you want to change it?

Is it used today?

Sanskrit is still spoken, but it's always been the spoken language of a small, educated intellectual and spiritual elite, particularly in the sacred city of Varanasi and Pune [in India]. These two sacred cities are great centres of Sanskritic learning. They are home to whole schools where the curriculum is taught in Sanskrit, and where the kids only speak Sanskrit. There is also a ten minute news broadcast in India each day in Sanskrit. One time I was listening and I heard them say the word for Australia, then the word for Open, then the word for Cup. Open Cup? It was a puzzling combination, until I realised they were talking about the tennis.

In pre-modern India, Sanskrit was the language of scholarly discourse, very much like Latin in pre-modern times. But it is also the sacred language of Hindu scriptures. The vast bulk of these still exist and are still used on a daily basis. There are many millions of Hindus who recite prayers in Sanskrit every day. It is also an official language of Buddhism, Sikhism and Jainism.

How does it work?

Sanskrit can cope with new vocabulary in very skilful and clever ways. It used old words in new ways. *Vidyut* means lightening, but it also does for electricity and electronics. *Patram* means leaf, but also means letter. *Vidyut patram*, electric letter, is also email. Spam is 'undesired electric letters'. A Spam filter is 'sieve for undesired electric letters'. When you say that in Sanskrit it still sounds like beautiful poetry. The language has been very good at adapting to modern usage as well.

It's a highly inflected language. Every noun has to take a particular ending, which would show if there is one object, two objects, or more than two objects. It can also tell you the role of that word in the sentence: if it's the subject, it takes a particular ending. If it's the object, it takes another. If you want to say 'with that thing', 'for that thing', 'from that thing', 'on that thing', 'of that thing', it takes other endings. As endings can be singular, dual or plural, there are actually 24 different versions. Any noun can take 24 endings. And there are 28 different patterns that you need to be more or less on top of. So it's 28 times 24 different ways of expressing a noun. Then there are hundreds of possible verb endings. It's complicated. Panini reduced Sanskrit grammar to 4,000 handy rules. All you have to do is memorise these 4,000 handy rules and you've got it down pat.

Sanskrit has an alphabet. So after a little bit of hard work you can master it. It's written in a beautiful script called *Devanagrai*, which means 'of the city of the gods'. If the gods ever had to write anything down, I'd be pretty sure they'd be writing it in Sanskrit, and that they'd be writing it in *Devanagrai*.

'My name is' is a very nice example for newcomers to Sanskrit, because it's very Indo-European. 'My' is *mama*, and 'name' is *nama*, and then you add your name to it. It's easy, but there is a whole lot happening under the surface. *Mama* is first person singular genitive, one of the 24 ways of saying 'I/we'. *Nama* is neuter nominative singular. That short 'a' ending is one of the 24 ways of saying name.

Why is it impressive?

I've seen a figure of 1.4 million Sanskrit manuscripts currently in existence. For Classical Greek and Latin combined, there are 30,000 manuscripts. This is Sanskrit's monument, that vast scope of surviving, hand-written documents sitting in people's libraries and temples. The size of the corpus is absolutely enormous. And the breadth of material boggles the imagination. Everyone knows the Kama Sutra, for example, which is a manual on sexual technique. But there are also texts on elephant-raising, architecture, astrology, medicine, grammar, spiritual traditions, geography – the vast scope of subjects covered by Sanskrit documents is amazing.

An elderly Sanskrit scholar, who had spent 50 years studying the language, was once asked what it was like to have spent so long on the subject. He replied, "Sanskrit is a boundless ocean, and I am still standing on the shore". There is no such thing as finishing Sanskrit. You don't have to worry about getting anywhere. You should always look behind you and get your satisfaction from what you've done, because it's a journey without an end.

What is its future?

I am the only person, possibly in the world, who truly believes that Sanskrit is the language of the future. We can't easily read Shakespeare without a glossary. There's no way you can read Chaucer without a glossary because English is changing so quickly. But I can pick up a Sanskrit document written in the last 2,000 years and make a good fist of it. It hasn't changed. In 1,000 years time, Sanskrit will still be the same, but every other language will have changed beyond in recognition.

Dr McComas Taylor

LOST & FOUND IN THE SUPERMARKET

Try doing your weekly shop blindfolded and you'd be close to the experience of a vision impaired person in the supermarket. But new computer matching technology could take the pain out of navigating those long aisles.

Navigating the towering, long and utterly indistinguishable shelves of a supermarket is challenging at the best of times, not least when the shopper is hunting that one special item – say, a pack of needles. Those people who are inclined to stick things out might seek assistance from a supermarket employee, which might in turn lead to one of those squawking announcements that temporarily disrupt the muzak: "Aisle check on tools, aisle check!" By this stage, no one could be blamed for abandoning the search and making his or her own check for the nearest exit.

Now, imagine attempting such a task if you were vision impaired. What was previously a minor test of resilience and recognition has suddenly become much, much harder. A red-coloured carton of laundry detergent can look much like a red-coloured carton of red wine, particularly if you're not in possession of 20-20 sight. One product will leave your whites whiter than white, the other might turn those same whites a striking shade of crimson. While admittedly at the extreme end of misrecognition, such a mistake does illustrate how forbidding a supermarket can appear to those with vision problems.

Help could be on the way for all shoppers, but especially those whose sight is impaired. A team of researchers from the Research School of Information Sciences and Engineering are developing software that will locate products anywhere in a supermarket. All you need do is point your camera at a sample of the item you're looking for and the computer will do the rest: matching the product to a record in a massive visual dictionary, and then giving you precise instructions on the shelf and aisle locations within the store.

Masters student Yuhang Zhang is the man driving the project forward. A hardworking student, he confesses to sometimes cutting his sleeping time down to five hours a night so that he could maximise the amount of time he'd spend on the problem: how to get a computer to perfectly match a product based on visual recognition. After 10 months of consistent labour and consultation with his supervisors, Zhang has come up with a system that works well and is getting better.

"Do you know how Google works? If you're looking for a keyword, the search engine will find your search item by locating any document that includes them," Zhang says. "What we are trying to do is describe each image as a 'text file'. Just as there are many words in a text file, we think that each image contains many subregions, which can be thought of as 'visual words'. We use software to extract the visual words and describe them mathematically so we can store them in a database, just as we do with a text document."

Last January, Zhang and his supervisors spent three days haunting a test supermarket in southern Canberra. They slowly walked up each aisle, painstakingly capturing overlapping photographs of shelves and taking detailed notes about locations. Their goal: to collect the image of every product in the store. At the end of their shuffling, the researchers had gathered 3,000 shots illustrating the 18 aisles of the market. The next step was to break each image down into sub-regions, resulting in 75,000 smaller images to analyse. The team then created software to hunt out 'local invariant features', those bits of pictures that are consistently similar when such factors as scale, viewpoint or illumination alter.

"The features are not things that you would recognise as letters or words or logos. It's more generic," explains Professor Richard Hartley, expert in computer vision and senior researcher on Zhang's team of supervisors. "To call them visual words is maybe a bit misleading. They're more like phonemes – units of sound that have no meaning in their own but can be combined to make words."

"A red-coloured carton of laundry detergent can look much like a red-coloured carton of red wine. One product will leave your whites whiter than white; the other might turn those same whites a striking shade of crimson."

Hartley takes the analogy of the phoneme a step further to explain the process of clustering, where near-identical local invariant features are grouped together to allow for easier sorting. "You might have someone saying 'r' in a variety of ways with subtle differences, but to all intents and purposes they might as well be the same," Hartley says. "In the same way, you take a bunch of things that appear the same and simplify the problem." This clustering process brought the total number of recognisable visual features down to around the 100,000 mark. The team describes these useful units as 'visual words'.

"We call [the 100,000 clustered features] a dictionary," says Dr Lei Wang, Zhang's immediate supervisor. "For each image you then scan, we'd be looking for matches between the features captured by the query and those stored in the database. It's a case of matching by approximation."

It's also a case of taking a lot of care. Any error in the programming at an early stage of the visual dictionary's development could compound disastrously later on. Zhang says the project has required much concentration, and he speaks of his dissatisfaction that the process of visual matching is yet to be 100 per cent perfect. At the outset, the software was able to match every one item in 30, but now it's getting it right up to two-thirds of the time with only a small number of repeated searches. Each individual search takes just 25 milliseconds.

"I cannot say I'm satisfied yet, because sometimes the picture match can prove quite difficult," Zhang says. "If you're looking for a box, it's easier. But if you're looking for a bag, its shape is much more complicated." Difficulties also arise when the object is too small to extract many useful visual words. This can be the case with something like a pen or a downsized chocolate bar.

But Wang speaks more positively about the work of his student. "I think [Zhang's] progress is quite good. Given he only started in January, he's done very well. Especially when you take into account the need to check the ground truths manually for each search, which means physically going through the images each time to see that the software is working correctly. He's also done well to develop the software to cluster features efficiently."

Hartley says the software would need to be able to match visual objects correctly up to 95 per cent of the time before commercial applications could be considered. But he's excited about the possibilities of expanding the project to cover the stock of more than one supermarket, perhaps even building up a network Australia-wide.

He says the work forms part of a very large endeavour in computer vision, where many researchers around the world are working to solve problems like object recognition and category recognition. This latter term might describe a system the could recognise different kinds of dog, for example, but one that knows that a Chihuahua and a Great Dane are both still 'dogs'.

As for Zhang, he intends to continue to refine his visual recognition software through further research. But check the aisles of your local supermarket in future for a system that makes navigating the stacks as simple as point and click.

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FRAGMENTS OF HOPE

Although one of the greatest Australian poets of the 20th century, the real A.D. Hope remains something of a mystery.

That is all I can do. It is you must record and create.
From now on it is you must decide what you think about me.
I cannot contribute opinions or join in debate
But to check matters of fact of course I am free.

Good Luck to you!
Your amorphous
Biographee!

- A.D. Hope, Letter to Ann McCulloch

Many people at ANU might think A.D. Hope is little more than the name of a building, just off University Avenue. They may also connect the name with the large, imposing portrait in the foyer of that same monument. Even among those who are familiar with his poetry, little is known of Hope except by those who knew him personally.

So what are the facts? The building is named after the man who joined ANU in 1961. Born in Cooma, NSW, in 1907, Alec Derwent Hope's education and academic career until then had taken him to Oxford University (where he was a student of Tolkien and C.S. Lewis), Sydney Teachers' College, the University of Melbourne and Canberra University College.

As Professor of English at the latter, his position was absorbed into ANU when the institutions amalgamated and he became the University's Foundation Professor of English. He retired from academia in 1968 but retained an office at the University where he composed poetry for many more years.

One of the greatest Australian poets of the 20th century, Hope was widely acclaimed for his work. His awards included the Grace Leven Prize for Poetry (1956); the Australian Literature Society Gold Medal (1966); The Levinson Prize for Poetry (1969); the Robert Frost Award for Poetry (1976); and an Order of the British Empire and Order of Australia in 1972 and 1981 respectively.

Such details are easily obtained but Hope the man is a much more difficult identity to understand. In 1980, still 20 years before his death, Hope wrote of his fear of being shoehorned by a biography. "Philip Martin is presumably on the job already. In the conversations I had with him last year, I continually felt that involuntary attempt to get me into a neat package and even while I felt that the intellectual cage was quite just and perceptive, I was tempted at every step to revolt, to cry: I am Proteus: let me out of here!"

Seven years on, no biography exists, the closest volume being Ann McCulloch's *The Dance of the Nomad*, which is more an academic study and selection from Hope's notebooks. Although written as a kind of journal, the notebooks express very little about him personally or about the events in his life. Instead they are collections of his musings on artistic, academic and spiritual matters that interested him.

Throughout the notebooks runs his insistence that his vocation was as a poet, not a scholar. "I was never conscious of having a destiny either, simply a sense that poetry was my business in this world and that nothing else really mattered," Hope wrote in a letter to Ann McCulloch. In that light his retirement from teaching at ANU in 1968 must have come as a relief, allowing him to return to his true calling.

"While I don't know that being an academic was his first choice in life, it gave him some influence at a very formative time for the field of humanities and I think he felt that a lot of influence needed to be exercised at that particular point," says former student and University of Sydney academic David Brooks.

This is an opinion clearly reflected in Hope's notebooks where the poet could be as critical of critics as he was of other writers. "Nothing excuses bad writing and the attempt to argue that this bad writing was the only way for the new experiment to succeed reveals the muddle-headed critic and the muddle-headed novelist alike," he wrote in 1980.

Also present throughout his notebooks is a constantly changing idea of the relationship between the poet and his poetry. In 1957 he wrote, "It is valuable in asking that criticism be concerned only with the poem as a [*Ding an Sich*] (thing in itself), not with the poem as biography, social or literary history. But it becomes absurd when it ignores what biography, history and literary history have to tell us about the poem."

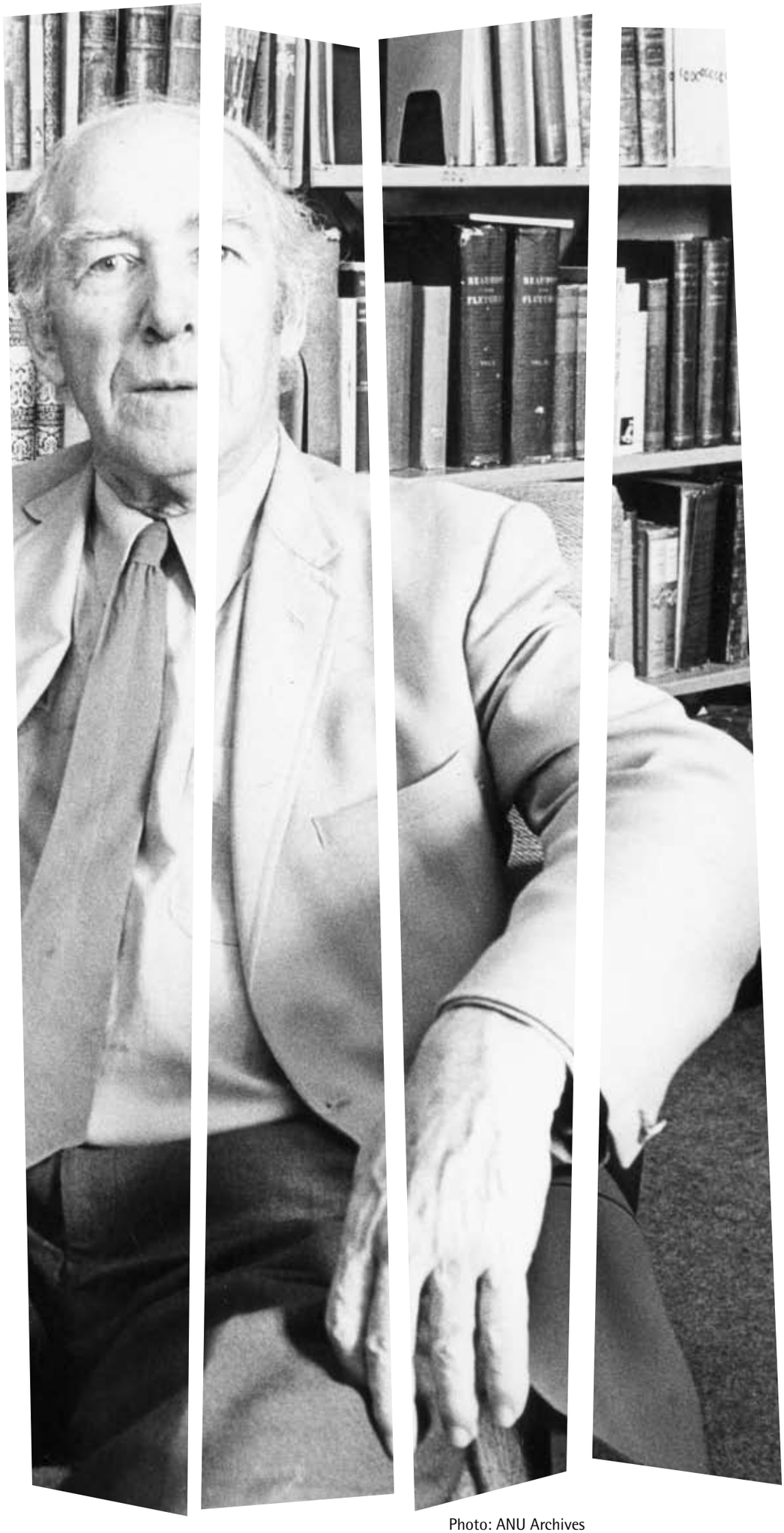

Photo: ANU Archives

Not ten years later another entry mused, "It would be hardly less crass for the critic to take the 'facts' of the poem as comic intention but to attribute to me a view in favour of the state of nature, or of longing for bold, bawdry and sexual licence. The Poet is taken to be expressing his view or his attitude, using the poem as a dramatic device."

According to Brooks this reflects a long argument between academics, critics and poets. "The idea that the poet is somehow outside the poem, the impersonality of the poem, was embedded in a thing we call the new criticism which was dominant in the teaching of English Literature at ANU, especially in the 1960s and 70s," Brooks says. "It's something that changes with fashion and I think we've got to read Hope from our own time and come to our decisions about his work. I think his personality was very strongly reflected in his poetry and I don't have any difficulty with that."

When Hope's first book of poetry, *The Wandering Islands*, was published in 1955 (quite late in his career as a writer) critics struggled to place it. "[M]embers of the avant-garde may feel impelled to dismiss Hope as an incurable traditionalist while people themselves incurably conservative (rather than traditionalist) may regard him as an experimentalist, a confirmed tamperer with the emotional status quo. The moralist may regard him as amoral, the aesthete may find him distressingly didactic," wrote critic Vincent Buckley in a 1957 essay.

As intellectual and literary fashions changed throughout the 20th century, so, to an extent, did Hope's poetry. But his preference for metrical verse and sexual subject matter remained to be judged in a very different light. "What he was writing in the 1930s was way ahead of its time," says Brooks. "But into the late 60s and 70s and into an age of second and third wave feminism, the fact that he'd written about sex and was an old man as well, meant he was considered somehow to be chauvinistic and writing against his time."

Last year the Humanities Research Centre at ANU hosted a conference to celebrate the life and work of Hope. This marked 100 years since his birth and was intended to reassess his place in Australian and international poetry. "When a major literary figure dies, their reputation peaks a little just after their death but then it slumps a bit. I think some people, myself included, felt it was time for a kind of reappraisal of his work and a way of registering the impact of his work on Australian poetry," says Brooks, who convened the event.

The news from the conference was positive. Translations of Hope's work into French are underway and a small group of American academics and poets are carrying his torch in the United States. Two very different readings of Hope's *The Death of the Bird* – one traditional and one post-modern – generated controversy that, in Brooks' view, demonstrates Hope's timelessness.

"It was like the present talking to the past and when you considered the two readings side by side, the post-modern version opened it up and poem was strong enough to answer back and even say at various points, 'yes, I know, but you haven't thought this far yet'," says Brooks. "It was a way of liberating the actual power that is in the work."

LAST WORD

AUSTRALIA IN THE ASIAN CENTURY

How should Australia position itself as Asian powers rise in the world? This question was pondered by Professor Hugh White, the Head of the Strategic and Defence Studies Centre at ANU, during his Last Lecture address in December. The following is an edited version of his speech.

We live today at the start of what seems likely to be 'The Asian Century'. If that proves true, it will be because over the last century Asian countries built the social and political foundations for sustained economic growth, and for the last 30 years or so have also built a regional order within which they have lived in peace as trade has grown. But this success has also transformed the region. India, Japan, China and parts of Southeast Asia have achieved high and sustained growth rates and impressive political evolution. Of all the developments, the most important is the rise of China.

We all see this but do not really grasp it. Looking back the future will see the defining dynamic of our age not in the two towers falling to earth on the banks of the Hudson, but in the thousands of new towers rising to the sky along China's Pacific coast. Of course China's growth spurt may not last. But it quite probably will, and if it does it will transform our world. Quite simply, China's rise is the biggest economic transformation in history, and within 20 or 30 years China may well have overtaken the US to become the largest economy in the world.

Among other things, this will transform the way Asia works. Asia's international order, which has kept our region so peaceful for 30 years, was built at a time when China's economic power was a tiny fraction of America's. It has been based on US primacy, in military power and political influence. But if China's power grows, the base of that old order will erode. America's primacy will be challenged – is already being challenged. A new order will emerge. What kind of order? Will it emerge peacefully or not? What will it mean for Australia? These questions are central to Australia's future in the Asian Century.

We need to start be recognising that these problems do not manage themselves. Even in a globalised world, states still act like states, and their propensity for strategic rivalry and organised violence seems as strong as ever. Of course everyone wants peace, but is that enough to make sure we get it? Admiral Jackie Fisher, who built the Royal Navy before WWI, once said "all nations want peace, but they want the peace that suits them". Ask in Tokyo, Washington, Beijing and Delhi, and you will see the truth of these words today.

All the major powers carry a big responsibility to ensure that their ideas of how Asia can work peacefully in future converge. But the challenge is hardest for America, because it has most to loose. Americans tend to assume that US primacy can be sustained indefinitely, even as the economic foundation of that primacy is eroded. The risk we all face is that the immovable object of US primacy will meet the irresistible force of China's growing power. It is not necessarily the case that China wants to replace the US as Asia's dominant power – at least not yet. But it will insist on being treated as an equal.

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The core challenge is to find space for China's aspirations to leadership, without conceding to it an overwhelming regional hegemony. That means America must stay in the region to balance China, while accepting that it can no longer dominate. That is very difficult for America, going against all of its deepest traditions of exceptionalism. But it is hard to see how Asia can remain peaceful over coming years if we cannot find a way to do that. And right now, American policy is heading the other way – towards building a coalition of allies and others in Asia to resist China's challenge to US primacy.

This is where Australia faces its hardest strategic choices. Do we support the US in trying to sustain primacy, knowing that it might fail, or in succeeding divide Asia into armed camps? Or do we urge the US to accept China's rise and learn to treat it as an equal? All our traditions and instincts point to the first option, but our interests point to the second.

Getting to the right answer will require us to rethink our place in Asia – to decide whether we can imagine a future in which our security is not guaranteed by a dominant outside power, but in which we look instead for our security 'in and with Asia', as Bob Hawke and Paul Keating used to say. It will require us to rethink our relations with the US – to move to an alliance in which we work to shape US policies on issues that are critical to our future. And it will require us to help define the conditions for peace in Asia in the Asian Century. These are big questions, and they will require deep thinking.

"It's estimated [ANU] could be saving up to around 500 tonnes of CO_2 being emitted each year."

Dr David Carpenter, p 11.

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