



# A WHALE OF A TIME

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## REFUGEES

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## SECURING SECURITY

Staff rely on the University's security systems to work without fault. We expect building doors to always unlock and lock at the right times and access cards to work seamlessly. Those of us who have complex components of the security system in our buildings want to know that Security will arrive if we activate our silent panic alarms, and that intruder alarms will detect unlawful movements. So what happens when things go wrong?

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## YOUNG PEOPLE'S HEALTH

In much of the world where threats to child survival or ageing populations place increasing pressures on health systems, the health of young people from 10 to 24 years is often overlooked in national policies and social support services. This neglect of an age group, assumed to be in the best of health, has serious implications for future population health.

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### ACADEMIC WINS WORLD CHALLENGE

Associate Professor Cather Simpson's (School of Chemical Sciences) spin-out company Engender Technologies has won the Agtech category in Microsoft's World Cup Tech Challenge held at Microsoft's Mountain View campus in Silicon Valley recently. Engender Technologies was the only NZ company in these awards. Cather, who is the Director of the Photon Factory at the University, has developed an entirely new high-tech laser-assisted process to sort bovine sperm into male and female.



### FAREWELL TASMAN DUO

School of Music students Lauren Bennett (violin) and Bradley Wood (piano), winners of the 2015 Pettman ROSL (Royal Over-Seas League) Chamber Music Scholarship will present a farewell concert on the eve of their departure to the United Kingdom. The duo was chosen as the winner from 11 different ensembles nominated by New Zealand's top music schools. The programme includes Gareth Farr's new work **Unforeseen Evolutions**, commissioned specially for the European tour. 11 July, 7.30-9.30pm, Music Theatre, School of Music, Free admission.



### INTERIOR | EXTERIOR

See the exhibition of photographs at Old Government House from the University's Art Collection. The selection depicts interior scenes exploring iterations of domesticated life. Images of architectural shapes, still life and glassware are presented through the work of Bill Culbert and John Daley. The exterior images focus primarily on naturally occurring phenomena and their relationship to human nature. Artists such as Richard Orjis, Catherine Opie and John Johns encapsulate the spontaneous beauty outside.



### UNDISCIPLINING DANCE SYMPOSIUM

Choreographic Research Aotearoa in association with the University's Dance Studies Programme is bringing together artists and researchers in the fields of dance, choreography, performance, visual arts, spatial design and architecture, to imagine divergent futures and ways of effecting change and movement. This unprecedented gathering of international artists, rethinks disciplinarity, the role of the body and live art in today's diverse cultural and political climate. 30 June 2016 - 02 July 2016.  
visit <http://undiscipliningdance.co.nz/>



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COVER PHOTO: "Whalers off Twofold Bay", New South Wales 1867, bought by the Art Gallery of New South Wales in 1901.

Official image for the Winter Lectures

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## ENGAGING WITH REFUGEES

**Our Equity Office – Te Ara Tautika is leading a pilot programme engaging with secondary schools who have a high number of students from refugee backgrounds (SRB).**

Around 50 SRB and their families from James Cook High School and Kelston Girls' College have participated in the programmes, which include campus tours, presentations and Q&A sessions. The students' countries of origin include Iran, Iraq, Syria, Afghanistan, Ethiopia and Democratic Republic of the Congo.

While on campus in May, Kelston Girls' College students heard insights and advice from two University of Auckland students who are from refugee backgrounds. Fatima Mohammadi is in her third year of a conjoint BA/LLB studying politics, ancient history and laws. She told the audience that the transition from high school to university can be "challenging", and she advised the students to "attend class, ask for help, and don't be afraid". She also emphasised the importance of keeping up with friends and joining clubs to meet new people.

In contrast, Adorate Mizero, a third year BA student from Burundi, admitted she found the move from high school to university easy, describing how much she enjoyed choosing her own courses. But she agreed that busy study timetables can make it harder to maintain friendships.

Director of Student Equity, Dr Terry O'Neill,

says the value that comes from supporting people from refugee backgrounds can be seen not just at the University but in society as a whole. "Our University community is amazingly diverse and our staff and students from refugee backgrounds add to this richness, contributing to our society, and to our future economic success and prosperity."

Feedback from both schools has been positive, with one James Cook High School careers adviser saying "The chance to visit the University is huge: you can't have the experience by looking at a website or reading a prospectus. Visiting the campus takes away the fear factor."

The Alumni Relations and Development Office is working with the Scholarships Office to establish new SRB scholarships. To date, the University's refugee appeal has raised over \$50,000 from nearly 400 donors. This work is in addition to the establishment of the new University of Auckland Academic Potential Scholarships, which support students who have achieved academically, but are experiencing hardships that potentially limit their opportunities or who may have been disadvantaged due to their personal circumstances.

[www.equity.auckland.ac.nz/ssrb](http://www.equity.auckland.ac.nz/ssrb)

*Kelston Girls' College parents and students from refugee backgrounds visited the University.*



## A WHALE OF A TIME

**Pacific nations have declared 2016 the "Pacific Year of the Whale." In a nod to this the University's Winter Lectures, beginning on 19 July, will examine Whales: The past, present and future.**

Speakers including Dr Ryan Tucker Jones from our History Department, Dr Rochelle Constantine from Biological Sciences & Institute

of Marine Science, Sir Geoffrey Palmer, former Prime Minister, on New Zealand and International Whaling Commissioner and Professor C. Scott Baker (Biological Sciences, University of Auckland & Oregon State University, USA)

They will look at points of conflict and convergence in cetacean and human histories, the ways humans have used whales as devices of profit and imagination, the exciting new trends in scientific understandings of whales, and the future of both our species.

"New Zealand has a long history with whales," say organisers Dr Rochelle Constantine (left) and Dr Ryan Tucker (right). "Whalers played a crucial role in our colonial history and we had a thriving whaling industry for many years until stocks were decimated. Today, whales have taken on new importance for Māori and Pakeha New Zealanders as cultural symbols and generators of tourist revenue. We think there is an excellent opportunity for an interdisciplinary consideration of the extraordinary, difficult, bloody, and political relationship between humans and



whales throughout New Zealand's history and looking into its future."

**A six-lecture series**

**Every Tuesday 19 July – 23 August**

**1-2pm, Lecture Theatre B10, Building 109**

**(General Library)**

**[www.winterlectures.ac.nz](http://www.winterlectures.ac.nz)**

*Pics Ryan and Rochelle*





## TELL ME A STORY

Staff and alumni from Elam School of Fine Arts are currently exhibiting in Shanghai as part of a show entitled *Tell Me a Story: Locality and Narrative*.

Held at the Rockbund Art Museum, *Tell Me a Story* draws on artists who through re-investigating the history, culture and heritage of different locations in Asia, explore and construct narratives relating to the effects of globalisation on local communities.

Elam Senior Lecturer Jim Speers, alongside alumni Zixuan Guo, Tu Neill, Clinton Watkins and Shanghai artist Li Xiaofei, are all members of "Field Recordings", whose Shanghai Rivers project for *Tell Me a Story* is the first research they've undertaken together, producing a five channel artwork called "Let the Water Flow".

Filmed over the winter of 2015, the work follows the Suzhou and Huangpu rivers as they run through the city and out to the Yangtze, providing a view into the lives of the people who work to transport the city's building materials.

These, often migrant, workers lead lives that run parallel to the cities other inhabitants and the stories they tell reflect their sense of being separate and a part of another culture. If it's common to consider China as one large country, then the conversations that occur in "Let the Water Flow" suggest many much smaller and quite distinctive cultures. The exhibition runs until mid-August.



## BEYOND HOBBITON

Angel funds, sustainable farming and fishing, obesity, homelessness and... Hobbits. Thirteen MBA students from Claremont Graduate University were given an eclectic, broad spectrum view of the challenges facing a small, distant export-driven economy when they spent a week in New Zealand on their 'Global Immersion' course.

The students were hosted by the Business School 29 May-3 June. Their itinerary, crafted by Darilyn Kane in Executive Education, included visits to Moana NZ, Waikato District Health Board, innovation cauldron the Icehouse, a Raglan-based business developing lake and river-cleaning technology - and, of course, Waikato's own Shire.

Expat Kiwi and alumna Professor Jenny Darroch, who teaches marketing at the Californian university's Drucker School of Management, led the visit. She jokes by the end, half the group had declared they were immigrating.

New Zealand business culture struck them as friendly and non-hierarchical, and they were impressed by the influence of Māori culture. After hearing Associate Professor Chellie Spiller explain her work on "wayfinding leadership" and the sustainability principle of kaitiakitanga (stewardship), one student now plans to apply the wayfinding leadership concept to American environmental policy in a research project.

A student with 25 years' experience working in non-profit housing in the US believes New Zealand should explore this housing option. Several students worked in healthcare, and all were keenly interested in our public health system and approach to obesity.

One night, University of Auckland MBA students joined the visitors for a robust debate on capitalism vs socialism. "Both groups shared a deep belief in the need for people to have a roof over their head, food on the table, and access to healthcare," says Professor Darroch. "The difference is that the non-profit sector in the US provides a lot of social services, whereas in New Zealand the government does."

Drucker School of Management runs the Global Immersion Course every year. This is the first time they've come to New Zealand.



## ARTICLE OF THE DECADE

Professor of Management Kevin Lowe in the Graduate School of Management and the Fletcher Building Education Trust Chair in Leadership has won the article of the decade award from the *Journal of International Business Studies*. Kevin co-authored "A Quarter Century of Culture's Consequences: A review of empirical research incorporating Hofstede's cultural values framework."

## QUIT SMOKING

Two research studies aimed at the goal of reduced smoking among New Zealanders to five percent or less by 2025, will go ahead at the University of Auckland this year.

A unique head to head trial that will compare the effective use of two quit smoking aids, Cytisine and Varenicline, will involve more than 2000 Māori participants from the Lakes District Health Board region.

The second study is smaller with 262 participants from the Auckland region who suffer from a lung condition called Chronic Obstructive Pulmonary Disease or COPD.

The research projects were funded for a total of just under \$2.8 million by the Health Research Council NZ (HRC) and are led by Associate Professor Natalie Walker from the University's National Institute of Health Innovation.

"The Cytisine study focuses on Māori because the rate of smoking is so high in this group and so they potentially have the most to gain from help to quit," says Dr Walker.

## DRINK COFFEE

A team of scientists from four countries led by Dr Nicholas Gant from the University has discovered that rapid eye movements slow down when we are fatigued.

"These results are important because our eyes must move quickly to capture new information," he says. "But there's hope for coffee drinkers because this visual impairment can be prevented by consuming caffeine."

In the study, cyclists exercised in a laboratory at the University of Auckland for three hours, after which their brain's control of the visual system was tested using specialised eye-tracking cameras. "It's remarkable that tiring the legs also slows the eyes," says Dr Gant. "This might well be the reason the tired cyclist never saw that bus coming!" An imbalance in neurochemicals caused by strenuous exercise appears to spread across the brain's control systems. But just a modest dose of caffeine can restore chemical balance, helping signals from the brain reach the eyes.

# SECURING OUR FUTURE SECURITY



## Staff rely on the University's security systems to work without fault.

We expect building doors to always unlock and lock at the right times and access cards to work seamlessly. Those of us who have complex components of the security system in our buildings want to know that Security will arrive if we activate our silent panic alarms, and that intruder alarms will detect unlawful movements.

Recently, one of the University's legacy access servers, called Forcefield, malfunctioned. This meant Security became blind and couldn't see if anyone required help.

"The first thing we knew about it was when we saw a critical alarm on the Forcefield system on our computers," says Security Services Coordinator Sophia Risino, who sprang into action.

Forcefield's failure had the potential to be a huge deal. But fortunately Property Services had already identified that the old system was overloaded and needed to be replaced. It had begun investing heavily in migrating Forcefield to Gallagher, a state of the art security system designed and manufactured by the Hamilton-based company. When Forcefield went down, 15 buildings on the City Campus had already been switched over to Gallagher, easing the pressure on the older system.

"If this hadn't happened the available options would have been significantly different and would have severely interrupted business," explains Sophia.

Instead, after a rigorous discussion among the Campus Operations Team and Chubb Security, it was decided that the buildings

operating on the failed server should be reconfigured onto the remaining operational Forcefield server. "Within two and a half hours full communication with all buildings was restored," says Phil Kirkham, Campus Operations Manager, Property Services.

Adds Emmett Mackle, Associate Director Facilities, Property Services: "If we hadn't solved the problem it would have been huge for staff and students and would have reflected badly on the University's reputation. As it was the resulting impact on the University was minimal and we kept both systems operating."

The University has one of the biggest

security systems in the Southern Hemisphere. Maintaining and managing this to meet the institution's growth is a tightly orchestrated process which began in 1992 when our first computerised security system called Ares was set up.

By 2004 we had moved to the more advanced Forcefield system. But then by October 2011 the number of buildings and doors was quickly approaching Forcefield's maximum capacity; its architecture was outdated and it wasn't scalable. After a rigorous selection process led by Property Services, a recommendation to implement Gallagher was endorsed by the University's executive.

"The new system operates on a virtual server and can keep expanding its capacity as our campuses grow," explains Sophia.

Gallagher also has the potential to integrate with other systems and provide more efficient provisioning of access through better management tools. That coupled with a dedicated team, ensures the University interests are kept safe and when the unexpected occurs the Security Team have the technical prowess to problem solve without major interruption.

"To keep abreast of our changing environment and ensure our facilities and people are safe hundreds of guards would be required if we didn't have the technical security systems of today," says Phil.



Members of the security team from left: Yaseen Sheik, Federico Weber, Phil Kirkham, Emmett Mackle, Sophia Risino, Fiona Murray



# MY STORY

## STAFF QUESTIONS AND ANSWERS



### JIM METSON

Professor Jim Metson became our new Deputy Vice-Chancellor (Research) in January this year. Jim has a BSc (Hons) in Chemistry and a PhD in Chemistry from Victoria University of Wellington. He did his postdoctoral studies at the University of Western Ontario, London Canada and joined the University of Auckland staff in 1986. He has since served as Deputy Dean of the Faculty of Science and Head of the School of Chemical Sciences. He also served two and half years as Chief Science Adviser to the Ministry of Business, Innovation and Employment and currently chairs the Science Advisory Committee for the Australian Synchrotron. His research speciality is in surface and materials science.

Jim's partner is Professor of Chemical and Materials Engineering, Margaret Hyland. She is Deputy Dean in the University's Faculty of Engineering and is also the director of the National Science Challenge "Science for Technological Innovation".

#### WHERE DID YOU GROW UP AND WHAT DID YOU LOVE DOING AS A CHILD?

I grew up on the fringes of Lower Hutt in Stokes Valley. I was one of three children and I went to the St Bernard's College in central Lower Hutt. My now 101 year old father was a soil scientist in the DSIR Soil Bureau.

As children we were relatively free to roam. It was a very classic Kiwi background. There was

huge opportunity to get into the bush, chop down trees, make huts, dam creeks and fish for koura.

I played rugby and tennis at school and was (only just) in St Bernard's First XV playing either prop or hooker. Yes I'm still interested in rugby now and I'm a frustrated Hurricanes fan (chuckles). Loyalties to Wellington run deep.

#### WHAT DID YOU ENJOY LEARNING ABOUT AS A CHILD?

What I certainly remember is the closeness of the Stokes Valley community. It was a new community in terms of the expansion of the Hutt Valley at that time and it was very close knit. I remember the way we all functioned together. For example when we built our garage everybody turned up. As was the way at that time, the women provided the sustenance and the men built the garage. That has had an impact on me ... the ability to draw people together to work on a common purpose. It's increasingly the way the research is working. As we address bigger questions, the need to work across disciplines and draw on a wider range of skills becomes critical. We still need our leaders out front but they need to be able to draw in a range of skills and resources.

#### WHAT WAS YOUR FIRST JOB?

In the holidays, as a student, I had jobs at Gear Freezing works in Petone and the motor assembly companies that were then based in the Hutt Valley. I remember the jobs intimately.

There were opportunities at the freezing works to see an industry already undergoing major change and to try and make the place run a bit better.

One summer I worked at Todd Motors [which assembled car parts imported from US-based brands such as Chrysler and Rootes]. I spent a lot of my time painting black steel wheels to make them look like aluminium wheels. Todd Motors was moving to Porirua at the time and so I also got involved in a bit of project management, helping with the move.

In those days the money I earned in the holidays was enough to pay the rent on the flat in Aro Valley and get myself through university.

#### WHO WAS YOUR BEST TEACHER?

The teacher who probably had the most influence on me was a particularly gifted maths teacher in fifth form who took a pretty mixed class and convinced us we were all gifted mathematicians. We all aced School Cert maths and I am sure it shaped our later ideas of the possible.

#### IN JUST ONE SENTENCE DESCRIBE THE PURPOSE OF YOUR PRESENT POSITION?

To champion the development of research across the whole University.

#### WHAT DO YOU LOVE MOST ABOUT THE JOB?

This job doesn't have any natural boundaries which makes it a landscape of opportunity. Discovering the range of work across the University is truly inspiring. We are a big comprehensive university and a lot of things are within our reach.

There's a real challenge in deciding how to best support the interests of the country and of the University. The New Zealand environment is difficult; we tend to be defensive about the capacity of our small country and it certainly limits our budgets, but it shouldn't limit our ambitions. We need creative and inventive thinking and we need to build on our international connections to address big questions with researchers across the globe.

#### DO YOU BELIEVE WHAT YOU DO CHANGES LIVES?

It's an arrogant question in some ways as I am really in the position of helping others to change lives. If you see some of the achievements of our staff, which were nationally recognised last year, we clearly are able to achieve this. The opportunities to provide that assistance is what really gets me up in the morning in this job.

## DID YOU KNOW

### WHAT HAVE YOU ACHIEVED THAT YOU ARE VERY PLEASED ABOUT?

Changing New Zealand's view of major infrastructure through my involvement with the Australian Synchrotron. [This a football-sized large machine that accelerates electrons to almost the speed of light and generates intense beams of x-rays used for research in things like drug discovery, materials science and increasingly in medical imaging and likely eventually therapy.]

I was originally the Government's representative on the National Science Advisory Committee which established the Australian Synchrotron. We had an old drive-in-movie site to work with across the road from Monash University and that became the synchrotron site. Getting it across the line as a New Zealand Inc. investment was particularly satisfying. Along with the help that this gave to research groups across the country, including my own, it became a financial and logical model for how NZ could get involved in international research facilities.

Yes you could say it is a scaling up of my early experience building the garage [in Stokes Valley] with a rather more healthy view of gender equity.

### WHAT DO YOU ENJOY DOING WHEN YOU ARE NOT WORKING?

Life is full but I have life outside of here. I still love building things including furniture, gardening, cooking with the family on Sunday nights. NZ is wonderful - you can still go out and chop wood and get rid of your frustrations.

Yes I talk work with Margaret at home. It's unavoidable. We argue and occasionally agree.

... that the University's student association has been going 125 years.

The 24th of June 2016 marked 125 years since the Auckland University College Students' Association (AUCSA, now AUSA) was established. On that day in 1891, 27 students and graduates met in the library "amid growing concerns over a lack of 'college spirit'" according to the Minute book covering 1891-1902. At the closing of the meeting it was stated that "much time was wasted" due to the enthusiasm of the students who attended.

One of the first aims of the AUCSA was to obtain a space for students. This was initially in Old Parliament House and then in 1926, the students moved into purpose-built common rooms attached to the Arts Building, now The ClockTower.

Men and women had their own separate common rooms. The women enjoyed most of the same benefits as the men, although they were not permitted to smoke. The Professorial Board reaffirmed this ruling twice in 1931 and 1933, but after two years of debate the ban was lifted in April 1936.

Throughout its history, AUSA has been a strong advocate for all students and has supported political activism, especially in the 1960s and 70s. The photograph to the right shows students gathered in the Quad to take part in a forum discussing racism.

If you want to learn more about AUSA history go the Auckland University Students' Association records kept in the General Library's Special Collections. This provides researchers with a wide range of primary sources covering the



association's history from 1891-1983.

*Special Collections' next display marks the formation of the New Zealand Labour Party on 7 July 1916 and will highlight their extensive holdings of Auckland-focused NZLP material.*

## WHAT'S ON CAMPUS

### DEAN'S LECTURE SERIES

6 July 2016, 1st lecture in the series  
Venue Room 401.439, Engineering Building  
The first speaker is Auckland alumna Karen Willcox, Professor of Aeronautics and Astronautics and co-Director of the Center for Computational Engineering at the Massachusetts Institute of Technology. She will speak about "Digital technologies in education: A catalyst for higher education". She will describe some of her recent work looking at the impacts of online learning on the higher education community from an institutional strategy perspective at MIT and from a broader nationwide policy perspective.

### SOUNDHOME

15 July, 5-10pm. Five performances, 9 at each  
Venue: Studio One, Kenneth Myers Centre  
74 Shortland Street. Booking essential.  
Cost: \$15/\$20 Book tickets at Eventbrite  
SoundDome comprises the sonic artwork of Dr John Coulter and special guests including New Zealand-born composer David Downes. The SoundDome 8m in diameter and 5m high, is fitted with state of the art audio technology, and 25 Genelec loudspeakers. It is designed specifically as an instrument for composing with three-dimensional space and as a relocatable venue for the presentation of innovative sound-based music.

### SUMMER RESEARCH

21 July, 6-8pm  
Venue: Engineering Lecture Theatre 401  
Host: Creative Arts and Industries  
Free: No registration required.  
Join eight of our students as they share their experiences as Summer Research Scholars. Covering topics from medium density housing to Latin Jazz and the realities of Greek dance practice during political unrest, the scholars will give three-minute speeches offering insights into their findings and how the summer research programme prepared them for their postgraduate studies. Drinks and nibbles will follow.





### CARBON TAX COULD LOWER EMISSIONS AND GST

A new, powerful way of modelling the economics of carbon pricing has been developed by University of Auckland doctoral researcher Sina Mashinchi in collaboration with experts at Cambridge University. It shows how a carbon tax targeting emissions-intensive industries along with a revamped ETS could boost economic growth, with the extra tax generated used to cut GST from 15 percent to 12.5 percent.

"I wanted to show that we could move closer to our Kyoto emission targets and have good economic growth," says Sina.

A signatory to the Kyoto Protocol, New Zealand is committed to cutting greenhouse gas emissions by five percent below 1990 levels by 2020, and by half by mid-century. But in 2013, our emissions were up 21 percent from 1990 levels.

Currently, the Emissions Trading Scheme (ETS) is the main economic tool in place here to lower carbon emissions. Industries start with a set number of carbon credits, and when they use them up through generating greenhouse gases, they have to buy more. This is meant to encourage practices that will lower emissions.

Critics have pointed out that the ETS is hamstrung by its soft application. The government gives freebies and two-for-one deals to many industrial emitters. And even though agriculture is responsible for half of New Zealand's emissions it's entirely exempt from the

scheme (true across the world).

It's widely recognised that the price of carbon credits, currently sitting around \$17 per tonne, is too low to change behaviour. But the new modelling shows that even if the price was gradually raised to \$300, we still wouldn't crack our 2050 target with the ETS alone.

Sina identifies another basic problem: the ETS is based on a weak and ill-fitting model. The model he helped develop is more sophisticated and finely tuned to real New Zealand experience. While the model used for the ETS used only one year of data, this new model draws on 45 years of economic, environmental and energy data from 1970 to 2014.

"It shows how New Zealand reacted to global events such as the oil shocks and the Great Financial Crisis," Sina says.

It also shows how New Zealanders responded to past policies, he says – not always as an economist might expect. The model that the ETS is based on assumes people act rationally, responding to policies and trends in predictable ways, "but people don't always act rationally".

Sina experimented with mixes of a beefed-up ETS and a carbon tax. He found if the price of carbon credits increased to \$75 right now, and rose by \$20 a year from now on, and a carbon tax for non-ETS sectors was introduced and set at the same levels, the government could use the extra tax take to lower GST by 2.5 percent to 12.5 percent.

According to the modelling, this would

stimulate the economy, encouraging investment in new technologies, energy efficiencies and public transport, which would create jobs. GDP was projected to rise by an average 2.2 percent per year from 2016-2015, while emissions fall by 14.2 percent from current levels in 2030.

"This still falls short of our target, but it's a lot better than rising emissions," says Sina.

Introducing a carbon tax is known as Environmental Tax Reform (ETR), something being tried in some form or another in places such as the UK, Germany, and Scandinavian countries.

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***According to the modelling, this would stimulate the economy, encouraging investment in new technologies, energy efficiencies and public transport, which would create jobs.***

"The idea behind ETR is very simple," says Sina, "it's about shifting tax from "good" things to "bad" things – from labour, income and investment to pollution and waste. This modelling shows it's possible to boost GDP and employment rate, and lower GST, through ETR in New Zealand."

Despite the challenges ahead, Sina is upbeat. "We can't blame our government over the ETS failing, because similar policies failed everywhere, and some countries haven't even started. We should be optimistic about the future. This modelling shows us one economically viable way forward."





# DIABETES AND OBESITY



**Dr Rinki Murphy writes about her research into the link between human gut microbiota and type 2 diabetes and obesity.**

I am an endocrinologist specialising in diabetes and obesity. I have a research background in studying genetics of people with rare forms of diabetes, and recently I have been studying the genetics of bacteria that inhabit our gut, which also relate to diabetes and obesity.

While distinct gut microbiota (microorganisms living in our gut) have been linked with many disorders (including obesity and type 2 diabetes), it is not clear whether this is a cause or an effect of these health conditions. Early life events such as mode of delivery, exposure to antibiotics, breastfeeding and diet are all known to shape the eventual adult gut microbiota. We have been analysing these and other factors such as ethnicity, exposure to pets, and maternal probiotic use, in relation to the types of gut microbiota found in New Zealand children whose mothers took part in a probiotic study examining its role in eczema prevention.

Probiotics are live microorganism which confer a health benefit. The effects of certain strains of probiotics in the prevention of diabetes are strongly encouraging, with reduction in the incidence of gestational diabetes among New Zealand women given the probiotic *Lactobacillus rhamnosus*, similar to another Finnish study which used a probiotic containing a combination of *L rhamnosus* and *Bifidobacterium lactis* BB12. It is uncertain whether the dose of probiotic and accompanying diet may be important in enhancing this effect.

We are beginning a feasibility study looking at the dose-response of the *L rhamnosus* probiotic given to overweight people with prediabetes

who are advised to practice intermittent fasting. We are hoping to recruit 44 overweight people with prediabetes from different NZ ethnic groups who are willing to reduce their dietary intake to <600kcal per day on 2 days of every week, and to take a daily supplement. The supplement will contain either a probiotic (*L rhamnosus* at 3 different dose-strengths) or a matching placebo. Data on adherence, acceptability, satiety, food diary, physical activity, body measurements, oral glucose tolerance test blood sampling, faecal sampling and MRI scans of the pancreas and liver will be collected at baseline and at 12 weeks.

Bariatric surgery is a very effective method of achieving durable weight loss and remission of type 2 diabetes in the majority of cases; however, the mechanism of action is not well known. We are studying the effects of two different types of surgery (sleeve gastrectomy vs Roux-en-Y gastric bypass) on gut microbiota. Preliminary analysis of the first 14 patients shows a dramatic difference in gut microbiota one year after both types of surgery, and some suggestion that remission of diabetes may be predicted by a specific pattern of gut microbiota at baseline. We are currently confirming these findings in a larger sample of patients who have received these two types of surgery.

We are planning to test whether the human gut microbiota is causally linked to overweight and type 2 diabetes by doing a faecal transplant experiment in which we hope to recruit 10 overweight patients with prediabetes or diet-controlled type 2 diabetes who are willing to receive a faecal transplant (through the colonic route) from a lean, healthy donor or a control participant, matched for body weight and diabetes. These participants will be studied carefully for any changes in their blood glucose, food intake, and gut microbiota over 3 months.

If you would like to learn more about these studies or are interested in participating, please email [R.Murphy@auckland.ac.nz](mailto:R.Murphy@auckland.ac.nz).

*Dr Rinki Murphy is a senior lecturer in the Department of Medicine, Faculty of Medical and Health Sciences and a principal investigator at the Maurice Wilkins centre.*

UNINEWS highlights some of the University research milestones that have hit the headlines in the past couple of months.

## FIGHT AGAINST CANCER

The *Weekend Herald* included a full page feature on Distinguished Professor Bill Denny (Co-Director of the Auckland Cancer Society Research Centre) and detailing progress on the fight against cancer and the New Zealand contribution to research.

## CHILD NUTRITION

An editorial opinion piece by Professor Boyd Swinburn (Global nutrition NIHI) on the high hopes for improving child nutrition at the World Health Assembly (WHO) despite backroom pressure from rich countries such as New Zealand to drive their commercial trade priorities ahead of public health appeared in the *New Zealand Herald* this week.

## SCIENCE TO BUSINESS

Innovations from the ABI Biomimetics Lab on the science to business ecosystem featuring Professor Iain Anderson on the StretchSense smart rubber that could change the way we control and charge modern devices and the many potential applications from measurement and user interface, to powering devices and much more. *BBC Business News* Video and text online

## ORLANDO KILLER

Dr Zain Ali (Islamic Studies Research Unit) wrote an opinion piece about how he believes Mateen, the Orlando mass killer, was not a typical second generation Muslim nor was he typical of any Afghani people he knows in New Zealand. *New Zealand Herald*. 15/06/2016

## REFUGEES

Associate Professor Louise Humpage (Sociology) writes an opinion piece about how refugees are an asset not a cost to this country and that the recent increase from accepting 750 to 1000 annually is "miserly". *New Zealand Herald*. 16/06/2016

## OMG TECH

Senior Lecturer Michelle Dickinson (Chemical & Materials) has founded OMG Tech to encourage younger students to consider a career in science and engineering. Science teaching at secondary level is getting funding and more attention as the Government focuses on getting more young people into the STEM subjects. *Herald on Sunday*

# FROM THE COLLECTION

## ART COLLECTION



More than just the combination of optics and chemistry, photographs bear witness to the moment that a human choice is made. In this case, the photographer who chose this moment to depict is art historian Gordon Brown (born 1931), who had studied painting at the School of Art, Canterbury College, in the 1950s and is now best-known as an art historian.

The woman in the image is artist Anne McCahon (née Hamblett) (1915-1993). Brown has captured her in motion, stepping across the hall in a Victorian villa. The open door and the draped curtain act as perfect recessionary diagonals to lead us to her figure. The title of the image tells us that Anne is framed in the doorway of her deceased mother-in-law's house, infusing the reading of the image with melancholy.

Ethel Beatrice McCahon (née Ferrier) (1888-1973) died at the age of 84 in July 1973. According to her will, the paintings in the house, many of which had been stored with Ethel and her husband John by their artist son Colin McCahon (1919-1987) and his wife, when they left Christchurch for Auckland in 1953, were to be gifted to the Hocken Library at the University of Otago. Colin McCahon's paintings had become more valuable as his stature as an artist had grown. Colin McCahon: A Survey Exhibition had toured nationally in 1972, the year after he left teaching at the Elam School of Fine Arts, but the premature death of his friend, poet and dramatist James K. Baxter at the age of 46 years in October 1972, had brought McCahon much sadness. Working on set designs for a memorial staging of Baxter's plays in Wellington in the early part of 1973, McCahon was also affected by the death of one of his greatest supporters, the poet and editor Charles Brasch (1909-1973), who died in Dunedin on 20 May that year. Commemorating

journeys from life into death, McCahon produced the monumental Walk series of paintings on unstretched hessian out at the Muriwai studio he had built in 1968.

Gordon Brown was in Geraldine in his official capacity, as well as offering support to his friends Colin and Anne McCahon. Brown was Curator of Pictures at the Hocken Library at this time, during a period of concerted art collecting led by Hocken Librarian Michael Hitchings (1924-2010) who was Hocken Librarian from 1965 until 1984. Hitchings collected art himself, and Toss Woollaston and Colin McCahon had their first joint exhibition at Hitchings' sister's gallery in Wellington in 1949. From the late 1960s until the 1980s Hitchings' wife Maureen was the director of Dawson's Gallery downstairs in Princes Street, Dunedin's first dealer gallery. Brown was deputed by Hitchings to travel to meet the McCahons at Cox Street, Geraldine, on 3 August 1973, a Friday, and together they made an inventory of the paintings bequeathed by Ethel McCahon to the Hocken Library.

Brown's monochrome photographs from the day are mostly unpeopled, but this one cleverly combines a forgotten artist with one of her own paintings. Shown hanging curiously low on the wallpapered wall, above the scratchings of a family pet wanting egress but below the light switch (perhaps so that it could be enjoyed better while seated proximately?), is Anne

## WHAT'S COMING OUT

### TAUIRA

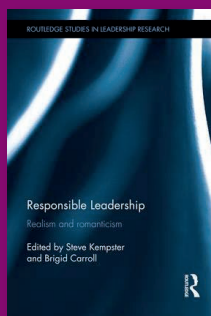


What was it like growing up in Māori rural communities in the mid-twentieth century? Voices from the past answer this question in the pages of this book.

In *Tauira*, acclaimed educator and anthropologist,

alumna and former staff member Dame Joan Metge introduces readers to Māori methods of teaching and learning that are rich in lessons for us all. Based on extensive interviews, this book offers a window on a mid-twentieth-century rural Māori world as described by those who grew up there. Metge shows that Māori ways of learning flourished alongside the school system – especially in rural Northland, the Bay of Plenty and on the East

Cape – and that those educational practices had a particular form and philosophy. Māori focused on learning by doing, teaching in context, learning in a group, memorising, and advancement when ready. Parents, grandparents and community leaders imparted cultural knowledge as well as practical skills to the younger generation through daily life and storytelling, in whānau and community activities. In preserving this evidence and these voices from the past, this important book also offers much inspiration for the future.



### RESPONSIBLE LEADERSHIP

This book, edited by Professor Steve Kempster from Lancaster University Management School and Associate Professor Brigid

Carroll from the Department of Management and International Business and the Leadership Institute at the University of Auckland, argues that it is time for a new understanding of leadership, a new romanticism which looks behind the overvalued, heroic leadership notion.

Combining the insights of leading academics and practitioners in the field, it is thought-provoking and engaging will challenge both thinking and practice, and will be of great value particularly for those who realise the overwhelming challenges of sustainability and corporate social responsibility the world faces. *Responsible Leadership: Realism and romanticism*, is in the Routledge Studies in Leadership Research series.

### MORAL JEOPARDY

Tobacco, alcohol and gambling corporations have been highly effective in stalling, diverting and blocking public health measures which

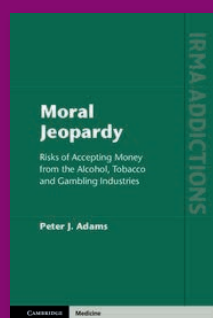


Hamblett's most celebrated subject, Poppies, painted in 1937 while she was still at art school. It is an oil painting of luscious Oriental poppies placed in the luminescent blue of a round pot, tilted up on a yellow cloth-covered table. None of this glorious colour can be enjoyed; the subject of this photograph is the artist, not her work. Just as the definition of the outline of her right shoulder is lost against the dark-stained architrave surrounding the bedroom door, so the left hand side of the painting of flowers in the scene has been cut off by the photographer's framing. An example of the photograph as document, the image shows us that Anne has left her painting behind.

This photograph is included in the exhibition Interior/Exterior, curated by ARTHIST 734 Art Writing and Curatorial Practice students Katie Skinner and Harriett Adams, which is on display at Old Government House from 21 June to 29 July.

**Linda Tyler**  
Director, Centre for Art Studies

*Gordon H. Brown (b.1931), Doorway, Geraldine, Home of the Late Mrs Ethel McCahon, 3 August 1973, ed. ¼, gelatin silver print, printed by Jenny Tomlin in 2004.*



have proved effective in reducing harm. This important and engaging book, by Professor Peter Adams in Social and Community Health, provides an original exposé of the ethical issues faced by people and organisations

when they accept industry money in ways that facilitate corporate influence with policy-makers.

It confronts ethical issues associated with conflicts of interest that affect what happens in governments, communities and universities, and develops a framework for action and intervention aimed at reducing conflicts of interest in science, public health and government policy.

## ACCOMMODATION AVAILABLE

**APARTMENTS FOR RENT.** Call us for your rental requirements; we offer city apartments furnished/unfurnished, all sizes and prices; great rental deals for long-term leases; call rentals (09) 303 0601 or (021) 246 6710 at City Sales or rentals@citysales.co.nz or log on to www.citysales.co.nz/rentals

**ST HELIERS BY THE BEACH.** Three bedroom + study fully furnished and equipped house for rent, available 1 September 2016 – 31 January 2017. Suit overseas sabbatical visitors. Quiet street only 5 minutes walk from St Heliers beach and shops/cafes. Easy access to schools, bus route, or 15-20 minutes drive/easy cycle to city. Rent \$850 per week includes lawnmowing. Contact: d. grinlinton@auckland.ac.nz, or ext 87230.

**THREE-BEDROOM FURNISHED HOUSE** in Birkdale on the north shore from the end of July 2016 to mid-January 2017. The house has a trampoline and some room to run around in privacy. Two University bus stops are 50m away. Comes with cat. Contact m.gunn@auckland.ac.nz

## PROPERTY FOR SALE

**CONSERVATION SHARE FOR SALE - \$85,000**  
Tired of city life? Then consider a share in a 423ha covenanted Brynderwyns bush property 10 mins from Mangawhai Heads. Sunny building site for bach or permanent home. Clean streams, walking tracks. Kiwi present so no dogs or cats. Keen conservationists preferred. Phone 09 376 4069; email marunui.share@gmail.com

**AT OCKHAM RESIDENTIAL** we believe Auckland is one of the most beautiful cities in the world and a wonderful place to live. Founded by alumni of the University of Auckland, Ockham is committed to ensuring urban regeneration in this beautiful city is world class. See our stunning new project in Grafton, Hypatia, at www.ockham.co.nz

## MISCELLANEOUS

**DO YOU ENJOY PHILOSOPHICAL CONVERSATIONS?** If so, you might like to come and spend some time with other people who enjoy discussions on interesting, important and sometimes controversial matters. The group meets about once every three weeks. The topic for each evening is set in advance. For more information or to arrange to come email wayne@brittennden.com

**CITY LEGAL SERVICES.** Rainey Collins Wright is a small law firm centrally located at L1 Princes Court, 2 Princes Street. We are near the University, with good parking. We can assist with

property transactions, trusts, wills, administration of estates, enduring powers of attorney and relationship property matters. Please phone our senior solicitor Nichola Christie on 600 0256 to discuss your needs, or email: nchristie@rainey.co.nz Visit www.rainey.co.nz

**NOTARIAL SERVICES:** I am a Notary Public with many years, experience and can notarise documents to be sent overseas and provide my Notarial Certificate. I am situated at the Ground Floor, Princes Court, 2 Princes Street, Auckland, next to the Pullman Hotel. Phone Stewart Germann on (09) 308 9925 to make an appointment or email secretary@germann.co.nz

**WANTED** Italian native with an interest in language teaching. For personal tutoring, in conversational skills, of a mature student with a background of 15 years study of Italian, but suboptimal speaking fluency. If you are interested, or may know someone who is, please text or phone 021 02454071.

**ACCOMMODATION WANTED:** Visiting scholar from the USA seeking family accommodations from September 2016 to June/July 2017. Priorities are access to good schools (our daughters are 15 and 9), public transportation and the University. We prefer a single location but are open to combining shorter term stays. Please contact Matt, zook@uky.edu



# YOUTH HEALTH

**In much of the world where threats to child survival or ageing populations place increasing pressures on health systems, the health of young people from 10 to 24 years is often overlooked in national policies and social support services. This neglect of an age group, assumed to be in the best of health, has serious implications for future population health.**

Recently, *The Lancet*, a premier medical journal, focused on the topic, bringing together major research projects and systematic reviews through a Commission involving over 50 scientists and many institutions across the globe. *The Lancet* invited commentaries for this massive initiative from the editors of the theme issue, as well as from Ban Ki-moon (UN Secretary General), Melinda Gates (Gates Foundation) and from the two writers of this opinion piece.

The unprecedented attention and call to action from *The Lancet* Commission resonates strongly with the broader agenda of the UN's Sustainable Development Goals. There are glaring inequities in the health of young people between and within countries.

At a global level, HIV/AIDS was the leading cause of death for 10-14 year olds (10.4 percent in 2013), with diarrhoea and intestinal infections, lower respiratory infections and malaria accounting for a further 21 percent of deaths in this age group. Many of these, especially diarrhoeal diseases, should be all but eliminated given available knowledge on disease prevention strategies. Yet large numbers of young women in some parts of the world are placed at risk of violence or abuse through essential daily activities such as going to the toilet or acquiring safe water to drink. Sexual violence and exploitation (suffered by about 150 million girls younger than 18 years in 2002) contributes to the

health burden from unsafe sex – which rose from 13th to second over the years from 1990 to 2013 among 15-19 year olds.

There is an urgent need for all nations to safeguard young women by eliminating risks of partner violence, promoting equal economic rights, ensuring access to schooling, and redressing laws that restrict their rights to divorce, to have custody of their children, or to own or control property.

For older adolescents and youth, road injuries were at the top of the list for disease burden, accounting for 14.2 percent of deaths in 15-19 year olds and 15.6 percent in 20-24 year olds. Most young road victims in low- and middle-income countries (where over 95 percent of road deaths occur) are pedestrians or motorcyclists. Not surprisingly, these vulnerable road users are far more likely to die as a result of crashes (compared with car occupants) or be unable to afford the out of pocket expenses required for longer-term rehabilitation. Road injuries in less-resourced settings trap millions of young people in poverty, with limited access to education and subsequent employment. Self-harm and interpersonal violence also accounted for high proportions of deaths in this age group. The huge burden of homicide, especially among young men in Latin America, reflects the failed war on drugs and the poor regulation of firearms (an issue that is of pressing concern even in affluent countries like the US). In terms of the overall “burden” of disease and injury, deaths are the tip of the iceberg. The vast proportion of poor health relates to non-fatal conditions and disability. The largest contributors to this burden among young people aged 10 to 24 are depressive disorders and alcohol use.

The issues at a global level are of pressing concern. Yet lest we get complacent, considerable progress is yet to be made in

promoting equitable health outcomes for all young New Zealanders. Young people's health in Aotearoa is poor in comparison with other developed countries, with high rates of obesity, suicide, poor emotional wellbeing and lack of access to appropriate health care. The challenges are disproportionately greater for Māori and Pacific young people, and youth in low-income families. Left unaddressed, health issues persist into adulthood contributing to major causes of premature death and disability from cardiovascular disease, dementia and long-term addictions.

While the Youth2000 surveys undertaken by our University demonstrate improvements in some indicators, poor health and lack of wellbeing threaten the ability of young people to engage in education, transition to work or further training, avail themselves of equitable opportunities to achieve, thrive, and positively contribute to society.

Whether it is in New Zealand, or globally, the freedom to flourish and lead a healthy and productive life is fundamentally dependent on improving living conditions and tackling inequities. Investment in the social improvements which are fundamental to the health of young people will help us realise substantial benefits for our societies, socially, politically and economically.

*Shanthi Ameratunga is a Professor of Public Health at the School of Population Health. Her research interests span injury and trauma outcomes, disability, youth health, and inequalities in health care. She was formerly the chair of the Adolescent Health Research Group undertaking the Youth2000 surveys.*

*Simon Denny is an Associate Professor and Paediatrician working at the Centre for Youth Health in South Auckland and the University of Auckland. He completed his adolescent training in the USA where he was a 2000-20001 Harkness Fellow in Health Care Policy. He was the Principal Investigator of Youth'2007 which was New Zealand's second National Youth Health and Wellbeing*