The soprano

Alumna Nicole Car is being hailed as a rising star of the opera world.
**ARTS WEST**

New building will transform way humanities are taught

A changing climate means that by 2070 koalas may no longer call large parts of inland Australia home, a University study has shown. Using a detailed ecological model, researchers found hotter temperatures and altered rainfall patterns will make it more difficult for koalas to get the water they need – making inland populations vulnerable to heat-stress. The researchers mapped potential koala habitats in 2070 by using information about koala behaviour, physiology, body size and fur to predict how much energy and water the marsupials need to survive under the climate at a particular location. They found that the climatically suitable area will be dramatically reduced by 2070, particularly in Queensland.

The koala’s range across Australia was limited by water requirements for keeping cool, with the timing of rainfall and heat waves being crucial in limiting the area in which koalas live. Lead author of the study Dr Natalie Briscoe (BA 2006, BSc(Hons) 2007, GCALL 2012, PhD 2014), from the School of BioSciences, says the findings could help in forecasting future impacts of climate change on biodiversity.

“Studies of climate change impacts on wildlife have often focused on how changes in average temperature or rainfall will affect species, but our research highlights the importance of thinking about the extreme conditions that will be most stressful for the animals – such as hot, dry periods – and how these may change in the future.”

The study was published in Global Change Biology.

**NATURE**

How much can a koala bear?

A new era for the Faculty of Arts has to our University and city. “Arts West is an innovative, amazing and fun place that opens our minds to the rich possibilities of an Arts education.” Vice-Chancellor Professor Glyn Davis says Arts West will transform the way humanities and social sciences are taught at the University. “It will be a true student hub, with 24 new teaching and learning spaces, a digital studio and a façade that displays images from the University’s cultural collections,” he says.

“A key theme in the building’s design is connectivity – embodied in the principle of interdisciplinarity, which informs teaching and research in the humanities at Melbourne, and the significant connection the Faculty of Arts has to our University and city.” Arts West was designed by the architectural teams of Architectus & ARM Architecture and was built in partnership with Kane Constructions.

**TECHNOLOGY**

One of the world’s largest advanced technology companies, Lockheed Martin, will establish a new STELaRlab (Science, Technology, Engineering Leadership & Research Laboratory) in the heart of the University’s engineering and science innovation precinct.

The $13 million Centre is a collaboration between Lockheed Martin, the Defence Science Institute and the University. It will open for an initial three years in existing University premises, before moving to a more permanent location as part of the University’s planned Carlton Connect Innovation Precinct.

It marks the first time Lockheed Martin has opened a research centre outside of the US.

The Centre’s establishment was coordinated through the Defence Science Institute, which was set up in 2015 to facilitate the growth of defence science research networks between Victorian universities, government and the Defence Industry. Deputy Vice-Chancellor (Research) Professor James McCluskey, pictured, says the University’s collaboration with Lockheed Martin is strategically important.

“The University has made no secret of its desire to both deepen and broaden its engagement with industry to have high impact and work together to solve some of the world’s most challenging problems,” he says. The Centre is expected to grow rapidly over its 10 years, with its researchers to be co-located with universities around the country.

It will provide PhD scholarships and internships, while directly funding research projects and co-authoring applications in the future.

Initially the Centre is expected to focus on research in emerging fields such as hypersonics, robotics, artificial intelligence, sensors and communications.

**CAMPAIGN**

Physics gains in latest gifts

Physics at the University of Melbourne has been advanced with the announcement of two major gifts.

Betty Laby (MSc 1985), pictured, a former University statistician and department head, honoured the memory of her father – esteemed University physicist and chemist Professor T.H. Laby (MA 1915) – by leaving a gift in her will for a Professorial Chair in Physics. The gift will support an area of research in experimental or observational physics.

Dr Laby was the last surviving member of a family with close ties to the Faculty of Science. Her sister, Dr Jean Laby (BSc 1940, MSc 1951, PhD 1950), was the first woman to receive a doctoral degree in physics from the University. Dr Laby later became a renowned physicist, specialising in climate assessment.

The gift extends the Laby family’s support of the School of Physics, which stretches back more than 30 years, largely through gifts from the Laby Foundation.

Mr Laby’s gift was followed more recently with a gift from alumnus Dr Jake Haimson (BSc 1948, DSc 1967). Dr Haimson is an international pioneer in the design of microwave electron linear accelerators – the devices used to deliver high-energy X-rays in cancer radiotherapy.

Dr Haimson commissioned Australia’s first linear accelerators at the Peter MacCallum Cancer Centre and the Royal Brisbane and Women’s Hospital.

The Jacob Haimson and Beverly Mecklenburg Lectureship in the School of Physics provides the school with the flexibility to teach and research fields vital to society’s future.

Dr Haimson, who is classified in the latest major contributions in Belief – the Campaign for the University of Melbourne.
A night in emergency

It’s called ED. The place people instinctively turn to when they are injured or suddenly ill, and where the doctors are ready for anything. Writer Gary Tippet and photographer Julian Kingma spend a shift at Austin Health’s Emergency Department.

TUESDAY: a wet, grey, cold and miserable day. A day for slips and falls, rear-end collisions, workplace accidents, broken bones and sickness. Yet, at 3pm, the waiting room at the Emergency Department of Austin Health in Heidelberg is little more than half full.

You should have been here yesterday, they say. The place was overflowing, the morose, fidgeting throng stretching along the corridor almost to the hospital foyer. Of course, Mondays in the ED are always busy, with people bringing in the injuries and ailments they have carried through the weekend. This afternoon, though, is unusually quiet.

Quiet, of course, being a relative concept in a department that on average sees 225 patients every day – 82,074 in the last financial year. Doctors Mani Rajee, Lee Yung Wong and the rest of the staff in Emergency are merely busy – as opposed to run off their feet. Still, most of the 31 cubicles in the department are occupied by patients being treated or awaiting their turn.

In cubicle 26, Lindsay McDonald, 69, of Greensborough, sits with a bandage wrapped around his head. There is sticky blood in his hair and in dried rivulets down both sides of his face. Dr Rajee carefully unwinds the bandage to reveal a ragged five-centimetre laceration, starting above his swollen left eyebrow and running down the side of his nose near his eye.

"Silly accident," Mr McDonald explains. "Just after lunch today I was shopping, buying a high chair for my granddaughter. I turned around, caught my foot under a cabinet and went down like a … well, like a bag of cement."

In one of those this evening, ED registrar Dr Wong (BMedSc 2007, MB BS(Hons) 2009) meets 67-year-old Maryann Pantalleresco, who, with daughter Tracy, has made a 30-kilometre taxi trip to the hospital from her home at Hillside in the outer western suburbs. They’d have called an ambulance, she says, but knew she would have been taken to a different hospital. And she’s had a long history with Austin Health since a liver transplant here in 1999.

"I hear you’ve had a pretty rough trot," says Dr Wong.

"Yes, I’ve had the liver transplant, bones broken in both my legs, breast cancer, a thyroid operation, and whatever else there was I don’t remember." Mrs Pantalleresco has had almost constant diarrhoea for the past five days. She is very pale, badly dehydrated and close to exhaustion, with pain in the abdomen and lower back, possibly, she says, from a recent fall. She winces and moans softly as Dr Wong presses under her ribs and around her kidneys.

STAT IS the second point of call for most people who present at the ED. Initial assessment usually happens at the Nurses’ Triage Station, just off the waiting room, where patients are assigned a rating from 1 to 5 according to the seriousness of their condition and the urgency with which they need to be treated – 1 being the most critical.

Most patients triaged at 1 and 2 will bypass STAT and go straight to the main section of Emergency with its two staff bases, two resuscitation rooms and 23 green-screened cubicles.

Writer Gary Tippet and photographer Julian Kingma spend a shift at Austin Health’s Emergency Department.

"You can’t get bored": Dr Mani Rajee (above) and Dr Lee Yung Wong (right) on duty in the Emergency Department.
Dr Wong orders blood tests and sets about getting her rehydrated. He’ll be back to see her when the results come back, he says.

**TODAY**

Lee Yung Wong and Mani Rajee are two of the staff – doctors, nurses, ward support staff, clerks, imaging technicians and others – working the afternoon shift in Emergency. The shift is from 3pm until 11pm, but Dr Wong, in blue scrubs, has already been here a few hours covering for a colleague.

Dr Wong came to Melbourne from Kuching in Malaysia in 2004 as an 18-year-old enrolled in the University of Melbourne’s Trinity College Foundation one-year course for high-achieving international students, before joining the Melbourne Medical School. Apart from one year, he has been at Austin Health since his internship there in 2010. After enjoying a few rotations through the ED, he began emergency medicine training in 2013. As someone who likes to work with his hands, he says he toyed with doing some surgical training, “but maybe my attention span was too short.” Instead, he offered a similar chance of hands-on medicine as well as offering constant variety and immediacy.

“We’re generalists,” he says. “We try to care for the patient as a whole and I think that’s a good quality of emergency medicine.

“People are usually in a great deal of pain or distress when they come to Emergency. If we can ease some of that, it’s cool to do a lot for them. There’s a really short space of time in which you can do a really great intervention – whether it’s just listening to someone or giving them medication or pain relief. There’s something extremely good about doing a small thing that has a big impact in a great time of need.”

Emergency physician Dr Rajee in Emergency medicine at the Austin Clinical School and the University of Melbourne Faculty of Medicine, Dentistry and Health Sciences. Before coming to Australia 23 years ago, he had never worked in an emergency department. In Chennai south of India, he had been an ear, nose and throat surgeon.

“When I started, it was very, very interesting,” he says. “It was a new field and you had a chance to do everything. You could do some surgical work, you could do some medical work. You got to see everything – the good, the bad and the ugly.

“You can’t get bored. You might deal with a heart attack, then all of a sudden it’s a kid with a broken bone or someone with a stroke. You see every type of patient, the young, the old, male and female, cuts and lacerations, serious infections, people dying in the department.” At Footscray Hospital, then St Vic’s, then the ED, he ended delivered a baby in the ED!

But there are frustrations, he adds. “Increasingly, people are using the ED like a general practitioner’s clinic for relatively minor ailments. There are drunken and drug-affected patients and staff face abuse and even violence. It is why we staff the trage area now work from behind glass screens like those in banks.

“Emergency is stressful but also very satisfying,” says Dr Rajee. “You have some gift that you’ve learned and you can use it to help other people in critical times. It’s a nice feeling if you’re helping another human being in need. That is the greatest feeling.”

The ED can be challenging and often confronting, adds Dr Wong. But one of the attractions is working in a big team responding to those challenges.

There is enormous camaraderie in Emergency, he says, a strong, positive, supportive culture. “When something major comes through those doors and you see everyone switch on and chp in and work together, that really is a sight to behold.

“I think for most people doing emergency, including myself, I don’t think we can see ourselves doing anything else. There’s a small caveat to that – it’s a tough job to do full-time, for your whole life.”

**THE NIGHT**

Grinds on. Doctors Rajee and Wong tend to a constant stream of the injured and the ill.

In cubicle 30, 81-year-old Giuseppe prestle waits with his wife, Caterina. Nine years ago, he was treated for prostate cancer and now uses a catheter every two days “to clear the way”. He tells Dr Rajee: “I put it in today and I think I went too far. I’m urinating blood, blood with my wee. Too much blood.”

After a bladder scan and some hydrate, his hydration is diagnosis is confirmed: he has scratched inside his bladder. He is catheterised and the urine ultrasound confirms there is no bleeding in the joint, and a 3D scan reveals in detail the break, which looks like a slightly tilted capital F.

The good news is that it won’t require wiring and Graeme goes home in a Zimmer splint stretching from his upper thigh to lower calf.

Meanwhile, Fiona Turner, 31, has arrived at St Vincent’s. She’s lovely. She’s a second-year medical student Richard Cole, on his first shift in the ED, “questioning her.” Fiona tells him she has been persistently unwell since a bout of influenza two years ago, has had gastro problems and has been on antibiotics since May.

Very pale and in tears, she says she has a band of severe pain stretching around her abdomen. “It’s like labour pain, but you probably wouldn’t understand how that feels.” Richard correctly suggests she may have colitis, perhaps from too many antibiotics.

Back in STAT, 63-year-old Helen Nikolau presents with severe tonsillitis and asthma, and a temperature of 38.6. Later, her husband, Chris, arrives in a wheelchair from Austin Health Olivia Newton-John Cancer Wellness and Research Centre next door, where he has been having radiation treatment for thyroid cancer that has spread to his brain, lymph nodes and lung.

“They’ve told me that without treatment I’d have 14 weeks, with treatment 16 months, maybe longer,” he says. He suspects Helen is worse than he has seen her out.

Helen will be admitted, but for his own good Chris has to leave, says Dr Rajee. “Because he is having radiation treatment he really needs to stay away from someone with a serious infection.”

They keep coming. 17-year-old Angus Garrard has broken the fifth metacarpal in his left hand after crashing his trial bike into a kangaroo at Hurstbridge; he goes home in a plaster cast. Adele, 31, receives eight neat stitches to seal a cut in her forehead suffered in a fall at a supermarket. A scientist, who has had long-term eye problems including glaucoma and is on the waiting list for a second cataract operation, presents with a bad bleed in his right eye. A victim of a massive stroke passes away in a resuscitation room.

Late in the shift, Dr Wong bends over a computer screen and shakes his head. Mrs Faulatzilouc’s lab results are back and one number worries him. Her level of creatinine – a chemical waste product usually filtered through the kidneys – is 398 when it should be less than 100. Six days of diarrhoea seems to have shut down her kidneys. She may be headed for intensive care.

He goes to see her: “I’ve got some news for you and it’s not good. We have done the blood tests and you are in kidney failure.”

“I don’t believe it,” she says. Her daughter begins to cry.

“It’s all right, Trace,” says her mum. “You’re okay, you’ve got two kidneys, haven’t you? It’s just another word on my long list – kidneys.”

Meanwhile, they will now admit her and begin treating and rehydrating her. “That’s good,” she says. “I know I’m always in good hands when I come here.”
The great proclaimer

George Megalogenis has made it his mission to help Australians understand their country.

BY GAY ALCORN

He would be embarrassed to be so described, but George Megalogenis is one of the country’s leading intellectuals. Academic Dennis Altman has called him “arguably the most important Australian political commentator of his generation.”

Megalogenis (BCom 1984) is a rare journalist in a time of frenetic, hyped-up, click-bait media. He has chosen to slow down, leaving The Australian newspaper four years ago to concentrate on thoughtful, big picture books.

They are ambitious books about Australia’s biggest challenges, yet he has the knack of being able to travel through mountains of data and find the threads in our political, economic and social history.

“We meet at a coffee shop – he orders two strong Americanos and then shows me the latest book, Australia’s Second Chance, published late last year, and his Quarterly Essay, Balancing Act, published in March.

Megalogenis is everywhere at the moment. He’s about to do a Wheeler Centre talk on the Mornington Peninsula. The following week he will deliver the annual Manning Clark history lecture. He’s at festivals and on panels, and last year his lanky frame walked us through a three-part ABC documentary, Making Australia Great: Inside our biggest Boom.

His Quarterly Essay argues that “the debate we have to have is on the role of government in our economy.” Both major political parties, he says, cling defensively to the open market economy when it is “exhausted” and unable to deal with the challenges of the 21st century, especially education, physical infrastructure and the environment.

“The default setting of politics in the 21st century — to trust in the market — has proven to be bad economics, even for Australia,” he writes. “It has left us with gridlocked cities, growing inequality and a corporate sector that feels no obligation to pay tax.”

The essay was written before the July 2 federal election. Megalogenis says now that he always believed that counter-intuitively, it might be a conservative government that would find it easier to shift the role of government, just as it was paradoxically easier for Labor to deregulate and open up the economy in the 1980s. That hope seems dashed for now, with politics becoming more focused than ever on the short term.

“I’m not arguing for more intervention,” he says. “I’m arguing for a much more intelligent, evidence-based involvement for government when the market can’t do the job.”

The Coalition had a poor result in this election, barely scraping back to power after a single term in office. Citizens again displayed their disenchantment with established politics by directing a record percentage of votes to independent and minor parties.

“The major parties are still looking at the result as some sort of Australian version of Brexit or the Trump phenomenon, which is a protest vote. I still don’t think it’s a protest vote. It’s a very active message to both sides of politics that until you’re prepared to meet us, not halfway, but meet us on our terms, with a more active government, I’m not prepared to give you loyalty!”

Megalogenis, 52, is the son of Greek immigrants. His father, a poor fisherman, arrived in 1950 from the Greek island of Ithaca. His mother arrived in 1962 after the Greek civil war. He remembers that when he joined the parliamentary press gallery in Canberra in the late 1980s, there were only two darker-skinned journalists he can recall – himself and Indigenous journalist Stan Grant.

“Poor old Stan kept getting mistaken for a Greek,” he laughs. It wasn’t until his 20s and 30s that he started to feel and understand his Greek background.

It seems an obvious thing to say that Megalogenis’s background must be related to his deep interest in Australia’s immigration story. If Balancing Act is about how Australia needs to respond to the challenges of this century, Second Chance is about how we got here, and that is a remarkable story of immigration.

We have flourished economically and socially when we have been an open, welcoming country, he argues. We have suffered when we have become scared and turned inward.

Megalogenis wants Australia to realise how special it is at this moment in its history. We are unique among developed nations with our quarter of a century of uninterrupted economic growth. “No other economy has had a comparable winning streak to ours, and at a time of global instability,” he writes. Yet, we are still afraid, worried our luck will fail.

“We have been here before. Spurred by the huge numbers of people arriving for the Gold Rush, Australia officially became the world’s richest nation in 1852, and the centre of this prosperity was Melbourne. The city was, he writes, the world’s first middle-class economy, its population rising by more than 70 per cent in the 1880s, with a staggering sense of optimism and opportunity. That was a time when the population was split almost half the people were born locally and half were born abroad.

“I’m talking about a much more diverse and confident culture and a country that can look after itself.”

All that changed. The boom was followed by a bust, and Australia turned towards, fearful of foreign competition and invasion, mistrustful especially of Chinese immigration. That would lead to the White Australia policy, which was, among all else, a disaster for the economy.

We opened up again after the immigration experiment after World War II, the largest wave of migration since the Gold Rush. Yet it wasn’t until the 1970s that Australia rid itself of the last vestiges of the White Australia policy. Today, the biggest sources of immigrants are the century’s rising nations, China and India.

It is a different world, but there are obvious parallels with today’s tensions.

Again, we are a population where about half of us were either born overseas, or are the children of immigrants. Australia has been suspicious of Chinese arrivals, and the Irish, and the post-war ‘wogs’ and Jews, then the Vietnamese, and now Muslims. Throughout our history the fears and suspicions have been similar.

“This is the second time in our history we’ve been in this position,” says Megalogenis. “The last time we were there we did some things that got us into a lot of trouble … The instincts now are not dissimilar to what they were in the 1880s.”

“When Australians are sitting on a pile of cash, whether it’s been distributed equitably or not, when we are relative to the rest of the world Number 1 or close to it, we get greedy and we get fearful and I think that the only way to hold on to this thing is to not let anyone else in. We don’t want to share it. We almost forget, and it’s a generational thing.”

He says the election threw up all the old paradoxes. One Nation’s Pauline Hanson is back, with her policies of stopping Muslims from migrating to Australia. Yet academic Anne Aly became the first Muslim woman elected to the Federal Parliament, winning in a marginal Perth electorate. “That tension is alive today between the open and the closed,” he says.

The world has changed. Students now comprise the biggest movement of people globally in the past 15 years. They arrive here to study, and many stay. They are middle-class educated, and like us are choosing Australia in great numbers compared with other countries.

He wonders about the differences between their experience and that of his generation. While new arrivals after the war took up ‘cultural reference points’ such as football to fit in and become Australian, today’s arrivals can read and watch anything around the world, following their home countries’ cultural and political life with ease.

“The challenge for the culture is to include the new arrival quicker than we were included because that migrant is more mobile,” he says.

“But once they’ve made that choice, we should be able to convert enough of them to create a great country. Great sounds a paradox, but I’m talking about a much more diverse and confident culture and a country that can look after itself.”

The son of Greek settlers, George Megalogenis has a deep interest in Australia’s immigration story. PICTURE: DARRIAN TRAYNOR
We just got on with doing things,” November 2014, so it was a good time for...
There are thousands of research stories at the University. Jaclyn Pearson’s is just one.

Dr Pearson swapped rock and roll for microbiology. She was an accomplished drummer touring with the ARIA-nominated rock band Lash when she decided she needed to return to her other love — science.

“I felt brain dead,” she says of her frenzied rock and roll years. “I just thought, ‘I have to do something different’.”

For her doctorate, Pearson (GCALL 2013, PhD 2014) conducted groundbreaking research into *E. coli* and other gut bacteria that cause diarrhoeal disease. Her PhD revealed exactly how the bacteria use specialised proteins to prevent our gut cells from alerting our body’s immune system to infection.

“We found biochemical mechanisms which have never been described before in nature,” she says.

Pearson’s work, which won the 2014 Premier’s Award for Health and Medical Research Council’s Peter Doherty Early Career Fellowship and now works as a postdoctoral researcher at the Doherty Institute.

She says the collegial nature of the Doherty allows her to work more closely with other scientists fighting infectious diseases.

“We have a great bunch of people who work on viruses and the immune system here, which is also very useful for us in case we’re interested in what bacteria and viruses do when you put them in a system together.”

The study of microorganisms may not sound as glamorous as drumming for a rock band. But Pearson says she is fascinated by how something “so small could have such a huge impact in the world”.

Pearson knows the organisms she studies cause disease in millions of people. “It should be something that we can fix,” she says.

“People have been working on these bacteria for over a hundred years. And we’re still figuring out exactly how they’re causing disease and exactly how we can treat them.”
HOT ON THE TRAIL

Hundreds of University staff and students are engaged in critical climate change research. Some operate in far-flung locations, others are much closer to home.

BY TIM THWAITES (BSc(Hons) 1974, Trinity College, Janet Clarke Hall)

F or a legion of researchers, the search for clues as to how our climate is warming can be as much about hard toil as hard science. And doing it in some of the most remote and inhospitable places on Earth.

For Dr Michael-Shawn Fletcher it has meant trekking into the Tasmanian wilderness in winter – as he did last year – to drill into the bed of a pristine lake, after first cutting through a 20-centimetre crust of ice.

Over the past 15 years, Fletcher (BEd(Sci) 1997, PGDipArts 2000, PhD 2009), has been extracting sediment cores – with the diameter of a jar and up to 10 metres long – from lake beds all over the Southern Hemisphere: in Chile, New Zealand, south-western Victoria, the south coast of NSW and, recently, Litchfield National Park near Darwin.

Many of his sites are so remote that his floating platform and drilling equipment have to be dropped in by helicopter. For his Tasmanian research, Fletcher, from the University’s School of Geography and Resource Management, was operating in Ben Lomond National Park near Darwin.

Why do it? “Lakes are receptacles of atmospheric information through time,” he explains. “It can be in the form of dust, pollen, or charcoal, or even the products of surface chemical reactions that are absorbed into the plants and animals living in the lake. Eventually all of these settle into the sediments at the bottom.”

His sediment cores provide clues to what has happened over time. The deeper one drills, the further back one goes. Pollen, for instance, tells you what plant species were around; dust contains the minerals that were present and tells you about the erosion they were subject to, and charcoal can show the frequency and extent of fire across time and space. All are indicators of past climate.

Already, Fletcher has found an astonishing correlation between the occurrence of fires and climate variation across the entire hemisphere, going back tens of thousands of years.

Earlier this year, he and student Michaela Mariani published a paper that should assist in predicting high-risk fire seasons in Tasmania. It linked the drying of western Tasmania and the subsequent increased frequency of bushfires over the past 1000 years with the southward movement of the westerly winds known as the Roaring Forties.

The recent depletion of the ozone layer in the stratosphere, or stratosphere, has previously been shown to be a driver of this process. It correlates closely with an increased frequency of fires in the past 50 years. Fletcher believes this is evidence of human-induced climate change at work.

He is one of hundreds of academic staff, post-doctoral fellows and graduate students at the University of Melbourne studying aspects of what many regard as the world’s most significant challenge.

They span a broad range of disciplines from physics and chemistry to zoology and botany, engineering and the medical sciences in economics, law and politics, as well as many interdisciplinary teams. Their work ranges from the highly theoretical, such as constructing numerical models from basic physics, to the eminently practical, such as studying how best to plant “green” roofs and wall gardens. Some of what they find is being used to guide the University itself.

“Universities are communities with similar populations to towns and large businesses, facing many of the same challenges of climate change mitigation and adaptation,” says David Karoly, Professor of Atmospheric Science in the School of Earth Sciences. “They can provide a test-bed for how to successfully transform into a 21st century, climate-adapted, sustainable community.”

Professor Karoly has been documenting and championing action on climate change for more than 30 years. But there is still much work to do. Although the existence of human-induced climate change is as well documented scientifically as almost any phenomenon, he says, we are still unclear as to how it will all work out in detail, particularly at a regional and local level.

And we also need to know how best to respond to it practically.

“For instance, one important thing is to understand extreme weather and climate events and the link to human-induced climate change. You can already do this, but only for some events, on some occasions.”

That’s why a major activity of his research group involves using an international citizen science program, Weather@home ANZ, to develop ways of understanding the connections between climate change and such events as floods, cyclones and heat waves. The problem is CONTINUED PAGE 18
The solution is to run hundreds of thousands of simulations of different conditions using regional and global climate models on the home computers of volunteers. And the result is a growing number of papers showing, for example, that the present devastating coral bleaching event on the Great Barrier Reef has been made 177 times more likely by climate change. And, if we do not act, within a couple of decades such events could occur every two years.

Apart from leading his own research group, Professor Karoly encourages research in interdisciplinary groups and activities across the University. Last year, for instance, he and his colleagues were instrumental in the publication of *Appetite for Change*, a report on the practical impact of climate change on food production in Australia, together with a cookbook, *Planet to Plate*.

It all goes back to why he became interested in the subject in the first place. A city boy, he grew up with a love of outdoor activity – bushwalking, rock-climbing, skiing. This engagement continued at university, where he studied maths and physics. “On one trip, I stood and watched clouds forming as the wind blew over a ridge. I realised that this was just fluid dynamics at work,” he says. “So, that’s what I chose to do, because it was something meaningful to the average person in the street. I could explain it to my mother, the non-scientist in my family.”

If Karoly and other researchers need evidence that things can change, they can draw on a recent example. Successful international action has raised ozone levels in the stratosphere – helping to heal the Antarctic ozone hole – verification of which was announced in late June.

This result has been attributed to the Montreal Protocol, signed in 1987, under which countries agreed to significantly reduce emissions of compounds containing chlorine and bromine, used as refrigerants and in aerosol sprays. And that’s where Dr Robyn Schofield, of the School of Earth Sciences, comes in. She originally trained in quantum chemistry, “but I knew that I wanted to do something applied, something that would make a difference some day”. That opportunity presented itself when she made a trip to a relatively remote New Zealand observing station in the central South Island, one of five worldwide that measures the “clean” background composition of the upper atmosphere.

“I saw how I could use what I had learned. And I haven’t looked back,” she says. Dr Schofield now specialises in measuring the levels of different altitudes of reactive chemicals and aerosols, typically greenhouse gases other than CO2, such as ozone.

She does this by studying the variations in the absorption of sunlight, particularly its ultraviolet component, as its path through the atmosphere changes while the sun is setting. This research has taken her all over the world, including Antarctica – and it has producing practical results. She is now part of a team developing AIR-BOX, a custom-built laboratory that fits into a shipping container to carry out comprehensive atmospheric monitoring and take measurements in difficult places, such as near the Great Barrier Reef.

Its deployment would be another small step in a massive interdisciplinary effort.
NICOLE CAR
OPERA SINGER
(BMusPerf 2007)

She’s being compared to Joan Sutherland and her voice has been described as “full-bodied and honeyed”. Soprano Nicole Car debuted at London’s Covent Garden last year and received immediate acclaim. One critic referred to her “show-stealing” performance. Car started winning awards soon after graduating from the Melbourne Conservatorium of Music and becoming a regular with Opera Australia. Her most recent role with OA was Fiordiligi in Mozart’s Cosi Fan Tutte.

CAREER HIGHLIGHTS
Car says her debuts in different opera houses have been serious highlights. “Walking onto the Sydney Opera House stage for the first time to sing Micaëla in Carmen, my European debut at Deutsche Oper Berlin in Eugene Onegin, and performing both roles at the Royal Opera House Covent Garden are all treasured memories for me.”

CAREER AND INFLUENCES
“My teacher Anna Connolly (Senior Lecturer in Voice at the Melbourne Conservatorium of Music) has always been a great influence. She encouraged a young singer with raw potential to become the performer and person that I am today. I have worked with many wonderful coaches around the world, but she still knows my voice better than anyone else.”

WHAT BEING A SINGER MEANS TO ME
Apart from a demanding calendar of events in the opera world, Car is also sought out for concert appearances and classical music recordings. She believes if you can imagine yourself doing any other job you should pursue that instead. “It’s hard work and there will be many knockbacks and challenges along the way. However, the moment I step onto the stage and know that I have the chance to move people in the audience, that makes it all worthwhile.”

A UNIVERSITY MEMORY
“In my final year, I was a soloist in Mahler’s Des Knaben Wunderhorn with the VCA orchestra at the Melbourne Town Hall. It was my first opportunity to sing with an orchestra and I absolutely loved it.”

STEPHANIE LAKE
CHOREOGRAPHER
(BFA (Dance) 1999)

An award-winning dancer and choreographer, Stephanie Lake has her own company and is also commissioned by other leading ensembles, including the Sydney Dance Company. Her career has taken her on numerous international tours with companies such as Chunky Move. She recently returned from far north Queensland, where she premiered a new work with the Dancenorth company.

CAREER HIGHLIGHTS
“Recently one of my works toured to Paris to the amazing Théâtre National de Chaillot, one of the most prestigious dance venues in the world. That was a pinch-yourself moment ... But honestly it’s the little moments in the studio, little triumphs you have when you’re making or performing a work.”

CAREER AND INFLUENCES
Lake singles out choreographers Lucy Guerin and Gideon Obarzanek, former director of Chunky Move, as major influences. “I’m also really influenced by my peers. I’ve collaborated in theatre, film and television and with visual artists, and I work a lot with my partner Robin Fox who’s a composer and audio-visual artist.”

WHAT BEING A DANCER AND CHOREOGRAPHER MEANS TO ME
“It’s so bound up in my whole identity, it’s really hard to separate it. I see everything through the lens of movement. It’s my passion and also my anxiety and the thing that keeps me up at night.”

A UNIVERSITY MEMORY
“They three years were very intense, and it was a lot of really, really hard work but I look back on it fondly. In second year we had a visiting choreographer called Phillip Adams (DipArts (Dance) 1988) who established his company BalletLab the year I was graduating and that was my first job. He’d just come back from New York and he brought something we hadn’t experienced before – an exciting physically. It was really rough and incredibly fast. I had a lot of energy for it then! That was the kickstart of my career.”
ADAM ELLIOT
ANIMATOR
(GDipFT 1996)

Adam Elliot rocketed to global fame when his short film Harvie Krumpet, narrated by another Australian Oscar winner, Geoffrey Rush, won an Academy Award in 2004. It was the culmination of years working on clay animation projects. While still at the VCA, Elliot completed Uncle, and a professional debut work, Cousin, soon followed. After his Oscar success, he went on to make a feature film, Mary and Max, in 2009. His obsession with storytelling, he says, continues to shape films such as the recent short Ernie Biscuit. “I’m certainly not an experimental filmmaker, I’m pretty old-fashioned, I tell pretty basic narratives.”

CAREER HIGHLIGHTS
“I remember the very first time I screened one of my films at the St Kilda Film Festival opening night. Just that buzz of hearing people laugh at what you’ve created. Any award opens doors and the Academy Award certainly did. I got to make Mary and Max, which opened the Sundance Film Festival.”

CAREER AND INFLUENCES
A self-confessed ‘lost soul’ before his time at the VCA, he was selling hand-painted T-shirts at art and craft markets. Choosing an animation course, he knew he had to study hard. “But it really transformed me. I discovered animation was an amalgamation of all the things I loved — making things, telling stories, entertaining large audiences.”

WHAT BEING AN ANIMATOR MEANS TO ME
“You can reach so many people with a film whereas with a sculpture or a painting it’s more limited. I get letters from people who’ve seen my films in Iran and Argentina and Iceland, so it’s very validating when you hear from people who have been moved or enlightened or inspired.”

A UNIVERSITY MEMORY
Elliot recalls the day the highly respected director and producer Fred Schepisi paid a visit. “We were all in awe of him. When someone so well-known takes the time to come to film school you realise it is a generational thing.” Elliot is also keen to support emerging talent. “So that’s why I go back (to school) and talk as well, because you never know who’s sitting in the audience and might make a fabulous film.”

ANNA SAMSON
ACTOR
(BDrama 2011)

Anna Samson’s youth belies the breadth of stage roles she has mastered since graduating from the VCA five years ago. Having performed with Australia’s major theatre companies and appeared in plays by Brendan Cowell and Joanna Murray-Smith (BAHons 1985) among others, she co-starred recently with Colin Friels in a Melbourne Theatre Company production of David Hare’s Skylight.

CAREER HIGHLIGHTS
“For me the highlight of Skylight is the quality of the writing I got to work with,” she says. “I made dear friendships and gained some surprising recognition for Birdland at Melbourne Theatre Company. I’ve always adored working for the MTC, and Red Stitch, too — an important little theatre and a piece of the puzzle that is my career. And, of course, there was the time I was in a film and met my now fiancé.”

CAREER AND INFLUENCES
Influences are “a patchwork of people, places and things” for Anna: “Teachers who inspired me, friends whose work and way of viewing the world surprises me. Artists, performances and people that try to be brave, to do something different or something pure. My friend Olga, my first drama teacher, the Schaubühne theatre company, my dad, Winnie the Pooh, my talented mates, Ralph Fiennes…”

WHAT BEING AN ACTOR MEANS TO ME
“Acting is the one area of storytelling I felt was most gifted in,” she says. “I’ve always found the theatre to be a place of great freedom and magic. I’m still finding myself in the world and that can be scary; finding yourself onstage always felt a little more comfortable. I think being able to go out under some lights and find the way another human thinks, somehow filtering it all through your own truth, is magic.”

A UNIVERSITY MEMORY
“My friend Tom Hobbs (BDrama 2012), a classmate, created what can only be described as a miracle of performance — he became the personification of Vegemite. It had to be seen to be believed.”
Reaping seeds of discontent

A chance botanical encounter reveals what the explorers knew long ago: that Australia’s Indigenous people had been cultivating crops well before the first Europeans arrived.

The accepted history of Australia is so pervasive, and laded so thoroughly with warm platitudes of self-congratulation, that the image of the Australian as a good-natured knockabout humourist has been achieved so quickly and so thoroughly with warm platitudes of self-congratulation, that the

I began to question everything, especially those things Australians claimed to know about Australia.

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The image of the hat full of seed, too, was an unhappy family of arthritic brolgas. Our mission had been to find a rare bankia and our success had been achieved so quickly we were faced with the prospect of returning before we’d even popped the plugs on our battered vacuum flasks.

We stood there surveying the scene of our triumph in doleful exhilaration. We were boffins mostly, so the emotion came as easily to us as our woeful choice of hat.

One of the gayblades swept his cap across the tops of the grass. Held received his cap during a Bi-Lo grocery chain promotion; he’d received his cap during a Bi-Lo grocery chain promotion.

We were stranded on a heathland west of Shipwreck Creek like an unhappy family of arthritic brolgas. Our mission had been to find a rare bankia and our success had been achieved so quickly we were faced with the prospect of returning before we’d even popped the plugs on our battered vacuum flasks.

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It takes two

Dr Stephen Cutter (BVSc(Hons) 1995) founded The Ark animal hospital in Darwin in 2006, the only veterinary clinic in the area that treats wildlife and domestic animals. Over the past 16 years, Stephen has also established canine health programs in more than 100 Indigenous communities.

Dr Ella Richardson (BSc, 2012, DVM 2015) moved to Darwin this year to work with Stephen. They spoke to Erin Munro (BA 2006).

The day an owner brought a freshwater crocodile into the clinic. We also get lots of pythons, lots of reptiles and bird species that are native to the Northern Territory. It’s very different to the wildlife I had seen in Victoria. I had wanted to be a vet since I was a little kid. Coming through the veterinary course at Melbourne I found that I also loved problem solving, so it was more than just a love for animals.

My partner and I both decided that we’d like to move to a different area, and we both wanted to move up north for a while. Last year I came up here with Liz Tudor (BVSc(Hons) 1973), a professor at the uni, and did de-sexings in Arnhem Land. I absolutely loved it and found a passion for public health.

Stephen does all the work with the bush trips and the dog de-sexings out in Aboriginal communities, so when I saw an advertisement for a job at The Ark I made an application.

I started work here in January. We are a small-animal clinic so we don’t work with any large animals like cattle or horses. There are a lot of dogs, and then obviously all the wildlife that comes into the clinic through Ark Aid, which is the spin-off wildlife charity that The Ark runs. As a vet student you don’t get a lot of opportunities to work with wildlife, the course is focused on domestic animals, so it’s been great to get the opportunity to treat wildlife. It’s different when you’ve got a wild animal. You have to consider how we go about rehabilitation.

One time a pelican came in from the Territory Wildlife Park. Stephen was out on a bush trip so it was down to me to treat this bird, which had been grabbed and injured by a freshwater crocodile in one of the billabongs.

Stephen goes out on a lot of bush trips, so he’s in and out of the clinic a lot, but he’s great. As soon as he walks through the door he’s happy to give him time and I never feel as though I’m annoying him. He’s got a wealth of experience, especially with wildlife, so you can always rely on Stephen if you’ve got something tricky.

I’ve been out on one trip with him so far. I’d love to go out more, but given that I’ve just started, I need to be in the clinic and learning on the job. The clinic is always very busy. There’s always something to do, and something new to learn every day.

We treat over 1000 wildlife cases a year, and a lot of exotic pets... We treat a lot of snakes, goannas and crocodiles.”

Stephen grew up in Alice Springs where there’s lots of wildlife and we had lots of pets. I spent most of my childhood denying that I was going to be a vet, even though most people told me, ‘Oh, you must want to be a vet’. But it turns out I did want to be one.

On the application for Melbourne University, you had to write why you wanted to become a vet. One of my reasons was I wanted to de-sex dogs in the Aboriginal communities. I already had that passion. I’d grown up in an Aboriginal community, so I knew how important dogs were to the people, and I’d seen how badly a lot of people outside of the community treated them.

I’ve been living here full time since December ’96, but for three or four years before that I commuted back and forth between the top end and Victoria. I spend about four months a year travelling, but it’s scattered through the year in one-to-two week blocks. My practice area covers the north-western corner of Australia. I go to the Pilbara and the Kimberleys as well as down into the Central Desert. I’ve done de-sexings at the base of Uluru and in the Kimberleys.

We see a lot of exotic animals. We treat over 1000 wildlife cases a year, and a lot of exotic pets. It’s more reptiles and birds than mammals; we treat a lot of snakes, goannas and crocodiles. We also have a dedicated sea turtle facility – we treat about six or seven sea turtles a year that come in for a variety of reasons, like being hit by a boat.

I’m naturally quite a cautious person so I tend to always think about safety first. Most of the hair-raising and risky experiences I’ve had have come from being persuaded by various people to do something.

In Aboriginal communities people go out into swamps and places like that to collect food. I’ve certainly been in crocodile habitats with people who know it, and it’s their country, but there has been a risk. I haven’t had any close calls that I know of, but there’s always the potential.

Ella’s great. She came here for a variety of reasons, but one of her motivations was to get involved with the dog programs in the community. She’s picked things up very quickly; she’s a conscientious worker and is very caring and compassionate about wanting to learn and to do the right thing. She has a general interest in a lot of the things I’m interested in, like exotic animals and dog programs, so we’re a good team.
Even the French are awed by Ted Gott's deep knowledge of their art and culture.

By Andrew Stephens
(BFineArt 1994, PGDipArts (ArtHist&ClinSt) 2001)

Ted Gott stands before an Edgar Degas oil painting. It is of a cotton dealer's office in New Orleans, which Degas and his brothers visited in the 1870s when their uncle worked there. It seems, at first, like an odd favourite for Gott: there are no radiant ballet dancers, no vibrant colours, no story. But the owner of the painting is the story of the present tense. He makes art relevant – and this painting's central subject is “work”, something with which Gott is familiar.

Many people moving around him during their visit to Degas: A New Vision try to eavesdrop as he talks, for it's evident to them that the man with extraordinary knowledge about Degas but an entrancing way of delivering it, has learned a lot from his French. “I was alone in Paris and it was hard – a lot of it was on microfilm. I had no choice, “ he says. “At first I was trying to understand that arts and artists have driven your life,” M. Lecourtier told him. “Furthermore, you also embrace the French culture and the French language in its entirety. We just need to hear you talking about France and your next trip to France – to feel the deep emotional attachment, not to say love, which animates you. “

These trips helped enormously with his French. “I was alone in Paris and I had no choice,” he says. “At first I was really terrible, but then you get your confidence. I was spending my days in the Bibliothèque Nationale and other libraries just reading French newspapers. I had no choice, “ he says. “I was in the right place at the right time and been enabled to travel and study to my heart's content,” he says. “What a great joy to do for a living something that you love, and work with what a lot of people associate with recreation – visiting museums. I do it for a living. There is no work-life balance because there is no division.”

The University of Melbourne's Learning Partnership with the Melbourne Winter Masterpieces at NGV allows alumni and friends to discover treasures of the art world. Visit alumni.unimelb.edu.au to keep up to date with special offers...

Painting by numbers • This year's Degas exhibition was the 13th Melbourne Winter Masterpieces staged by the NGV.

The biggest attendance so far was for The Impressionists: Masterpieces from the Musée d'Orsay, which drew 380,234 visitors in 2004.

More than 2.8 million visitors attended the first 13 exhibitions.
The world depends on the internet, that tangle of interconnected wires and cables girdling the Earth and penetrating ever deeper into the fabric of our lives. But it is also a jungle.

1. For years now we have heard about cyber criminal attacks on individuals, banks, companies and nations. Just how concerned should we be about the security threats we face on the internet?

I think a lot does not get reported. Companies don’t always want to advertise an attack, especially not banks. They generally have very good cyber security, and support customers who have suffered credit card loss through cyber fraud. Australia does not have a very big cyber security industry but the banks do quite a bit. I don’t know what banks report on losses from cyber crime but we know its impact in Australia is huge; globally many billions of dollars.

Governments are reticent, too. The Australian Government has never reported a large hack. The US Department of Defense has reported being broken into and military equipment designs stolen. US investment in cyber security is quite large; about 28 times more per capita – about 400 times greater as a nation-spend – than the $250 million over four years that Australia invests. The US is a prime target, but so is Australia. Attacks are not only for money. There is potentially strategic value in a country hacking into the systems of another and I think they all do it. I think there have been attacks on Australian Government systems, but we don’t hear about them.

2. Where initially there was a limit of 4 billion internet addresses, now the number is almost infinite to handle the rising demand of the Internet of Things (which connects everyday items and devices, such as home appliances, to a network). Is it growing too fast for us to keep secure?

Developers of IoT devices may not necessarily think about security. Their device might have a vulnerability but it takes time for security to catch up. That’s a worry, too. With IoT, billions more things are connected to the internet, which means there is some kind of an attack vector. It may not really matter if your IoT connected refrigerator fails to order more milk, but think about critical sensors in transport networks and medical devices, such as pacemakers or glucose monitors for diabetics. If a technical glitch or a cyber ransom demand interfered with those it could be pretty bad.

3. Could a “black hat” state stun the economy of another nation or group of nations – deprive people of water, food or energy – by attacking such a network?

I definitely think they can. The stock market is very much connected to the internet with significant high frequency trading, which relies on having a machine close to the exchange so that with low latency you can make small trades very quickly and make money. But an attack on the computer system of a stock exchange could hurt a national economy. Affecting a special machine running SWIFT’s software that is supposed to be separate from other machines in the bank, but some banks are less rigorous than others. Earlier this year Bangladesh’s central bank SWIFT system was hacked because their SWIFT machine was being used for other functions. A large amount of money was lost.

In Ukraine last year a power station was hacked, turning off power to a huge number of homes and businesses. In Germany a furnace in a steel mill was badly damaged by a cyber attack. It’s not just about turning things off or on. If there is a control system that is in some way connected to the internet or connected to another thing connected to the internet, damage can be done. It might be connected to a computer where an email attachment is opened, or a thumb drive connection from which a worm or a virus is inserted to override the control system and make a process or machine go outside its design limitations. Even for critical infrastructure, where you would expect to see close oversight, there could be vulnerability because of the IoT.

4. So what about the suburban grandmother with an iPad who does her internet banking, swaps emails and makes FaceTime calls to her friends and relatives? You hear of all sorts of scams preying on people like her. How big is that?

Phishing – as it is called – and other social engineering exploits are among the most serious issues in cyber security, for individuals and companies. Companies put their employees through security awareness training; how to spot phishing emails and other scams. Phishing can be a power station, even without disrupting production for very long, could affect industries and consumers.

The international banking industry has a system called SWIFT (Society for Worldwide Interbank Financial Telecommunication) used to identify banks in money transfers. Banks have a general – fake letters from banks, fake offers of prizes and other come-ons – but it also can appear to come from, say, a company manager and be aimed at an individual whose identity has been obtained from a social network or other internet source. The email might ask for information or have an attachment that carries malware, say a keystroke logger by which the criminal can obtain passwords and key information. Be cautious. Mose over the link and see if it is genuine. Think about content; don’t accept what looks like a bank letterhead.

5. So it’s a constant battle between the good guys and the criminals. Who is winning?

It is easy to over hype, but the threat is very real, hard problems. Defence is difficult because of the asymmetry between attackers and defenders. The attacker needs only to find one way in, one door to break down, but the attacked must defend everything. As long as there is an economic or political incentive for criminals or a country to attack a system, they will. The IoT is only going to make the problem bigger. Self-driving cars will make it bigger. Everything becoming digital and systems becoming more connected to increase productivity – and the kinds of insights you get from data – means it is easy to break into a system, jump between systems and make lateral movements. Services such as Gmail have very good spam filters that don’t just look at content, but sources. They have a big view of the internet and can gather a lot of intelligence. But it’s an arms race and that makes it a wicked problem.
On the road less travelled

Jemma Xu
(BE, BCom 2012)

Jemma Xu was travelling in Europe when she was struck by a compelling idea. After a whirlwind of old palaces and glamorous tourist traps that left her a “bit bored”, Xu was pleased to visit an old friend in Krakow, where she was introduced to local life in Poland.

“I had the best time when I had local friends who took me around,” she says. “It was nothing special. Nothing that looked any different to what a normal Polish person would do.”

And then she had that thought: what if there was a platform where one could find local experiences everywhere one travelled?

It would be a few years before her idea came to fruition. After graduating from the University, Xu started on a “traditional path” through the banking sector. She worked for three years at Macquarie Group.

Her business idea, however, kept bobbing up when she travelled. She took three weeks of annual leave to volunteer in rural China, where she stayed at a school and “did everything a local person would do”.

“It got to a point in my career where I felt if I didn’t leave banking I’d be there forever,” says Xu, who knew that the further she advanced in her career, the more difficult it would be to pass up the high salary and security such a lifestyle afforded.

In 2014, Xu founded Tripalocal, an online platform that connects Chinese travellers to local experiences in Australia and New Zealand. She and her co-founders moved into a start-up incubator based in Sydney, where they spent months developing a plan.

It was a steep learning curve for Xu, a crash course in entrepreneurship. She says the idea for Tripalocal evolved to a business that focused exclusively on the Chinese market, particularly “education tourism”.

By May 2015, the company had secured $850,000 in angel funding.

Since then, Tripalocal has maintained a Melbourne presence and opened an office in Beijing, where Xu now spends most of her time. She travels to universities and schools in smaller cities outside of the saturated Beijing and Shanghai markets.

She says students at Chinese schools and universities are particularly interested in travelling to English-speaking countries with the prospect of eventually enrolling in a full-time degree course. Tripalocal helps plan tours – for larger organisations or individuals – that include university visits.

“Education is the most important thing for Chinese families,” Xu says. “They want to look at schools, they want to speak to teachers, get an experience of what it is like to study in Australia, in New Zealand, in the US, in the UK.”

Lawyer opts for class action

Grant Anderson
(BCom(Hons) 1987, LLB(Hons) 1988)

Grant Anderson had worked for decades as a corporate lawyer when he left his high-paying career for a decidedly less lucrative one – teaching.

“There were some who wondered what on earth I was doing,” he says, with a laugh. “Because the salary cut is quite significant.”

He had spent the previous 27 years, 18 as partner, at the legal firm Allens in Melbourne. He was 50 and knew if he wanted a change, he would have to start soon.

“I wanted to have a second career,” he says. “I didn't want to leave it for too much longer because there's obviously training you have to do and I wanted to work for perhaps another 15 or 20 years.”

One of the things Anderson had enjoyed most about his work in the law was mentoring and interacting with younger lawyers. “I had it in the back of my mind for a while that teaching was probably the sort of career that would suit me,” he says, “because of the communication of information and interaction you have with younger people who are starting off in their career.”

Anderson left Allens in November to pursue a Master of Teaching at the Graduate School of Education, a three-year program that involves a large measure of practical experience in classrooms. In February, Anderson started work at Victoria University Secondary College in St Albans, teaching legal studies, economics and business management to years 10, 11 and 12. It was no easy feat, even for a man with years of experience in the field.

“I've stood up in front of lawyers and clients. But I was nervous,” he says of his first day back at school. “I'd never been in front of a classroom of teenagers. Having three teenagers myself, I knew there'd be a few challenges in there.”

Anderson says he has had to learn the art of keeping kids interested in the material.

“You have to grab their attention from the first minute. If you don't make your lesson interesting within those first couple of minutes, then they're going to just lose interest. And once they've lost interest it's very hard to get it back,” he says.

Anderson says the transition from lawyer to teacher is not necessarily a stretch. Both professions try to make difficult information easy to understand. “There's a lot of an art to identifying what's relevant, packaging it up and explaining it to clients and particularly non-lawyers,” he says.

And though he worked longer hours as a lawyer, Anderson has found that teaching can be just as tiring.

“Kids just see teachers in the classroom, but that's the tip of the iceberg,” he says. “There's a huge amount of preparation and thought, along with administration.”
A word to the wise

ANYA ADAIR
(LLB 2008, DML 2008, BA(Hons) 2009, MA 2012)

anya Adair has always loved languages, even as a child in Ballarat, when she used to spend recess in a teacher’s office learning Latin. “That’s the kind of student I was. I must have been insufferable,” she says.

Adair thought she might be a lawyer, but it was at Melbourne that she fell hard for Anglo-Saxon Studies and the languages of that era, particularly Old English.

After interviewing for several firms, Adair knew she needed to think outside the legal profession.

“It just occurred to me that it wasn’t what I loved,” she says of the corporate offices she visited. “That maybe there was something that I loved more.”

Adair went on to complete a Master’s degree in Old English Literature at Melbourne. Studying a language, she says, means an Arts degree can be both practical and theoretical. She also enjoyed learning about a historical culture through its words.

In 2011, she left Melbourne to pursue a PhD at Yale University, where she was writing a dissertation on medieval statute law. She wants to know how old legal codes were recorded and used outside the courtroom.

The work involves intense scrutiny of old English texts, a meticulous study of history through words, something that gives Adair enormous satisfaction.

“The first thing they ask is why? It seems so specialised and so particular a set of things to be working on.”

“Some of them are very highly and beautifully decorated,” she says of the old legal manuscripts. “It fascinates me to ask not just how they were composed from a more literal perspective, but also who was reading them and why it mattered so much to own one of these collections.”

While at Yale, Adair also founded the Digital Manuscript Studies Working Group, an interdisciplinary workshop that helps participants learn how to archive digital versions of old manuscripts. Nowadays, Adair can speak French, German, Russian and Japanese, and she can read and understand Latin, Spanish, Old English, Old Norse and Old French. It’s an impressive list, but her favourite language is English.

Adair is currently researching legal manuscripts at the British Library. She and a colleague also teach ‘The History of the English Language’ at Yale, where they discuss the diversities and dialects of English through time – a subject that gives Adair a chance to discuss the Aboriginal Australian English varieties of her home country.

Adair says she has met people who are puzzled by her fascination with a defunct language and culture. “‘Why?’ It seems so specialised and so particular a set of things to be working on. But I think that you can’t go forward without the humanities,” she says.

KATE STANTON
AWARDS, HONOURS & ACHIEVEMENTS

AWARDS

Associate Professor Kevin Tolhurst AVF (DipFor 1973; BFA 1976, 1979; BSc 1985) was presented with the prestigious Ember Award from the International Organisation of Windland Fire for his work on the Phoenix RapidFire bushfire modelling project. The Phoenix RapidFire software has been used to successfully predict the path of dangerous bushfires such as those that occurred in New South Wales in January.

APPOINTMENTS

Professor Kate Aly (BA(Hons) 1977, LLB 1979) is the ACT’s new Commissioner for Sustainability and the Environment. Professor Aly previously held the same position in Victoria before leaving to become a Vice-Chancellor’s Fellow at the University of Melbourne.

The Faculty of Architecture, Building and Planning announced a new Dean in July. Professor Julie Bishop (LLB, BArch 1989, B(Hons) 1992, PhD 1997) will replace Professor Darryl Grew (BArch 1969, March 1972, PhD 1983) who will become an Adjunct Dean since July. In nearly 40 years of work, Professor Bishop has served in numerous senior roles – most recently as Pro Vice-Chancellor (Research & Research Capability). She will commence her role as Dean in November.

Heather Campbell (BE(Hons) 1988, MEngSc(EnvEng) 1995), International Director, General Manager of Health, Safety and Environment at CSRIO, is the newly appointed Chair of Sustainability Victoria.

Dr James Hunt (BS(Hons) 1999, PhD 2006) was awarded the 2015 James Grains Research and Development Corporation Southern Region Seed of Light award for his contribution to communicating the outcomes of grains research. Dr Hunt’s pioneering research into water use efficiency, time of sowing and stubble management has changed many growers’ practices.

Neurosurgeon trainer Dr Ruth Mitchell (BSc 1981, MB BS 1986) was presented with the Australian Medical Association’s Doctor in Training Award in the 2016 Year in Award in recognition of her work to address bullying and sexual harassment in the medical profession. Dr Mitchell is completing a PhD at the University of Melbourne and is a neurosurgery registrar at the Royal Melbourne Hospital. She is also Chair of the Royal Australasian College of Surgeons Trainees’ Association.

The University of Melbourne’s Dr Richard McInnes (BCom 2004, BA(Hons) 2005, PhD 2010) has been awarded the 2016 Max Crawford Medal by the Australian Academy of the Humanities. The medal is presented to early-career Australian researchers for outstanding scholarly achievement in the humanities, and to whose publications make an exceptional contribution to the understanding of humanities disciplines, in the general public. Dr McInnes has been internationally recognised for his research exploring how scholars can share information about lost plays in England from 1570 to 1642. This year he is leading Shakespeare 400 Melbourne, a series of events marking the 400th anniversary of the playwright’s death.

More than 60 University of Melbourne alumni, staff and friends were recognised in the 2016 Queen’s Birthday Honours. For a full list visit bit.ly/2HH472U.

ARTS

Soprano Shauntai Gunnersen was selected as one of the inaugural group of Melbourne alumni, staff and friends to be appointed to the Board of the University of Melbourne. She will join the University’s Board with a focus on providing advice to staff and students on students’ experience of University life.

ARTS

The 2016 Australian Institute of Architects Gold Medal was awarded to the Victorian Opera’s production of Donizetti’s Lucia di Lammermoor. The award was presented to Howard Raggatt (BArch 1970) and the late Stephen Ashton (BArch 1977, Ormond College) of architecture practice Ashton Ashton McGettigan (AAM). ARMs projects can be found across Australia and include the Perth Arena and the National Museum of Australia in Canberra. They shared the honour with Ian McDougall, the third founding director of ARM.

A documentary by filmmaker Aidan Prewett (GDIFTV 2008, MFTV 2010) has been picked up by US distributors. A film for the End of the World, which looks at the dangers of audience manipulation and leadership, was Mr Prewett’s first full-length feature.

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Opera singer Shakra Isidore (BMus 2015) made her professional debut when she starred in Victorian Opera’s production of Donizetti’s Lucia di Lammermoor. She made her Majesty’s Theatre, Melbourne in April. She took on the role of Alisa in the production just months after graduating from the University of Melbourne’s School of Drama.

On Stalin’s Island, the new book by Professor Sheila Fitzpatrick (BA(Hons) 2004) and John Cochrane looks at the team of people surrounding the former Russian dictator.

SPORT

Two Melbourne alumni won Rowing medals at the 2016 Olympics. Olympic Champion Kim Brennan (Blacksburg 2012) and Jessica Regan Lamble (Blacksburg 2012) were among the inaugural group of Melbourne alumni, staff and friends to be appointed to the Board of the University of Melbourne. She will join the University’s Board with a focus on providing advice to staff and students on students’ experience of University life.
we were drinking a nice bottle of wine when the idea came to us. My brother Peter (B Agr, B Com 2007) and I were reflecting on how good the wine industry is at reserving the highest-quality grapes for making the best wines and at telling the story behind the labels. In the wine industry, provenance matters.

Our Dad has always grown top-quality oats on our farm, winning several awards during his 55 years on the land. The more we thought about it, we wanted to embrace the example of wine by taking something from our farm to complete the journey from paddock to plate.

We couldn’t name one brand of rolled oats that was single origin, supplied directly from an Australian farm. So, the concept was born: we would sell traditional rolled oats, quick oats, groats and steel-cut oats, all from our family farm at Natte Yallock, north-central Victoria.

As the idea firmed, we chose the name ‘Dad’s Oats’ as a tribute to family farming, to our Dad and Mum – Maurice and Ruth – and to the generations who have tirelessly worked the land before us.

We revealed the brand name to our parents after we had packaged the first batch. They were surprised and delighted. Even if the idea didn’t go anywhere, and we struggled to sell even a packet, we would still enjoy eating Dad’s Oats for breakfast.

Five-generation family farm is in the foothills of the Pyrenees, about 100 kilometres north-west of Ballarat. There are no shops or pubs nearby, just a sports reserve and a primary school.

But life was never boring growing up at Natte Yallock. On school holidays we’d help Dad with the cropping, the sheep or just general farm work. Ours was the biggest backyard you could imagine, with endless places to explore and trees to climb.

When we told Dad about our idea of selling branded rolled oats from the 800-hectare farm he was a little apprehensive. Although he understood the difference in quality, he was concerned we wouldn’t be able to compete with cheap oats in the supermarket.

Mum and Dad always encouraged us to follow our ideas and have been very supportive. This time was no different. Although they had some initial reservations, I think they were excited by our enthusiasm and energy.

We started selling oats late last year at farmers’ markets in Melbourne. Since then, we have expanded to supply a number of cafes around the city, and have launched an online store and a subscription-based service. It’s early days, but we have been encouraged and excited by the market feedback.

Dad’s faith in the concept was boosted when he came to one of our markets, in Daylesford. It was a busy day and we were a little short of staff, so he was thrown into the role of explaining to customers where the oats were from, how they were grown and processed.

On that day, he realised just how important food provenance is to many people. Not everyone is focused on simply buying the cheapest food they can find in the supermarket. There’s another group of consumers that cares about quality and embraces the single-origin concept.

Our brother Matthew (B Agr 2003) now operates the farm, with the experience and the wise counsel of Dad close at hand. He has also enjoyed talking directly to customers who appreciate the quality of the grain, the hard work that goes into ensuring the best produce, and the best-practice farming techniques we employ. And then there’s the care that goes into maintaining the sustainability of that precious land at Natte Yallock.
CULTURAL COLLISIONS
GRAINGER | GRIFFINS
6 – 23 October 2016

The University of Melbourne presents Cultural Collisions, a campus-wide program, inspired by Percy Grainger, Walter Burley Griffin and Marion Mahony Griffin. Featuring some of the University of Melbourne’s most iconic historical sites, and state-of-the-art technologies. Alternately weird and wondrous, inventive and awe-inspiring, it’s a program that could never be repeated elsewhere.

Presented in association with the Melbourne Festival.

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