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New Zealand in 2050

The shape of the nation we are becoming

Calls of the wild

China's golden snub-nosed monkeys



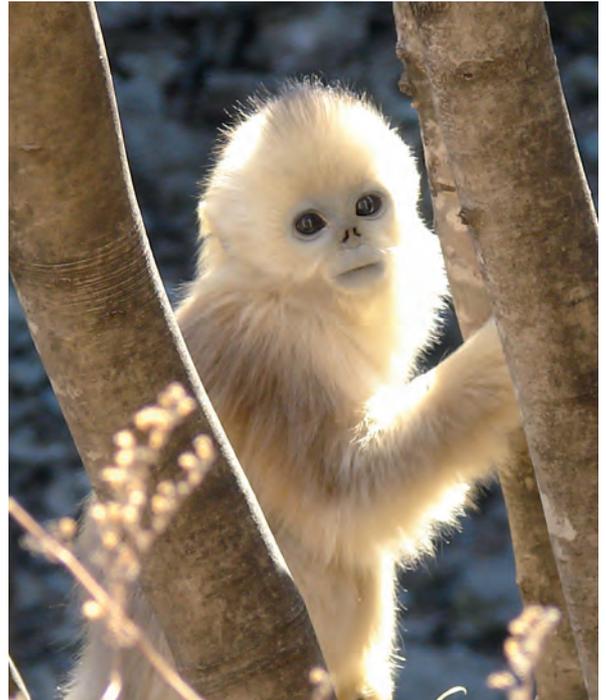
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In the first of an ongoing series looking at the nation's future, we talk to **Professor Martin Hazelton** about the perils of prediction, **Professor Paul Spoonley** about New Zealand's changing demography, **Nick Nelson** about security, **Associate Professor David Tripe** about banking, and **Dr Chris Wilkins** about illicit drug use.

FEATURE

14 Calls of the wild

Master's student Jonathan Cope has been in China studying the vocalisations of the enchanting golden snub-nosed monkey.



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Website: www.definingnz.com

Editor: Malcolm Wood definingnz@massey.ac.nz

Writers: Kelly Burns, Bryan Gibson, Michele Hollis, Jennifer Little, Paul Mulrooney, Andrea O'Neil, Bevan Rapson, Sidah Russell, Malcolm Wood, Sonia Yoshioka Braid, Redmer Yska

Thanks to: Jeannette McKinnon

Design: Grant Bunyan

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Subscription enquiries: k.shippam@massey.ac.nz

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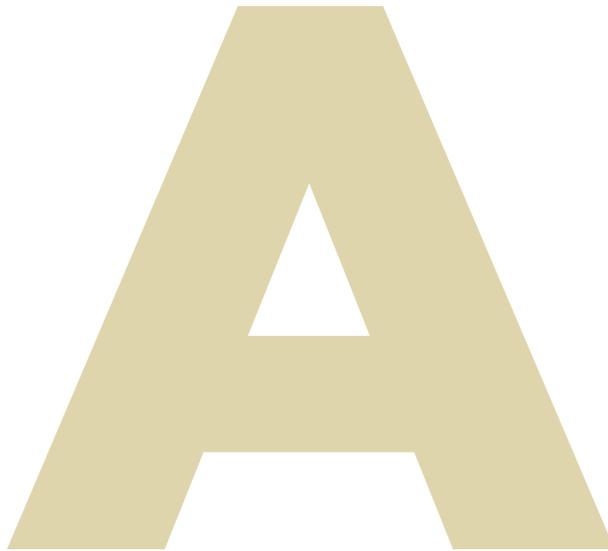
Reviews of *Moral Awareness in Greek Tragedy*, *Shelter from the Storm: The Story of New Zealand's Backcountry Huts*, *Great Kiwi Firsts* and *Dogfight: The Battle of Britain*.



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slogan I saw on a t-shirt recently ran: This was supposed to be the future. Where is my jetpack? There you have it, the essence of baby boomer disappointment. Whatever the world was supposed to be like in 2012, it was never supposed to be like this. Who would have thought back in 1969, when Neil Armstrong took that “small step for a man” onto the moon’s surface, that it would effectively be the high point of the first – and so far only – great era of manned space exploration?



But then predicting the future is the definition of an iffy business. In the 1970s, when I was a university student, *Future Shock* by Alvin Toffler seemed to be on everyone’s shelves. *Future Shock*’s thesis was that the giddy pace of change, the accelerative thrust of the times was such that it was leading to social and psychological dislocation. Toffler’s work set the template for many a futurist book thereafter: an illustrative anecdote followed by a sequence of breathless speculations. You don’t need to read much of Toffler today to see how wrong or mistimed or self-interested most of his speculations were or how grounded they were in the 1960s, the decade in which he was writing. Certainly these days that ‘furious pace of change of the 1970s’ angle doesn’t work the way it used to.

Toffler’s book was calculatedly populist, but sharing the bookshelves were also more sober-minded books of prophecy. I think of 1968’s *The Population Bomb* by Paul Ehrlich and 1972’s *The Limits to Growth*, commissioned by the Club of Rome, both of which forecast calamity as pollution, overpopulation and resource depletion manifested themselves around the globe.

Again, these apocalyptic visions have not come true – though some would say that matters have merely been deferred.

As the physicist Neils Bohr put it, “Prediction is very difficult, especially about the future.”

Today *Future Shock* and *The Limits to Growth* have their counterparts in a new crop of books. Off the top of my head, I can think of *Hot, Flat and Crowded* by Thomas Friedman, *Megachange 2050* by the editors of *The Economist* and, in the environmental sub genre, *Here on Earth* by former Australian of the Year Tim Flannery and *2052*, a follow-up to *The Limits of Growth* by one of its original authors, Jorgan Randers.

These are hugely well informed books. One of the differences between the world of the 1970s and that of today is the extent to which we know and understand the world in which we live. Back in the 1970s, we were still getting over seeing the world viewed from space. Today we can view the world in miniature on the screen of any smartphone and, with God-like powers, zoom down to soar above the landscape, viewing our houses and workplaces. This is a digital world, awash in detailed data, much of it generated in real time.

The books also share some other things in common: urgency and – apart from the less sanguine views from the author of *2052* – optimism. None of the problems confronting us is beyond the power of human agency to solve.

I too am an optimist about the future, both of the world and of New Zealand’s place in it.

What might New Zealand be like in 2050? Just look at what we have accomplished since 1970. In the 1970s we were a land of tariffs, import restrictions, subsidies, government-regulated wage bargaining and high inflation. Britain had jilted us in favour of joining the European Common Market, leading to a precipitous drop in overseas income. We were flailing. In response, the government of the day set up the Task Force on Economic Planning and, if you thumb through the Courier typeface-set pages of the resulting report, 1976's *New Zealand at the Turning Point*, you can see how perilous our situation was. New Zealand had to change; there really was no choice. In the decades since, sometimes smoothly, sometimes lurchingly, New Zealand has transformed itself to an extraordinary degree. We are a very different place, more confident, cosmopolitan, varied and outward looking, and we live in a vastly changed world.

Once again I think we are at a turning point, but this one has more to do with opportunity. The rising economies of Asia with their demand for New Zealand commodities, particularly food, have bought us breathing space. Now is the time to arrive at a common vision of the sort of place we want New Zealand to be and to set to work on making it a reality.

Will we do any better at predicting the future than our predecessors? Some things I think are givens. Friedman seems to be on to a sure thing with the title of his book *Hot, Flat and Crowded*. The world's climate is warming and 'weirding', as a species we are increasingly interconnected and, in some ways, levelled by the technology we have created, and somewhere around 2050 the world's present population of seven billion will break the nine billion mark.

In New Zealand, as in many Western nations – and in China for that matter – the average age of the population will rise, and New Zealanders are set to become

both browner and more Asian; the days when 95 percent of the population defined themselves as Pākehā are long behind us. Auckland, our one super city, and the largest Polynesian city in the world, will continue to grow apace, adding the population equivalent of present-day Blenheim every year.

In the labour market, there will be a continuing erosion in the number of semi-skilled jobs in farming and manufacturing. But the number of professional new-technology jobs will grow and so, at the other end of the market, will unskilled jobs in the service sector.

There will be continuing structural

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changes in our labour market, and by and large this will be a good thing as resources are reallocated from less to more productive areas of the economy. Here the State can help ease the pains of transition by adopting a policy of 'flexicurity': a combination of flexibility in the labour market, social security and an active labour market policy. The rise of women's paid employment – now at greater than 60 percent of the workforce – will lead us to look afresh at the relationship between paid employment and domestic work.

To shift from prediction to advocacy: if New Zealand is to prosper, I believe it should play to its areas of competitive strength, such as agrifood, but not solely. Sir Paul Callaghan was a great advocate for the creation of a more scatter-shot, harder-to-define, high-value economy based on research-based light engineering

targeted at niche markets, and this too will have its place.

Our record of domestic savings and investment has been abysmal; it needs to change. In a world where multinational corporations earn more than individual nations, our autonomy depends on it. At the moment, our largest domestic investors are KiwiSaver and the major Māori tribal holdings.

We need to place a proper value on our natural environment and the ecosystem services on which much of our prosperity and quality of life depends and that we have hitherto taken for granted.

Will there be 'black swan' events? Certainly. Think of 9/11 and the Global Financial Crisis. And it is almost impossible to predict what tomorrow's science will bring. As Karl Popper pointed out back in the 1950s, if we could accurately predict tomorrow's science it would already be today's science.

But the future is not just a matter of prediction, but one of choice, a choice in which we all participate every day of our lives, sometimes consciously, sometimes not.

If we work together, knowing what we are working towards, we can make the new New Zealand a special place indeed.



For more about the cover illustration by fourth-year design student Carol Wu, see page 13.

Talking points



65

The age at which Whistler's mother sat for her famous portrait, a fact pointed out by Retirement Commissioner Diana Crossan when discussing how life expectancy and our views of ageing have changed.

It's Our Future - the new New Zealand Forum, December 2012



Dr Mervyn Hancock has been conferred with a Doctor of Literature (*honoris causa*) in recognition of his influence on the professionalisation of social work and his national contribution to social work education. The 86-year-old is regarded as the founder of the modern social work profession in New Zealand. Pictured: Dr Merv Hancock with Professor Robyn Munford, Dr Kieran O'Donoghue and Professor Steve LaGrow from Massey's School of Health and Social Sciences.

7

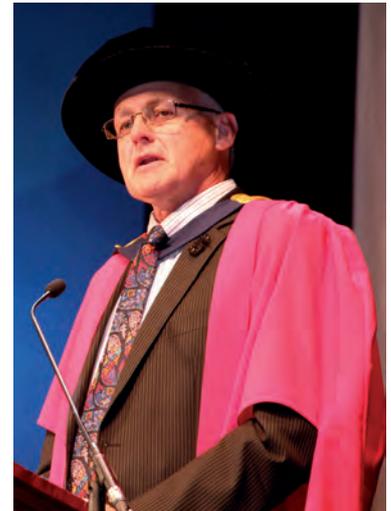
The place assigned New Zealand in a ranking of the best places to be born in 2013. The editors of *The Economist* ranked 80 countries, with Switzerland topping the list.

Daniel Franklin, It's Our Future - the new New Zealand Forum, December 2012



200

The initial order of composting toilets made to the design of fourth-year industrial design student Jadon Calvert. (See page 10.)



Former Reserve Bank Governor Alan Bollard has been awarded a Doctor of Commerce (*honoris causa*) in recognition of his outstanding service to the nation in the field of economic policy. New Zealand Post Chairman and former deputy Prime Minister Sir Michael Cullen introduced Dr Bollard at the afternoon graduation ceremony in Palmerston North. Bollard, from Wellington, is a former Treasury Secretary, Commerce Commission Chairman and Institute of Economic Research director. He stepped down as bank governor in September after a decade in the role, and from January will head the secretariat of Asia-Pacific Economic Cooperation, based in Singapore.

80

The percentage of the time over five-year horizons that a Sell-in-May trading strategy beats the market. Professor Ben Jacobsen and PhD student Cherry Yi Zhang have shown that the so-called Halloween sharemarket strategy, also known as 'Sell in May and Go Away' may have something to it. Their analysis of data from 108 countries as far back as 319 years found that market returns were notably higher in the Northern Hemisphere winter and that the differential between winter and summer returns has grown in the past 50 years.



Jacobsen, Ben and Zhang, Cherry Yi, *The Halloween Indicator: Everywhere and All the Time* (1 October, 2012). Available at SSRN: <http://ssrn.com/abstract=2154873> or <http://dx.doi.org/10.2139/ssrn.2154873>

Prime Minister's Science Prize winners

Distinguished Professor Paul Moughan and Professor Harjinder Singh have been jointly awarded the \$500,000 Prime Minister's Science Prize.

Singh specialises in food protein structures and how they interact in food systems; Moughan, in the breakdown and absorption of proteins by the digestive system and the resulting physiological benefits.

"It is a marriage made in heaven," Moughan told *The Dominion Post*. "Between us we cover the whole spectrum of food protein science."

Moughan's and Singh's work in food protein science is internationally recognised and has led to a number of commercial applications.

The two established and now co-direct the Riddet Institute, a Centre of Research Excellence

dedicated to food, nutrition and health sciences. They also drove the formation of Riddet Foodlink, as part of which 90 companies are collaborating with the institute in research and intellectual property commercialisation initiatives.

Singh says he and Moughan plan to use \$400,000 of the prize money, which is tagged for ongoing research, to commercialise discoveries made at the institute. "We have a lot of bright minds that come up with really good ideas," he says. "The prize money will allow us to screen those ideas and take the most promising through to the next stage."

New Zealand's annual agri-food exports currently amount to \$20 billion. The Government's Economic Growth Agenda calls for the real value of our agri-food exports to reach \$58 billion by 2025.



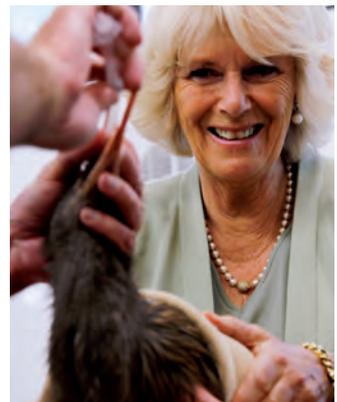
Left to right: Vice Chancellor Steve Maharey, Deputy Vice-Chancellor Robert Anderson, Prime Minister John Key, Professor Paul Moughan, Mrs Anne Singh on behalf of Professor Harjinder Singh and Minister for Science and Innovation Steven Joyce.



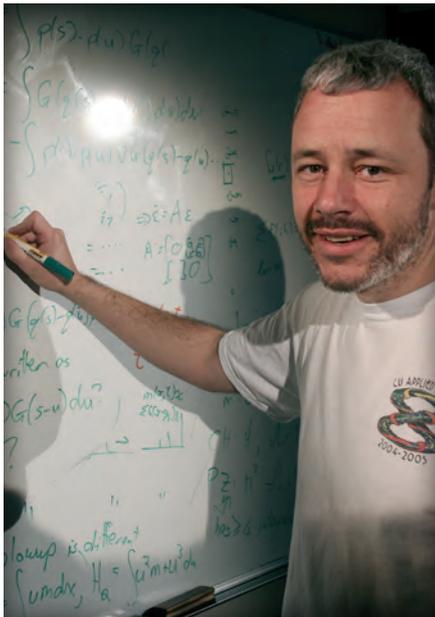
Professor Paul McDonald is to head the university's new College of Health. McDonald, 55, is currently Director of the School of Public Health and Health Systems at the University of Waterloo in Ontario, Canada. He is known for his work in population health planning and in health interventions such as reducing tobacco use. He will take up his position as Pro Vice-Chancellor in March 2013.



Geoff Sharp, a Massey University short course teacher and graduate of Massey's dispute resolution programme, has won the inaugural Mediator of the Year award at the New Zealand Law Awards. Sharp, formerly a litigation lawyer and partner in Bell Gully in Wellington, has operated as a full-time mediator for a decade, with his practice taking him to Amsterdam, America, Malaysia, Hong Kong and Dubai.



Camilla, Duchess of Cornwall, holds a kiwi during a visit to Massey's Wildbase in November. The Duchess also visited a Jack Russell terrier recovering from surgery, and met Team Massey riders at the Equestrian Centre.



James Cook Fellowship for mathematician

Mathematician Professor Robert McLachlan of the Institute of Fundamental Sciences has been awarded a prestigious James Cook Fellowship by the Royal Society of New Zealand for his research project *Geometric methods for the simulation of complex systems*.

The two-year fellowships, of which four were awarded this year, carry an annual stipend of \$100,000 and up to \$10,000 in research-related expenses, allowing the recipients to concentrate on their projects free from administrative and teaching duties.

“It is a fabulous opportunity to concentrate exclusively on research,” McLachlan says. “Several eminent scientists and their research students from Norway, the United Kingdom and Australia are lined up to visit Massey to collaborate on this research as well.”

Geometric integration, a novel approach to simulation, is being used to study areas as diverse as the origin of the ice ages, the structure of large molecules, quantum mechanics, nanotechnology and weather forecasting.

“These systems all have underlying geometric structures that influence the phenomena they generate,” McLachlan says.



Health Research Council funding

Massey University researchers have been awarded almost \$1 million in research funds by the Health Research Council.

Dr Helen Fitzsimons has been awarded \$500,000 to study how Alzheimer’s disease and dementia affect long-term memory storage. She is one of three researchers given a prestigious Sir Charles Hercus Health Research Fellowship, announced by the council.

Dr Fitzsimons, of the Institute of Molecular BioSciences, will study how long-term memories are formed and stored, and how these processes are disrupted in people with cognitive disorders such as Alzheimer’s disease and dementia.

About 43,000 New Zealanders have dementia, and Alzheimer’s New Zealand projects this will increase to 74,000 by 2026.

Dr Fitzsimons is focusing on the role of histone acetylation in memory formation, firstly through genetic interaction studies in the fruit fly *Drosophila*.

“This research aligns with my career objective of building a research team and collaborative network to study how long-term memories are formed and stored, with the ultimate goal of providing new targets to develop treatments for disorders such as Alzheimer’s and dementia.”

The Sir Charles Hercus Health Research Fellowships are awarded to outstanding emerging health researchers who are committed to careers in health research in New Zealand.

Massey University researchers were also awarded four Māori health research PhD scholarships:

- Monica Koia (Research Centre for Māori Health and Development) received \$110,050 to investigate Māori health cancer workforce initiatives.
- Sharon Awatere (School of Māori Studies) was given \$109,500 for her study *Māori elders’ resilience and arthritis: Measuring home health outcomes*.
- Teah Carlson (SHORE and Whāriki Research Centre) received \$109,500 for her study *Kaupapa Māori evaluation of a health literacy-appropriate CVD intervention*.
- Felicity Ware (School of Māori Studies) received \$108,402 for her study *Whānau kopepe: Young Māori parents’ experiences of raising a family*.
- Diane Koti of the School of Psychology was awarded a Māori Health Research Summer Scholarship worth \$5000.



An architect's rendering shows the premises of the newly created College of Health. The new premises, which will involve the extensive renovation of existing buildings, are part of a programme of building across the three campuses. Notably, on the Wellington campus work will proceed on a much-needed new library building.

World Health Organization alliance to promote global food safety

In a world that is forecast to add another two billion people to its population by the year 2050, food is becoming a pivotal issue, one that embraces its production, distribution, price and, crucially, safety. Safe food is of critical importance to food security, public health, agri-food trade, market access, rural livelihoods and, ultimately poverty alleviation.

At Massey, Professor of Agribusiness Hamish Gow, of the School of Economics and Finance, is known for his research into such things as food certification and accreditation systems and food safety, security and sustainability, and he has provided consultancy for a roster of prestigious national and international organisations, including the European Commission, the Organisation for Economic Co-operation and Development and USAID.

So when the World Bank, another former client, was looking for the right person to facilitate the establishment of a Global Food Safety Partnership – a public-private partnership aimed at increasing food safety capacity worldwide – it approached Gow.

Gow says Massey is well placed to guide the initiative, being internationally recognised for both its expertise in agri-food matters and its experience as an innovative distance-learning provider.

The goal will be to build a food safety system suitable for supporting the delivery of safe, affordable food for everyone, everywhere, all of the time.

Gow will lead the project on behalf of Massey University and the World Bank and Ross Davies of the School of Engineering and Advanced Technology will act as project manager.



For Storm Uru, 2012 was a year to remember. First the rower took bronze at the Olympics, then, in November he graduated with a Master's degree at a graduation ceremony in Palmerston North. Even while training for the Olympics he had been pursuing his studies.

"It was a difficult process, and it wouldn't have been possible without the support of Massey staff who were always great," Uru says. "I'm very pleased I completed it and I think the harder something is, the greater the satisfaction you get out of it." Uru intends to pursue a six-month contract working as a trader for BNZ and then, if all goes to plan, he will head to Cambridge University to study towards an MBA.

Thoughts on thrift

Young New Zealanders know the wisdom of saving, yet two-thirds are failing to save for the long term.

The Fin-Ed Centre (Financial Education and Research Centre), a partnership between Westpac and Massey University, has released the baseline results for its 20-year longitudinal study, the first of its kind in New Zealand.

Of the 18- to 22-year olds surveyed, 77 percent said it was not important to plan any further than four years ahead when it comes to finances.

Just 52 percent gave thought to financial goals, spending habits and ways to manage money. However, 80 percent of those surveyed agreed it is better to draw on savings rather than credit for purchases and more than 90 percent recognised the importance of saving.

Thirty-eight percent of those surveyed owned credit cards and nearly 80 percent believed credit cards could be problematic. More than 90 percent compared prices when shopping.

Sixty-six percent said they learnt everything about their finances from their parents. Seventy-two percent looked to their parents as positive financial role models.

Dr Pushpa Wood, Director of the Fin-Ed Centre, says the survey of 300 young Kiwis will be repeated with the same participants every five years for the next 20 years.



Illicit drug users more likely to use new synthetic drugs and pharmaceuticals

Methamphetamine users' use of synthetic cannabis products (such as Kronik) increased from 10 percent in 2010 to 41 percent in 2011, an annual report on illegal drug use shows. Many of these synthetic cannabis products have subsequently been banned; they have contributed to an increase in new synthetic drug use, often in the form of 'legal highs', in the past three years.

The 2011 Illicit Drug Monitoring System (IDMS) study was carried out by researchers at the SHORE and Whāriki Research Centre at Massey University.

Lead researcher Dr Chris Wilkins (pictured) says 372 illegal drug users from Auckland, Wellington and Christchurch were interviewed late last year about trends in the use, availability, price and potency of a number of key illegal drug types and about any new drugs they had encountered in the previous six months.

Overall the use of many new substances remained fairly low, Wilkins says, though the proportion of frequent drug users who had tried a new drug increased from 24 percent in 2009 to 33 percent in 2010 and 40 percent in 2011.

Drugs reportedly most frequently used for the first time in 2011 included ecstasy, oxycodone (a medical opioid), antidepressants, methylphenidate (Ritalin) and synthetic cannabis (eg Kronik, Spice).

"The use of many of these new substances remains at a fairly low level at present, but it is important to continue to monitor them closely given the speed at which new drug epidemics can develop (such as methamphetamine in the early 2000s) and, in the case of new synthetic compounds, the potential for unpredictable health risks," Wilkins says.

Frequent drug users are also changing the way they obtain drugs, he says.

The proportion using 'someone else's prescription' and 'doctor shopping' to obtain drugs increased from 9 percent in 2008 to 30 percent last year.

"The misuse of pharmaceuticals is a growing problem in many first-world countries and our findings indicate an increasing use of pharmaceutical opioids, such as oxycodone, by frequent illegal drug users in New Zealand. It is a complicated problem, though, as we need to balance making pharmaceuticals readily available to those in need with reducing their inappropriate use."

Methamphetamine use remained a problem associated with serious harm to users and others. There was some evidence that greater enforcement efforts were making an impact on the methamphetamine market, with the price of a gram of methamphetamine (also known as 'P') increasing steadily from \$610 in 2006 to \$815 in 2011.

"The strength of methamphetamine has also declined slightly since 2006. The availability of methamphetamine has declined slightly in recent years, and this trend is strongest in Christchurch," Wilkins says.

Many of the frequent drug users experienced serious health, relationship, financial and legal problems as a result of their drug use. They also reported increased instances of 'being given a drug without their knowledge' – up from 9 percent in 2008 to 24 percent last year, – while reports of those claiming to have had their drinks 'spiked' rose from 8 percent to 19 percent over the same period.

"These trends may reflect the growing number of new synthetic drugs that can easily be passed off as other substances or concealed in drinks," Wilkins says.

Campus wide

Hallmarked

A New Zealander who now helps lead Nike's footwear design, an Arts Foundation Laureate, and one of the country's most prolific artist-sculptors have been inducted into Massey's College of Creative Arts.



Julia Morison works in a variety of media including painting, photography, sculpture and installation. Her works have been extensively exhibited here and overseas.



Guy Ngan, now aged 86, is responsible for numerous public artworks as well as a large body of sculpture, design, painting, drawing, interior architecture and printmaking produced in a career that has spanned almost 70 years so far.



Matt Holmes is Creative Director of Innovation with Global Footwear at Nike.



Fourth-year design student Kieran Stowers addresses the opening of the Blow Festival, including the exhibition of final-year student work *Exposure*.

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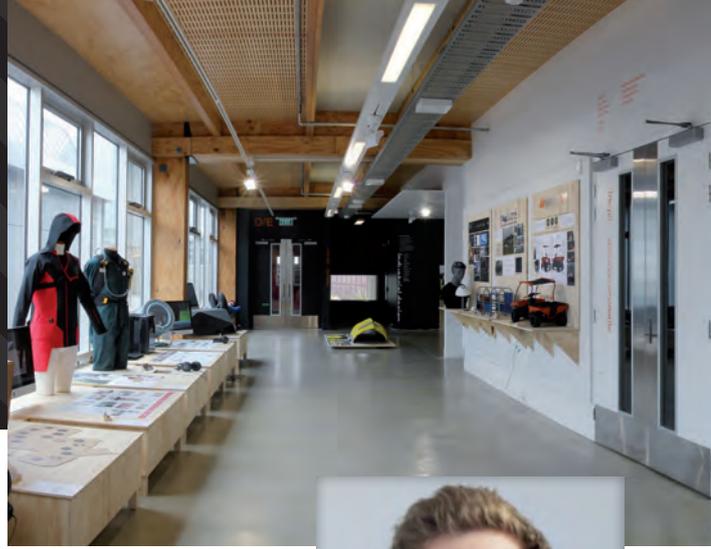
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Portfolios

EXPOSURE2012

The annual pre-graduation exhibition of the work of fourth-year College of Creative Arts students is one of Wellington's must-see events.



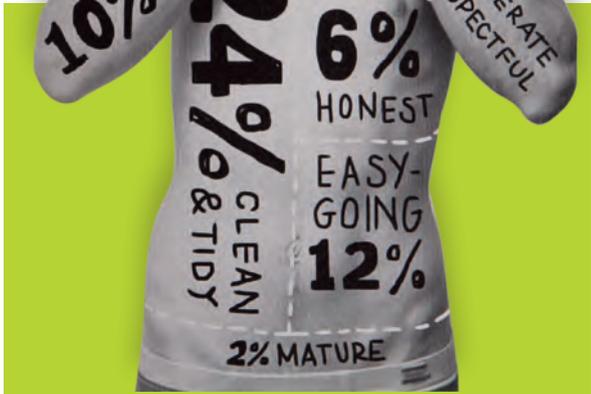
For the former battery hens that are its intended inhabitants, this may be the ultimate rehabilitation and retirement home. For an urban dweller, it could be the perfect 'Good Life' accessory, a no-fuss, feel-good way of producing eggs for breakfast. **Stacey Kenny's**

Nest Urban Hen House is designed to rotate about a central shaft, driven into the lawn, moving the hens to a fresh patch of grass when the old patch is exhausted. For traumatised hens, the house includes features – such as adjustable lighting above the roosting area – that will help them adjust to the unaccustomed light, space and freedom of movement of their new home. Kenny intends the hen house to come as part of a kit, with everything a first-time hen keeper might need. Battery hens are usually killed after a single season of laying, but allowed a break will continue laying eggs for many years.



Jadon Calvert is saving lives, one toilet at a time. In 2011, the Papua New Guinea-born Massey industrial design student visited the country of his birth. After a local flight from Port Moresby to Barimuru the Gulf Province, he travelled 10 hours by canoe to meet villagers, aid workers and staff in a remote hospital where water-borne diseases, such as typhoid, cholera and amoebic dysentery, kill far too many people. Jadon wanted to “do something” as part of his final-year design project. He first worked with local community leaders and non-governmental organisations to investigate the villagers' current hygiene systems, then developed a prototype composting toilet that meets community needs and can be locally made. The result is a piece of human-centred design that will save lives. Now Jadon has his first bulk order: 200 of his ISY Toilets will be constructed and installed in Papua New Guinea early next year. “I hope I will always try to do something,” he says. “This is where I'm really excited by good design. It's this design that can increase people's quality of life.”



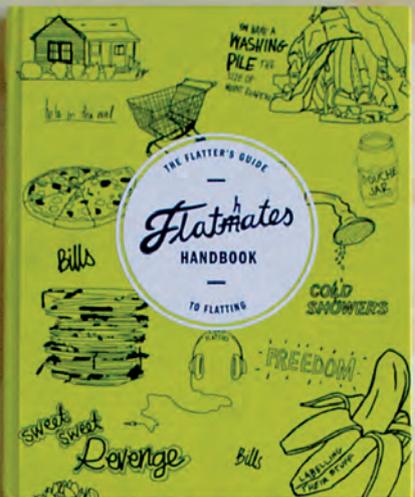


Dealing with a flatmate's boyfriend who guzzles the last milk in the fridge, keeping the common spaces tidy, dealing with conflict and choosing the ideal flatmate are some of the issues explored by **Lauren Earl** in her hardback *Flatmates Handbook*. "It uses humour and unpredictability to prepare people for the experience of flatting and to help them make it enjoyable," says Earl, who drew on her experiences and those of her friends. It's the sort of light-hearted book that might easily go wandering. So a notice to flatmates: if you borrow it, put it back.

Above: Graphic based on traits given in flatmate-wanted advertisements on the Trade Me website.



The annual *Exposure* exhibition always includes some remarkable digital animation, but for her video *Helter Skelter*, **Justine Law** chose the more unusual route of stop-motion and digital compositing. Be reassured: despite the axe in the heroine's hands, this is no shock-horror. The only creature harmed is a stop-motion snake.





In her project *All Things Tails and Claws*, **Alice Moore** has referenced her son Tobias's drawings to create vivid three-dimensionally modelled illustrations of a child's imaginative world.



Serbian-American inventor Nikola Tesla lived a life fit for a graphic novel, and now he has one. **Brodie Nel** and **Joshua Thompson** have produced *Nikola Tesla*, subtitled as one of instalment of a series called *The Lonely Lives of Miserable Men*. Tesla is an unfairly neglected contemporary and rival of Thomas Edison (for whom he briefly worked after arriving in the United States, before an acrimonious parting). Besides conducting pioneering work with alternating current (while Edison was promoting direct current), Tesla experimented with radio and X-rays, produced artificial lightning, and claimed to have the plans for a teleforce weapon some dubbed a death ray. In later life he became a recluse, and having sold his alternating current patents, ultimately died penniless.





Fish by Alice Moore – see story on left-hand page.



Above and below: **Carol Wu** was four years old when her family came to New Zealand from Taiwan. “I have specific memories of playing cards with my parents on the plane before we landed in Christchurch.” Carol evokes that memory in her cover illustration. It is part of a series conveying the experience of a ‘1.5er’ from leaving their country of origin to belonging in the new country. The term ‘1.5er’ or ‘one-and-a-half generation’ describes young children who migrate with their families. They are not first generation because they did not make the decision to migrate. They are not second generation because they experienced the culture of their country of origin before being exposed to a second, foreign culture. They are the in-between generation, the Hyphenated New Zealanders. Carol says New Zealand is home. “Taiwan feels foreign to me. I’m always wearing different clothes due to the heat, and people are always able to tell that I grew up overseas from either the way I dress or my accent.” Yet she says “there’s still some ignorance in New Zealand”, with people lumping all ‘Chinese’ in a single category, so she hopes her illustration project will start people talking about the 1.5ers.



We play card games
passing the twelve hours to arrival
green and vibrant from east to west
I am full of hope

carolwu.net



Photo by Matthew Phua

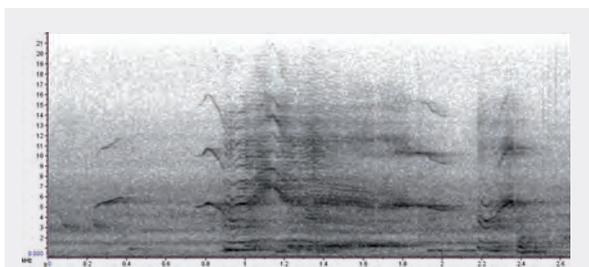


wild

Calls of the

In November of 2011, 25-year-old conservation biology master's student Jonathan Cope travelled to Shaanxi province to study the vocalisations of golden snub-nosed monkeys, a field untouched by English-language researchers for four decades. He talks to Andrea O'Neil.





The sonogram of a monkey vocalisation, as recorded by Jonathan Cope.



Visiting China for the first time usually involves some rough patches. Even so, Jonathan Cope’s first patch was rougher than most.

Cope’s fieldwork started badly when his luggage was lost for three days en route to the city of Xi’an. Then, on his first day in monkey territory in the Qinling Mountains, he slipped.

“When it happened we were trying to get down from the mountain, a thunderstorm was brewing, and the rocks were extremely slippery in the wind,” he says.

He had broken an ankle and would spend two months recovering. “I was laid up in a bed in the mountains, looked after by a local doctor who gave me herbal medicine.”

The accident was a setback. Cope managed a couple of days’ recording in the mountains after his recuperation, before moving on to an eco-tourism region in southern Shaanxi and then on to a zoo to study the monkeys in captivity.

Cope’s research project came about by chance. It was while volunteering with Massey students on a Ponui Island kiwi conservation project that Cope, then a University of Auckland undergraduate, met his future supervisor, Chinese-born Weihong Ji.

Working in conjunction with Chinese researchers, Ji had been studying golden snub-nosed monkeys for many years, and she and Cope hit it off.

So when Ji obtained funding from the Shaanxi Sciences and Technology Foundation to bring in postgraduate

students to work on these monkeys, she recruited Cope to work on their vocalisations.

He had scored a more exotic location for his fieldwork than any of his fellow Master’s students. “I’m very lucky.”

Golden snub-nosed monkeys are found only in a small area in the temperate, mountainous forests of central and southwest China, and the species is considered a national treasure.

But the felling of their native forests for firewood and building timber has put them on the endangered list.

“They’ve got the same status as panda,” Cope says. “They’re threatened by hunting, by habitat loss and by permanent barriers like roads and towns that prevent genetic migration through the larger population and cause inbreeding.”

Cope hopes to discover whether monkeys that have been held captive in zoo breeding programmes or have been in regular contact with humans through eco-tourism exhibit anomalous language patterns. If so, this could have implications for their reintegration with wild populations.

“If you’re supplementing the population with individuals that have lost key charismatic sounds that only their population would have used, you’re losing cultural and behavioural diversity,” he says. “It could mean that languages or behaviours are lost. They’re just not passed on any more.” ▶

“They embrace each other a lot, it’s the major part of their social dynamic, more so than in any other species.”



Until he began work with Ji, Cope had never studied animal vocalisations or heard of golden snub-nosed monkeys.

“The only prior experience I can claim is trying to mimic monkey noises when I was a kid growing up in South Africa,” he says.

Most of the animal vocalisation research literature features birds, says Cope, but primate vocalisations have been a topic of interest for anthropocentric reasons.

“[People have] been interested in primate vocalisations for many, many years because of trying to understand the origins of our language.”

The only existing English-language research on snub-nosed monkey vocalisations dates back to the 1970s and was carried out in United States zoos.

“They are the calmest, most gentle, beautiful monkeys in the world.”

Cope’s fieldwork involved hundreds of hours painstakingly making audio recordings of monkey vocalisations and noting down the corresponding behaviours.

Back in New Zealand, he is finding distinct calls emerging from the data: contact calls, which allow a group of monkeys to keep tabs on each other’s

whereabouts when foraging or on the move; alarm and warning calls; questioning calls; and stress calls.

Cope has discovered a call unrecorded in the literature, made when the monkeys embrace one another. Cuddling is a trait unique to golden snub-nosed monkeys – they hug not just for warmth, but to soothe and socialise.

“They embrace each other a lot, it’s the major part of their social dynamic, more so than in any other species,” Cope says. “Other species won’t embrace and welcome each other, or reaffirm social bonds. These guys do it to end fights and it’s as important as grooming would be for other primates.” When the monkeys hug they let out a series of high-pitched squeaks, the equivalent of a human’s “mmm” snuggling sound, he says.

In the face of such adorable animals, what could Cope do but fall in love? “They are the calmest, most gentle, beautiful monkeys in the world. They really are probably the most gentle of the primates. They’re really, really, really lovely.”

Cope was almost accepted as a member of the troupes he studied, he says, becoming especially close with a male he called Nose-less. “We would sun ourselves on this big rock because it was approaching winter, and we would just lie there next to each other. He was my friend, I liked him.”

Another significant monkey call that Cope recorded is a wistful sigh given by male monkeys. In the wild, such sighs are like a quieter contact call – the call made by a male to reassure nearby females of his presence, Cope says. But males in the zoo gave the sigh constantly, despite a lack of female companions. “The captive population that I studied seemed to have gone a bit further with their sigh. They give what we now call a ‘quiet sigh’. It’s almost inaudible and they give it pretty much constantly. It may be to do with lack of stimulation,” Cope says.



Similarly, in the eco-tourism region he found that the effects of human contact were showing up in his recordings. “In the eco-tourism region, the population exhibits a significantly higher rate of alarm calls and stress calls.”

Supported by a local fund and working alongside a local expert, one of Ji’s doctoral students, Brigitte Kreigenhofer, is working with the tourism operators to ameliorate the causes of stress.

“If the tourism operators understand how to improve the welfare of the monkeys, it will be good for everyone. The monkeys will be happier, and the operators will be able to run more successful businesses,” says Cope.

Cope finishes his research next autumn, and while he has yet to draw definitive conclusions from his data, he is already discovering things that are new to the English-language literature.

“In the research I read, they were in captivity and it was only done over a very short period, like a matter of hours,” he says. “So the stuff I’ve got is very different from what they found.”

With his degree coming to a close in a few months, Cope faces some hard choices. He could continue on to a doctorate, but Cope would like to try his hand at natural history filmmaking.

Whatever he does, he firmly intends to revisit the golden snub-nosed monkeys of Shaanxi. “I miss them,” he says. “I would give anything to be there right now.”



Massey researchers Brigitte Kreigenhofer, Dr Weihong Ji and Jonathan Cope in the Qinling Mountains.



To view video footage and hear some of the golden snub-nosed monkey vocalisations compiled by Jonathan Cope, visit www.definingnz.com.

Where to from here?

It's Our Future – the new New Zealand Forum, December 2012



Daniel Franklin, Executive Editor of *The Economist*, talks to Future U winner, 18-year-old Stephen Lines.

New Zealand is “surprisingly well positioned for 2050” Daniel Franklin told the new New Zealand Forum during his keynote address, which outlined the mega-trends.

Franklin, the Executive Editor of *The Economist* and co-editor of the book *Mega-change: The World in 2050*, identified population growth as one of the key drivers of change, as well as the growth of Asia’s economy.

“New Zealand is surprisingly well positioned for the world in 2050 for a number of reasons. It’s close to Asia where a lot of the economic action is going to be, and it has a relatively big agricultural sector in a world that will need to feed nine billion people,” Dr Franklin said.

“The implications are even more dramatic than the actual population numbers suggest. The world’s population is not only increasing but also getting richer... so we will need to produce something like 70 percent more food.”

Franklin believes that New Zealand’s agri-food expertise means it should be in a position to not only produce valuable food products, but also export its agri-food technology, helping other countries to increase their own food output.

“There may be some complications due to climate change,” he acknowledges, “but New Zealand has a relatively enviable environment so it also raises the issues of managing that

great heritage well.”

The fact that English is one of New Zealand’s official languages will also be to its advantage, Franklin says.

“English is probably going to continue to be the main language spoken, despite the rise of China, and New Zealand’s links through the Commonwealth to Africa will be important. There is going to be tremendous population growth in Africa and it will be a very fast-growing part of the world’s economy.”

Massey University Vice-Chancellor Steve Maharey says the University organised the forum with Westpac to create a stronger

“New Zealand can’t feed nine billion people, but we can provide some of the thinking and knowledge it will take to do this.”

focus on New Zealand’s future. He believes that the university is already responding to the future needs of New Zealand and the world, particularly in terms of agri-food research and education.

“New Zealand can’t feed nine billion people, but we can provide some of the

thinking and knowledge it will take to do this, at the same time moving our products up the value chain.”

Westpac’s Managing Director Private Wealth and Insurance Simon Power says: “Thinking long term is exactly what we as a country need to be doing, and having someone of Daniel Franklin’s stature to assist with leading that discussion is an extraordinary opportunity. Westpac is proud to back any forum that gets us focused on what those opportunities may be.”

At the It's Our Future – the new New Zealand Forum, with, from left to right, Vice-Chancellor Steve Maharey; Justin Mowday, Managing Director, DDB; Diana Crossan, Retirement Commissioner; Rod Oram, business commentator; Daniel Franklin, Executive Editor of *The Economist*; Adjunct Professor, Mai Chen, Founding Partner, Chen Palmer; Paul Brislen, CEO, TUANZ; Adjunct Professor, Rawiri Taonui, Professor of Indigenous Studies, AUT University; and Dominick Stephens, Chief Economist, Westpac.





The way forward

Business commentator and journalist Rod Oram reports from 2012's new New Zealand Forum.

We humans are confronted by a speed and scale of change beyond our comprehension, thanks to unprecedented and accelerating pressures from population growth, resource depletion and technology change.

Wild-eyed techno-optimists reckon science will save us. The American futurist Ray Kurzweil, for example, says unlimited opportunities beckon because both the rate and impact of technological change are accelerating exponentially.

In his 2005 book *The Singularity is Near* he predicted that we would soon experience in a decade 80 times the technological advancement we had in the previous 100 years. In the 21st century we will see 1000 times as much progress as in the 20th century. Some time around 2045 technology will be more powerful than biology. Men and machines will merge in the great singularity, he asserts.

Profound pessimists, however, are sure that we are already doomed. They say our only chance of survival is to shrink human population to a billion or two, with all of us living a simple, subsistence lifestyle.

Yet even influential business organisations such as the World Economic Forum, globalisation's torchbearer, are deeply worried about trends. Its annual global risk assessment this year concluded that only excellent political and corporate governance could guide the world through the thicket of interrelated, high-probability, high-risk challenges it faced. Financial system shocks, income inequality and food, energy and water crises are just a few of many it named.

The forum even asked itself whether the Occupy Movement was merely an anomaly – a brief quirk of the Global Financial Crisis – or a harbinger of social unrest. It chose the latter.

The Economist, though, offers some light amidst the gloom. Its collection of essays, *Megachange: The World in 2050*, argues that biotech will heal us, IT will connect us, political science will lead to genuinely free and democratic societies, greater public spiritedness will arise thanks to social media, and governments will slim and prosper in public-private partnerships with business. It predicts that nine billion people will be living on US\$20,000 a year per person (at 2012 prices).

The Economist is “confident that with the right policies progress is possible on most fronts”. The world will be “richer, healthier, more connected, more sustainable, more productive, more innovative, better educated with less inequality between poor and rich and between men and women, with more opportunity for billions of people”.

Within these changes lie abundant opportunities for New Zealand, Daniel Franklin, one of *Megachange's* editors and

The Economist's Executive Editor, told a ‘new New Zealand’ seminar hosted by Massey University in Auckland in December.

The shift of global economic momentum to Asia is opening up new markets for our primary products. Moreover, New Zealand, as a spacious place, will flourish in fields such as education, farming, ecological management and tourism.

But, he warned, New Zealand will only thrive if it remains a country open to those possibilities. If we showed any signs of withdrawing from the world, we would condemn ourselves to a far poorer future.

While many New Zealanders agree with such a view of our potential, we're starting to see, though, a divergence of opinions on how we must respond.

On one hand the Government and leaders of the primary sector believe we will prosper from catering to the needs of hundreds of millions more middle-class consumers in Asia; on the other hand, some business and technology leaders warn we must push for much more sophisticated, high value products and services.

The simple arithmetic of this shows the latter is right. If we tried to, say, double the size of our economy in the next 15 years the export sector would have to do most of the heavy lifting because domestic growth is partially geared to population growth. Recognising this, the Government has set a goal of increasing exports from 30 percent of GDP, their rate of the past 50 years, to 40 percent of GDP by 2025.

But if we were to lift exports by only doing much more of what we already do, perhaps helped by some price lift, we would among other goals have to treble the value of food and beverage exports by 2025, which is a second government target.

But if we tried to do that, we would run very quickly into physical constraints. For example, most water catchments in the country already suffer from full water allocation and nutrient loading.

Science could come to our rescue in two ways: by helping our farming practices to restore ecosystem health and biodiversity; and by helping us to produce nutrigenomics and other very sophisticated high-value foods and quasi-medicinal products.

Every sector of the economy has to make equivalent leaps. But we barely discuss these issues, let alone devise and commit to the business, social and government strategies required to address them.

We could console ourselves with the thought that very few other people in the world are ready to embrace and deliver what *Megachange* offers. Or we could seize this liberating future.

New Zealand in 2050

In the first of a series of features, we ask Massey academics for their thoughts on how New Zealand will look in the years leading up to 2050. In this issue we cover demography, security, banking and illicit drug use. In future issues we will cover matters such as business, farming, religion, public health, biodiversity and climate change.



The perils of prediction

Professor of Statistics Martin Hazelton
Malcolm Wood writes.

“**B**eware of prophets” is the blanket warning given by Professor Martin Hazelton – even of those who have been right before. That successful stockbroker of the moment with a record of picking winner after winner may be truly prescient, but in any population of stockbrokers there will always be a few who have had unbroken runs of good luck – and that is an equally plausible explanation. Statisticians are natural sceptics.

Does more data always mean better predictions? Not necessarily, says Hazelton. In theory, the more information the better, but only if you can winnow out the relevant information from among the irrelevant chaff; the signal from the noise.

It is human nature to want to impose patterns, even where there is none. “If you toss a coin repeatedly, you will see patterns emerging.” Patterns like these are artefacts.

Then there is the issue of black swans: events with major consequences that are so seemingly unlikely that they are completely discounted. The Global Financial Crisis was a black swan, as was the Christchurch earthquake. “I don’t think we are very good at say distinguishing between the one-in-a-hundred-year event or the one-in-ten-thousand-year event.”

Hazelton stresses the importance of factoring in the consequences of an event alongside its likelihood.

“Even if the percentage chance of a major earthquake is tiny, a few percent, it is still something for which you would want to prepare.”

Finally, he warns against the biases that arise from predilection and gut instinct.

In the recent US national elections, a media consensus seemed to have been reached that it was ‘too close to call’. Every poll result with any sort of swing – even if that swing were close to the margin of error – would

bring a flood of punditry, ‘experts’ offering rationalisations – the latest employment figures, or the success of a campaign ad – for things trending the way they were, divining patterns where there was none, and bringing in herds of other experts on their heels.

Meanwhile, Romney was reportedly certain enough of victory to have ordered a fireworks display.

“He would have been following the pundits and listening to the voices of encouragement in his inner circle.”

Yet some more sober-minded statisticians always gave the odds to an Obama win, with one of them, Nate Silver of the FiveThirtyEight blog, pulling off a coup by picking all 50 state winners.

The secret? “He used statistical models to aggregate and weight the poll results across states and across time to filter out noise.”

If Hazelton were to devise a code of practice for prognosticators, central to it would be one thing, confidence intervals – those plus-or-minus margins of error we know from election polls.

Silver was lucky to get his numbers precisely right; he probably surprised himself. In many states the tipping point lay only just outside his 95 percent confidence intervals: in one in 20 instances he might have expected to be wrong.

The importance of confidence and prediction intervals is the first thing Hazelton impresses on his first-year statistics students.

“If a financial adviser recommends a stock to you on the basis that it will rise 10 percent in value in the next year, you will probably invest. If he says that the stock is likely to rise between 8 and 12 percent in value, the same applies. But if he says that the stock’s range of values is likely to be somewhere between a 20 percent loss and a 40 percent gain, you might have second thoughts.”





Demography

Professor Paul Spoonley, Research Director College of Humanities and Social Sciences Bevan Rapson writes.

Professor Paul Spoonley identifies an ageing population, a hugely disproportionate growth of Auckland, a population decline in some regions, and the increasing importance of immigration as key elements in changes unfolding in our population. Each of these factors will help to shape the New Zealand of tomorrow.

New Zealand's population recently topped

4,444,444

Ticking past five million

Projections suggest that the New Zealand population – which recently topped 4,444,444 – will hit five million by 2031. That number should not be seen as a certainty, however. Spoonley points out that previous projections have consistently fallen short of the reality. “Every time there has been a projection about population size – when New Zealand would reach one million, two million, etcetera – they have under-estimated. The population has reached the target earlier than estimated.” He believes that the historical forecasts reflected a conservatism over the attractions of New Zealand for migrants. Today, immigration continues to loom large in any view of New Zealand’s future – and in population projections. We have been close to the top of OECD rankings of immigration rates and, unlike some countries, have continued to attract high flows of newcomers since the Global Financial Crisis.

New Zealand politicians have mostly chosen to take a softly-softly approach to population policy. Some business leaders, frustrated by the nation’s lack of scale, would like to see a major population increase. Most recently, the New Zealand Institute of Economic Research suggested that a population of 15 million by 2060 would be beneficial. That politicians haven’t typically been so gung ho probably reflects an ambivalence to the idea among voters. Our annual immigrant target of 45,000, attempting to meet certain skill shortages, effectively becomes our de facto population policy.

Spoonley: “The idea of having some magic figure or some mix of the population is not something we’ve seemed enthusiastic about at all.” This is in contrast to

Australia, where environmental pressures mean population numbers are the subject of intense politics. Here, “we’re building a population but we’re building it particularly in Auckland and we’re diversifying it – and nobody is calling it a population policy”.

1/3 of New Zealanders live in Auckland already

Big Auckland

Of that projected five million, two million will live in Auckland. Spoonley believes that the city’s continued growth will dominate New Zealand’s population picture for the next quarter of a century. He says the proportion of New Zealanders living in our biggest city is already unusually high. “It is not simply a classic primate city,” he says. “Apart from Dublin, in the OECD no other city dominates its country to the extent that Auckland does.”

One-third of New Zealanders live in Auckland already. In the next 25 years the city will grow to account for 38 percent of the total population, surpassing even Dublin’s dominance in Ireland. Half of New Zealand’s regions will lose population in the same period. ▶

“Apart from Dublin, in the OECD no other city dominates its country to the extent that Auckland does.”

While a sudden influx of immigrants might once have been expected to lead to some tensions, Christchurch appears relatively ready to welcome newcomers.

‘Agglomeration effects’ mean a snowball effect for Auckland as demand for goods, services, schools and hospitals helps to drive growth. The reverse is also true. Spoonley: “In smaller centres, there is often a tipping point reached that means the loss of health services, or the contraction of such services, and so there is less reason for households and individuals to stay.”

Spoonley believes that we haven’t yet fully appreciated the demographic changes ahead. “What I think is a little disturbing is the lack of recognition of how significant the Auckland growth is going to be whereas, already, half of New Zealand’s regions are flat-lining and some of them are beginning to decline.”

Auckland’s rise, while sometimes resented in other parts of the country, can be seen as an important strength for New Zealand in the next two decades. The city will have the scale to be competitive internationally, and with other Pacific

rim cities in particular. Spoonley: “City economies are actually really important to any nation.”

Spoonley notes that the city’s growth will lead to “pinch points” in its infrastructure, whether that be in housing, transportation, education or healthcare, but the creation of a ‘super city’ under the Auckland Council has brought at least the potential for a greater degree of co-ordination as the city expands. He says the council’s economic development plan “signals a very aggressive, forward-looking strategy to grow the Auckland economy”.

A bigger Auckland will act as a magnet for immigrants, who have overwhelmingly preferred it to other parts of the country. “The bulk of migrants will come to Auckland and stay in Auckland.

They’re not interested in the rest of New Zealand.” Auckland’s character will increasingly differ from that of other parts of the country. Europeans are expected to be in the minority in Auckland within the next few years.

“The thing that interests me is that there’s an increasing two-nations effect,” says Spoonley. Already, 40 percent of Aucklanders are immigrants;

including the children of immigrants lifts the figure to 56 percent. “That is seriously cosmopolitan.” The proportion of immigrants in Sydney, Australia’s most cosmopolitan city, is just 32 percent.

The number of New Zealanders identifying as Asian will have risen to 800,000 by 2026 – not far short of a Māori population of around 811,000.

Mixing it up

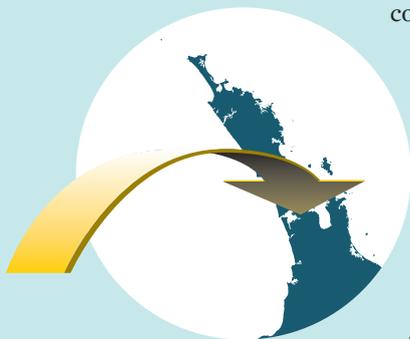
Where New Zealand traditionally relied on migration from Europe (and specifically the UK), since 1987 the bulk of immigrants have come from non-traditional sources. That will continue. In Auckland, says Spoonley, Asian communities will be easily the fastest growing in the coming decades, rising to between 25 and 30 percent of the population.

Our ethnic mix will change in other ways: “Nationally, the age profiles of Māori and Pasifika populations will mean that they contribute more to education and prime working-age populations.”

The long-predicted “browning” of New Zealand, now most apparent in the under-15 population profiles, will contribute to an increasing ethnic diversity, although it will be much more pronounced in those regions such as East Coast and Northland that already have major Māori populations. Spoonley says the “two nations” division can be expanded to three by identifying those predominantly Māori regions as quite different from other areas.

Formerly high Māori and Pasifika birth rates have begun tailing off, although the age of first birth remains much lower among Māori than among Pākeha.

Historically, immigration has been a contentious issue, but it is all that prevents our population from shrinking; one estimate suggests that shutting our doors to immigrants would within a decade bring an 11 percent fall in GDP. Spoonley says that polling shows the public has become noticeably more positive towards immigrants and immigration since 2000 – and also more positive towards immigrants compared with Australians. Yes, there is still evidence of anti-immigrant feeling – it can easily be found online – but it is very much a minority. The one exception: Māori, who have increased in their negative views about immigrants since 2000. “This is an issue,” says Spoonley. He identifies a number of dimensions to this sentiment: “Job competition; tension between biculturalism and multiculturalism; and probably the sense that migrants don’t understand the history of this country, nor the Treaty of Waitangi.” Projections suggest that the number of New Zealanders identifying as Asian will have risen to 800,000 by 2026 – not far short of a Māori population of around 811,000.



It seems likely immigrants will continue to be primarily attracted by the quality of life here, but also by our education system, legal system, relative lack of corruption and the relative ease of doing business.

While there has always been a ‘brain drain’ effect, where some of the brightest and best-qualified New Zealanders are attracted overseas, our overall skills and qualifications base will continue to be enhanced by immigration. Spoonley: “The immigrants who come here are better qualified than the people who are already here, so we’re also topping up the human capital pool with immigration.”

New Zealand will also continue to benefit from expats returning home after spells working overseas. Typically they return for lifestyle reasons; starting a family is often cited as a big motivator for coming back to New Zealand. But Spoonley points out that there was also a spike of returns after the Bali bombings of 2002 – “international terrorism also sends New Zealanders home” – which suggests that international geopolitics and security will also play a major role in how attractive New Zealand is perceived to be in the next two decades.



The Australia factor

Most New Zealanders who leave for other countries go to Australia. 53,800 left for Australia last year. Currently, for every four who go to Australia, only one returns, although tougher economic times on the other side of the Tasman can lead to more Kiwis coming home. Our neighbour’s fortunes and the lure it has for New Zealanders will therefore have a major impact on our population changes in the coming decades. “We are transferring a very significant number of our population to Australia,” says Spoonley. “Migration will determine the shape of New Zealand in the future but emigration will also be a major factor and the movement between Australia and New Zealand is the most important emigration we have going on.”

Regional ageing

The ageing of our population will play out as a major policy and political issue in the next 20 years, especially as ‘dependency’ rates (the number of those in employment compared with those relying on benefits of some sort) adjust. The pace and impact of ageing will be partly determined by immigration and emigration, which both involve prime working age populations. “Already, elder care is a major growth industry in New Zealand, and there are a lot of implications for healthcare generally – and the cost of it,” says Spoonley.

The average age in many regions will rise markedly. “The centre of gravity will shift, both in terms of where the population will live and in terms of regional age profiles.” In some areas, an ageing population will mean that those exiting the workforce, as retirees, exceed the number entering the workforce.

‘Retirement belt’ areas such as the Kapiti Coast, Tauranga and Queenstown Lakes will grow – against the trend for many other regions – but have markedly older populations than elsewhere.

Spoonley also refers to a “kohanga reo vs grey power” population shift. “Younger age groups will increasingly involve Māori and Pasifika as older age groups – those over both age 65 and 85 will be dominated by Pākehā.”

Labour pains

Technology will continue to transform the way we work – and the nature of what jobs are available. One estimate is that automation will replace more than two billion jobs globally by 2030 and a McKinsey Global Institute analysis has found that most job growth in mature economies “involves complex interactions, not routine production or transaction work”. That means that an increasing proportion of jobs require complex problem-solving skills, experience and an understanding of context. While jobs involving interactions have increased, those involving transactions have fallen and those in production – that is, the processing of physical materials into finished goods – have declined even further. It seems inevitable that anything that can be automated – think bank teller work and retail sales – increasingly will be. For now, the trend is also away from full-time, permanent jobs towards more part-time, casual and contract work.

The past two decades have brought a huge growth in post-secondary education and training, which has in turn led to a growth in over-educated employees. Spoonley

“It seems inevitable that anything that can be automated – think bank teller work or retail sales – increasingly will be.”

says that “credential creep” means that employers are using higher qualifications as a sifting device to identify potential employees.

One thing to be particularly concerned about, Spoonley says, is that a high proportion of those without work in New Zealand today are young people. He identifies three main challenges ahead: identifying what encourages job creation; learning how to reverse youth non-participation rates; and deciding what the education and training sector should look like and focus on.

Quake questions

The Canterbury earthquakes have influenced demographic expectations, with some Cantabrians prompted to shift

across the Tasman and between 30,000 and 40,000 workers required for the rebuild (and ancillary services) by the third quarter of 2013. While some of those workers will be recruited from elsewhere in New Zealand, there will also be a significant immigrant component. Workers from overseas – notably from Britain and Ireland – are already on the job, but it is unknown how many of those arriving for the rebuild will become long-term settlers.

The city currently lags behind the national immigrant

population of about 24 percent, but Spoonley expects that to change and believes the influx might even mean that Christchurch becomes the second “super diverse” city of New Zealand.

While a sudden influx of immigrants might once have been expected to lead to some tensions, Christchurch appears relatively ready to welcome newcomers. Spoonley says the Asia New Zealand Foundation noted a spike in warmth towards Asian countries after the involvement of Japanese teams in the aftermath of the February 2011 earthquake. “The data tends to suggest that there has been a shift in the way in which immigrants, in particular visible immigrants, are seen in Christchurch.”

Climate issues

Climate change could be beginning to have an influence on global migration by 2030, if only marginally. For New Zealand, that could mean people from low-lying Pacific countries seeking to immigrate while Australians who fear that their country will face more droughts and calamitous weather events might also be looking to relocate here. “It may well be that the major weather-related events will have a much greater effect on Australia than New Zealand,” says Spoonley, though “if we’re going to see environmentally prompted migration, it’s some way away.”

...the influx might even mean that Christchurch becomes the second “super diverse” city of New Zealand.



Security

Nick Nelson, Director of the Centre for Defence and Security Studies
Redmer Yska writes.

Nick Nelson foresees a much more complex security environment in 2030.

Globalisation and innovations in science and technology will give al-Qaeda-type groups – so-called ‘non-state actors’ – and rogue states the means to inflict far greater damage at less effort and expense.

Part of the threat is digital, encompassing sabotage and the theft of information, money and identity.

In 2010 a sophisticated computer worm called Stuxnet was targeted at damaging Iran’s uranium enrichment infrastructure. Nelson sees it as the forerunner of attacks to come.

“In the next 20 years cyber-attacks will increase in both number and severity,” says Nelson. “New, highly sophisticated computer worms will be

developed and released, causing enormous economic damage and, on occasion, physically damaging critical infrastructure, with consequent loss of life.”

The difficulty of identifying a culprit makes this sort of threat especially challenging. Stuxnet has been alleged to have been the product of a US-Israeli intelligence operation, but it is difficult to be certain.

“This makes cyber-attacks an incredibly difficult threat to deter or defeat at the same time as making them very appealing to criminals and terrorists,” says Nelson.

He also worries about the speed with which the tools and techniques of genetic engineering and advanced chemistry are becoming accessible. Computer hacking now has its analogue in ‘biohacking’.

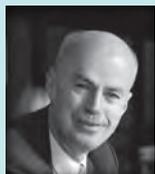
Although this brings to mind nightmare scenarios of bio-engineered plagues and potent neurotoxins targeted at the general population, Nelson is more

“In the next 20 years cyber-attacks will increase in both number and severity,” says Nelson.

immediately worried about the use of biologically engineered agents as economic weapons, perhaps, in the case of New Zealand, directed at the agricultural and horticultural sectors.

Traditional approaches will not be able to counter

threats such as these, says Nelson. “We will need an intelligence-based security approach that collects, analyses, integrates and operationalises information, allowing us to neutralise threats before they materialise, because, once they have, it is probably too late.”



Banking

Associate Professor David Tripe, School of Economics and Finance
Malcolm Wood writes.

New Zealand is a small, technologically advanced nation with a chronic balance of payments problem and a banking system dominated by Australian-owned banks, and, barring unforeseen circumstances, that is how it will remain, says Associate Professor David Tripe.

What will change is the nature of the business environment of which retail banking is a part. The disruptive force of the internet is not spent. iTunes and its ilk have displaced the local record store and the EPUB (electronic publication) market threatens to do the same to many of the local bookstores that have until now withstood hard-copy competition from the likes of Amazon. But this is just the beginning.

Pervasive high-speed internet access is going to affect many more mainstream bricks-and-mortar retail businesses. In the US, Walmart and Amazon are testing same-day delivery services for online purchases. “If I can order something online more cheaply and conveniently and have it in my hands the same day or the day after, why wouldn’t I do it that way?” asks Tripe.

Competition with online retailers will be the death knell for some physical retailers, the result being a hollowing out of traditional shopping precincts. As more and more banking transactions take place online and over the phone, the need for physical bank outlets will diminish. Some will close. Most will change the nature of the services in which they specialise.

How then will banks distinguish themselves from one another if most of their customer interactions are virtual? “Banks still need to offer the right products at the right price, and when you ring them up there still needs to be someone there to answer your enquiry sensibly. Competition will still be important.”

Tripe is similarly cautious about the shift to a cashless society. Cash is convenient; it will be with us for a long time yet. He himself has some financially anachronistic behaviours. “Someone came to do some work on the house this morning. I gave him a cheque, he gave me a receipt – it was easy.”

In the US, there has been some excitement about the potential of near field communication (NFC) devices. Phones like Samsung’s Galaxy SIII can be used in contactless payment systems, similar to those currently used in credit cards and electronic ticket smartcards, and NFC devices will no doubt develop increasing market penetration.

Yet New Zealand is quite well served by its current payment systems, says Tripe. “The US payment system is very clunky by comparison. New Zealand is one of the few countries where there is very little use of PayPal. That is because we don’t need it. We use direct bank transfer, which is cheaper.”

Nonetheless, new payment options will be developed and some of them will certainly be part of our future.

It is highly likely that New Zealand’s dominant banks will continue to be Australian owned. “The only chance I can see of that changing is if an Australian bank were to get into difficulty or were to be sold to a non-Australian bank. It is possible that one or other might want to sell down its interest in its New Zealand subsidiary, although the challenge would be that there isn’t much share market activity in New Zealand.”

The one difference may be the factor of Asia, as the Australian banks seek to increase their Asian presence and Asian banks, in turn, seek a presence in Australasia.

Geopolitically and economically, New Zealand and Australia are likely to be drawn closer together. “We have so much Australian business in New Zealand, it’s inevitable that there will be stronger linkages. It makes sense that there be more government links as we have more issues in common.”

A common currency – an idea recently bruited by Massey’s Professor Christoph Schumacher – would bring some advantages. Schumacher argued for a

“It is all very well bemoaning foreign ownership, but ever increasing foreign ownership is a necessity to balance the balance of payments.”

reduction in transaction costs; Tripe thinks that a common currency could lead, as it did in the European Economic Community, to cross-border banks.

As for New Zealand's larger problem, its persistent balance-of-payments deficit, Tripe suspects that it will persist in persisting. "That deficit is funded by an inflow of investment funds to New Zealand, which is reflected in the sales of assets to foreigners and the inflow of foreign funds to the banking system. That's why we have foreign-owned banks – because we have chosen collectively to invest in housing rather than own businesses. It is all very well bemoaning foreign ownership, but ever-increasing foreign ownership is a necessity to balance the balance of payments."

The escape routes, he says, are few, and the principal

one is unpalatable. "The established way of escaping the cycle of balance-of-payments deficits and ongoing borrowing is by having a major financial crisis.

"Maybe if we found huge quantities of oil somewhere and continued to ship dairy and other products we might be able to buy back some of the assets we have sold. Or investing overseas, countering the net impact of overseas investment in New Zealand."

However, if New Zealanders were to improve their saving rates, that would have a positive impact, and if they were to tone down their love of the house on the suburban section in favour of well constructed and managed medium-density housing – and the banks were to adjust their lending criteria accordingly – this might lead to a productive shift in investment.

What happens when banks

FAIL?

The future of the New Zealand banking system is an interesting subject for speculation, but Associate Professor Tripe and Geoff Bertram from Victoria University of Wellington have a more immediate worry: the Reserve Bank's adoption and implementation of a policy known as Open Bank Resolution (OBR).

OBR is the mechanism that will apply if a bank is seen to be failing. The scenario, Tripe explains, is that if a bank is seen to be in difficulty, its activities will be frozen, a statutory manager appointed, and a portion

deducted from deposits to bring the bank back into solvency. This is likely to be on a percentage basis, but the Reserve Bank has yet to define how the haircut might be applied to balances.

OBR is intended to reinforce the Government's rejection of blanket insurance of banking deposits.

"In other words, if you bank with a dodgy bank, you'll pay. No one will bail you out." On the surface, this sounds sensible. Buyer beware. Why should the Government indemnify private risk?

But Tripe and Bertram believe that the approach is fraught with peril.

The first problem is knowing how to spot a dodgy bank. "The Reserve Bank would say, well we've got this wonderful disclosure regime. The disclosure regime came in 1996, but you can't really compare a disclosure statement from 1996 and a disclosure statement from 2012. It is just so complicated to understand what a bank is actually doing."

The second is knowing how to set about shutting a bank down, even temporarily. "There may be multiple banks with interests in any transactions. It is very difficult to bring things to a halt without major repercussions." That many of New Zealand's banks have Australian parents makes matters yet more complicated.

"If an Australian-owned bank were to collapse, it seems likely that its first loyalty would be to its major Australian shareholding.

"The argument is, of course, that a bank failure is so unlikely that you are never likely to have to pay for it."

But 'never' is a very long time – and 'safe as a bank' doesn't have the same ring that it had a decade ago.

The first problem is knowing how to spot a dodgy bank.



Illicit drug use

Dr Chris Wilkins, SHORE and Whāriki Research Centre
Redmer Yska writes.

To predict the future, look to the past, says Chris Wilkins. Consider BZP, a drug with amphetamine-like effects that became a popular ‘legal high’ in New Zealand during the mid-2000s.

His findings show that one in 20 people aged between 16 and 64 took a BZP legal high – known as ‘party pills’ – before BZP was prohibited in 2008.

One in five users had taken six or more BZP party pills and one in nine had taken eight or more BZP party pills at one time. The dosage recommended by manufacturers was one or two pills per session.

“An alarming 90 percent of BZP users mixed BZP party pills with alcohol and 22 percent combined them with smoking cannabis. The product instructions on BZP party pills advising against using them with alcohol or any other drug were widely ignored,” he says.

As a commercially marketed, synthetic, legal high often used in combination with other drugs, BZP party pills may be a portent of things to come.

Wilkins believes that by 2030 we will face increasing challenges controlling a growing number of both illegal and legal psychoactive substances. And he predicts that alongside the alcohol and tobacco industries a third legal drug sector will emerge selling vetted and approved legal highs.

“Tomorrow’s sellers of low-potency psychoactive substances will have to provide evidence that the products they are sponsoring are ‘low harm’.

“This new sector will offer opportunities to respond to drug problems in different ways, but will also bring the same challenges related to intoxication, risk-taking behaviour and vulnerable groups, and the lobbying of a powerful industry,” he says.

Wilkins says that by 2030, concepts like the ‘war on drugs’ and prohibition may seem increasingly meaningless. However, he does not favour the legalisation of illicit drugs as a way forward.

“Retailers and others argue that alcohol and drug use is a consumer choice issue but my experience as

a researcher tells me that for some, substance use is used to cover up underlying problems such as stress, anxiety and depression.

“That’s why I don’t believe that the legalisation of illicit drugs is a realistic option. Our past record in trying to control industries selling legal drugs like alcohol and tobacco is not reassuring.

“The political response to the commercialisation of alcohol and drug use is often timid, with controls progressively eroded over time. What we are left with is legal products that are cheap, very available and socially acceptable.

“What we do know is that people will use whatever substances are available to them that are socially sanctioned, and heavy users will tend to choose the cheapest substances available to get intoxicated. Prohibition is not the only policy response but as a policy tool, it does have a number of strengths. It can reduce the availability of a substance, force the price up, and some sectors of society won’t use illegal substances.”

What Wilkins thinks will certainly shift is the perspective from which we view illicit drug use: it will come to be seen as less a criminal justice issue and more one of public health.

This is already apparent in the provision of dedicated drug treatment units in nine local prisons and the recent setting up of full-time drug courts in Auckland.

“We can see evidence of an appetite to do things differently in places like the Netherlands and Portugal, where the possession of small amounts of drugs has been decriminalised and referral to treatment is being emphasised as the primary institutional response,” he says.

“Our own Misuse of Drugs Act 1975 includes a public health dimension, but this perspective has been neglected in the past.” ■

“That’s why I don’t believe that the legalisation of illicit drugs is a realistic option. Our record in trying to control industries selling legal drugs like alcohol and tobacco is not reassuring.”

“What we do know is that people will use whatever substances are available to them.”



Moral Awareness in Greek Tragedy
Stuart Lawrence, Oxford University Press

Gods and men

Redmer Yska talks to **Stuart Lawrence**,
the author of *Moral Awareness in Greek Tragedy*.

Nowadays the term ‘Greek tragedy’ tends to be applied, when not to the Euro crisis, to the public unravelling of a luminous career. We heard it again recently when the suitably Greek-sounding CIA boss David Petraeus fell on his sword after an extramarital affair.

Technically, of course, it describes a particular genre of fevered drama written and performed in Athens 2500 years ago. The works of playwrights Sophocles, Euripides and Aeschylus typically chart the fall of a noble hero through fate, pride and the will of the gods (or a combustible mix of all three).

The tragedies themselves still get dusted off, even if commercial imperatives meant that a recent production of *Oedipus*, renamed *Oedipussy*, was billed as “Sophocles meets James Bond”. Yet to acknowledge that the ancient Olympics showcased drama as well as sweaty athletics, the *Oedipus Saga* of five tragedies was performed this year in London.

Stuart Lawrence, senior lecturer in classical studies at the Palmerston campus, says to enter the world of Greek tragedy is to strip away the protective coverings of modern life and confront the human condition in the raw. He still recalls reading the plays in the original

Greek during his final year at college in Tasmania in the mid-1960s.

“I was fascinated with their dramatisation of human beings on the edge, as it were, involved in worst-case scenarios (such as Oedipus’ discovery that he has killed his father and married his mother), and how the characters react and understand their relationship with the world and, in the terms of their culture, the gods who have inflicted such sufferings on them.”

Half a century on, Lawrence’s continuing fascination with Greek tragedy is evidenced in his new book, *Moral Awareness in Greek Tragedy*. Starting with a definition of morality itself and exploring trends in moral philosophy, Lawrence probes characters’ recognition of moral issues and crises, their ability to reflect on them, and their consciousness of doing so. He is particularly interested in exploring the problem of autonomy and personal responsibility within a world view that sees humankind as subject to the caprices of the gods.

The book, published by Oxford University Press, then moves on to a detailed analysis of 14 individual plays, including such landmark works as Aeschylus’s *Seven Against Thebes*, Sophocles’s *Oedipus Tyrannus* and Euripides’ *Medea*.

RY Why did you write the book?

SL “I’m interested in how people see their worlds and how this understanding relates to their psychologies. One of the most illuminating ways people that interact with their worlds is through engaging in moral deliberation. Does a particular moral decision emerge from an immediate intuition or from a process of deliberation? If from the latter, what are the constituent elements of such a process? In a work of literature the process may be laid out for us to examine. Here there are additional challenges. Greek tragedy is the product of an alien culture, but, not only that, it dramatises an artificial world that contains elements derived not only from the contemporary world of its ancient audience, but also from an imaginary world of myth.”

Is Greek tragedy still relevant in the 21st century?

“Absolutely. It presents human beings in extreme situations confronting their destinies. Reading or, better, seeing a Greek tragedy should be an emotionally cathartic experience. We are forced to face the full intellectual and emotional implications of the terrifying scenarios. One of the characteristics of our age is to hide from unpleasant and messy matters like death (people don’t die any more, they ‘pass away’). Greek tragedy will have none of that. Perhaps we’d do better to face these things, at least vicariously through literature.”

Which of the tragedies you discuss is your favourite?

“I have a particular fondness for *Seven Against Thebes*. Oedipus cursed his two sons, saying they would kill each other fighting over the throne of Thebes. One son, Polyneices, is about to attack the city with a foreign army. The other, Eteocles, the King of Thebes, must defend it. Thebes has seven gates, and Polyneices has arranged that a formidable warrior shall attack each gate. Eteocles picks suitable opponents and includes himself. When the name of the seventh is announced, it is his brother. Eteocles realises the gods have cornered him. They have been working mysteriously through all his ‘free’ decisions and now have confronted him with their purpose to destroy him and his brother. He becomes fatalistic, and rightly so as there is no escape from the divine will. I can imagine no more vividly conceived encounter of a man with his irrational and amoral (immoral?) destiny, with the dreadful realisation that this is the end and all that is to be done is to meet it bravely.”

Do we need a new way to read Greek tragedy?

“It is fascinating to apply a modern scheme to a fictional world in which human psychology is rather differently conceived. Walter Glannon, a contemporary moral philosopher, for example, raises the vexed question of the autonomy of the deliberative process, but Greek tragedy often represents the gods as directly inspiring thoughts and feelings in the characters. That might seem to rule out autonomy, but sometimes these interventions are entirely in harmony with the natural psychology of the character.”

Is the 21st century an amoral age?

“People often say that the world has become a nastier place, but that seems unlikely, and I suspect that our standards have risen. In certain societies, at least, there is strong and institutionalised opposition to slavery, racism or irrational discrimination on the basis of gender and sexual orientation, and that surely is moral progress.”

Are we still grappling with the same universal questions?

“Every age has to do that. It is part of being human. We are overwhelmingly defined by our mortality, and

“One of the characteristics of our age is to hide from unpleasant and messy matters like death (people don’t die any more, they ‘pass away’). Greek tragedy will have none of that.”

associated with that there is our radical vulnerability in the world, although modern technology manages to conceal that from us for a lot of the time. (The Greeks, on the other hand, lived precariously in a subsistence economy.) True, we don’t have to decide, like Orestes, whether to kill our mothers in order to avenge our fathers, or whether to make human sacrifices of our daughters in order to prosecute the Trojan War, but we can still face difficult dilemmas, and the way we choose to resolve them provides much insight into our characters. So you have to see in Greek tragedy the universals that underlie the particular preoccupations of a given society.”



Hut book

Shelter from the Storm: The Story of New Zealand's Backcountry Huts

Shaun Barnett, Rob Brown, Geoff Spearpoint, Craig Potton Publishing

Reviewed by Malcolm Wood

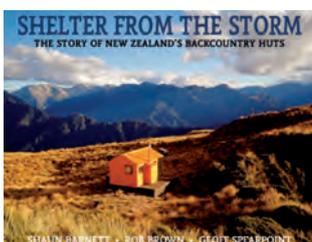
What did I do when I first picked up *Shelter from the Storm*? I did exactly as you might expect: I looked for the huts I knew. Empress Hut (page 111) at Mount Cook, into which I once stumbled, drunk with tiredness, with a climbing partner out of a gathering nor'west storm; Fenella Hut (page 309) with its stained glass window in the loo; and Goulund Downs Hut (which is absent), in which I not so long back steamed dry before the fire during a very wet mountain-biking trip across the Heaphy Track.

I don't think I am unrepresentative. A vast number of New Zealanders have overnighted in what is, as the preface to *Shelter from the Storm* puts it, the "most extensive collection of simple public huts" in the world, and it is understandable – if a bit ego-driven – to look for where you have been.

But *Shelter from the Storm* offers much more than this. In format, this 364-plus-page door slab of a book may look like a coffee table book, but to call it that would be an injustice. It may have requisite production values and glossy photographs, but it also runs to 150,000 words of text, including 7000 words of captions, and while it is ostensibly all about huts it turns out to be just as much about New Zealand's social and economic history.

From New Zealand's more than 1000 huts, the authors have chosen to profile 90. They are arranged according to a typology of origin and purpose. Pastoral huts, for example, constitute one category, as do mining huts, huts for tourism and climbing, club huts and New Zealand Forest Service huts. There is even a small category of huts as monuments (Fenella Hut is one of these).

Each category begins with an essay followed by a series of (usually) double-page photo-and-text spreads



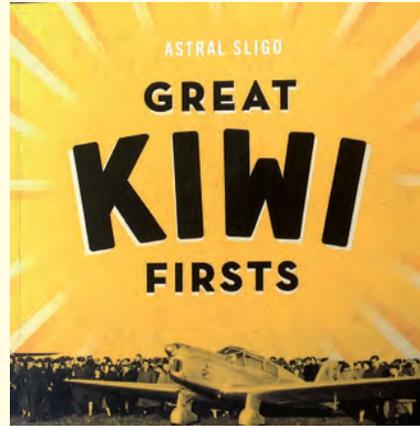
Mixed media

World famous in New Zealand

Great Kiwi Firsts

Astral Sligo, Allen&Unwin

Reviewed by Malcolm Wood



In newspaper circles they are sometimes known as ‘Hey Martha’s, as in ‘Hey Martha, listen to this...’. Here’s one such from the pages of *Great Kiwi Firsts*: [New

Zealand’s] “first (Christian) wedding ceremony took place on 23 June 1823 – the marriage also ended that day when the bride bolted for the bush”. Or how about this? “In 1903 a Dunedin inventor patented New Zealand’s first device capable of ‘obtaining a workable power of commercial value from the force exerted by the action or movement of wave’.”

Slightly eccentric in format as befits its often eccentric content, *Great Kiwi Firsts* is a trove of odd facts and interesting people. The usual suspects – aviator (after a fashion) Richard Pierce, motorcycle speedster Bert Munro, Bill Hamilton of jet boat invention fame, and, of course, the no-introduction-needed Sir Ed – jostle with such fairly and unfairly forgotten types as Cantabrian John Matson, who was the first to import ostriches to New Zealand, and Joseph Burns, the murderer and ne’er-do-well who was the first European to be hanged in New Zealand.

Much the same goes for inventions. You might know that the electric fence and spreadable butter are New Zealand innovations, but did you know that we can also claim the lipped airtight lid on tins, the stamp-vending machine and the disposable syringe?

One thing that is good to see is the generous coverage given to New Zealand science and scientists.

Travel writer and author (and Massey alumna) Astral Sligo has a light touch. A good choice for that Kiwiana-ish gift to round out birthday or Christmas gift-giving. She blogs at www.greatkiwifirsts.com.



Clockwise from left: Trampers Jason Roxburgh and Bruce Postill in the Old Manson Hut, 2011; Field Hut in the Tararuas, 2010; Green Lake Hut, Fiordland National Park in 2008; Asbestos Cottage, a historic mining hut, in Kahurangi National Park in 2002. PHOTOS: SHAUN BARNETT/BLACK ROBIN PHOTOGRAPHY

about the stories of the individual huts that fall within it. It is an eclectic approach. At one moment you are with Samuel Butler on a 19th-century high country station, at the next experiencing the trials of a city dweller dispatched into the wilderness to mine for gold on a government pittance during the depression years of the 1930s.

If nothing else, the book gives you an appreciation of the labour that went into building many of these huts and the comparative ease in which most of us now live. A simple construction of corrugated iron takes on a different complexion when you realise that each of its elements was once laboriously carried in on someone’s back from a distant road end.

Rob Brown and Shaun Barnett are alumni of Massey and the Massey University Alpine Club (which is still going strong). They, their fellow author Geoff Spearpoint and Craig Potton Publishing are to be congratulated on a book that is monumental in more than one sense.



Fly boys

Dogfight: The Battle of Britain
Adam Claasen, Exisle Publishing
Reviewed by Paul Mulrooney

John Gibson, Air Force Museum of New Zealand.

A journalist who once asked the Australian cricketer great and World War II fighter pilot Keith Miller to compare the pressures of sport to those of war got the answer he deserved. “I’ll tell you what pressure is,” Miller said dryly. “Pressure is a Messerschmitt up your arse. Playing cricket is not.”

The 171 airmen from Australia and New Zealand who fought in the Battle of Britain would have applauded.

Their stories are the subject of senior lecturer in modern history and international relations Dr Adam Claasen’s book, *Dogfight: The Battle of Britain*, the latest in the ANZAC Battles Series edited by historian Professor Glyn Harper.

Claasen first became interested in Australians and New Zealanders in the Battle of Britain while a graduate student of the University of Canterbury’s late Dr Vincent Orange, an internationally recognised authority on all things Royal Air Force (RAF).

The Antipodeans, Claasen says, warrant special coverage. Unlike the British, they were not public-school educated. A few

months before their arrival in Britain they were beginning their working lives as clerks, bank tellers and farm-hands.

“The Kiwis were egalitarian, and it was not uncommon for them to become friendly with their engineers and armourers. They earned respect because they were good at rugby and brilliant pilots.”

Brilliance was needed. If Britain lost the air war – and as Claasen recounts, several times in that summer Hitler and his Luftwaffe chief Hermann Goering believed the RAF was on the verge of collapse – Germany would have a free hand in its assault on the Soviet Union.

So who were these Australians and New Zealanders? Claasen covers the full cast of individuals, from Air Vice-Marshal Keith Park, whose command bore the brunt of the Luftwaffe’s air attacks, to the pilots themselves – people like Alan Deere, John MacKenzie and John ‘Gibbo’ Gibson – through to the people who dealt with the consequences, notably pioneering plastic surgeon Archibald McIndoe. All are vividly drawn.

Kiwi Air Vice-Marshal Keith Park was an imposing yet engaging figure who

won the admiration of pilots with his tactical nous, organisational abilities and egalitarian approach – he never forgot that cooks, aviation engineers and armourers were essential to maintaining a group’s operational readiness

He made a habit of sitting in on officers’ meals to gauge morale and pick up first-hand information.

A World War ace himself, Park also flew, piloting his personalised Hurricane to 11 Group bases to get an accurate appraisal of the fighting.

Claasen is good at conveying the psychological pressures the pilots faced – flying three or four sorties a day with the possibility of an agonising death, disfigurement or the loss of close friends constantly present.

“They suffered increasing fatigue, running on fumes and the intensity of combat. They became more snappy, they lost weight and they often drank heavily.”

They also became local celebrities. These were the ‘Brylcreem boys’ (in reference to the hair product), with a reputation for being seen off duty wearing flying jackets, trousers tucked into boots,

holstered pistols and a woman on each arm.

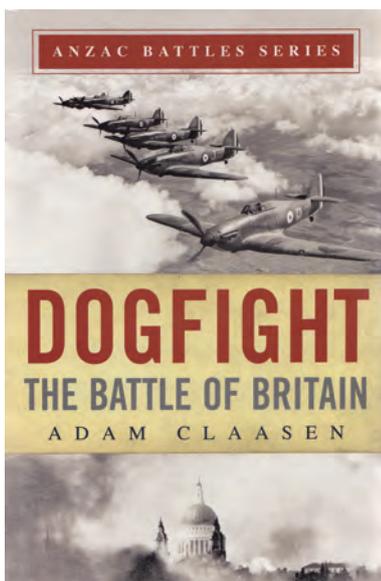
“Young airmen lubricated their nights on the town with beer or spirits as they let off steam and tried to forget the terrors of the fight. The patrons of English country ale houses welcomed Churchill’s airmen with open arms,” Dr Claasen writes.

The ‘eat, drink and be merry for tomorrow we die’ ethos is understandable, for many did: 20 New Zealanders were killed in the Battle of Britain – the youngest being just 18 years old.

(However, some of those who escaped lived on well into old age. I was a young reporter on the local community paper in Balclutha in the early ’90s when I heard a colleague getting a blast down the telephone from pilot John MacKenzie about some over-exaggerated detail in an account of his exploits. It must have been a chastening experience.)

Noted World War II plastic surgeon Sir Archibald McIndoe, who worked for the RAF, was one of three New Zealand plastic surgeons in the war.

“He developed techniques to deal with the massive burns that fighter pilots suffered and he revolutionised treatment. If a plane, like a Hurricane, caught fire and fuel entered the cockpit, the pilot could end up with horrific burns if he survived at all.”



Mindful of the psychological effects that such burns and long-term scarring could have on the self-esteem of young men suddenly facing irrevocably altered lives, McIndoe, known by his patients

cockpit of the aircraft, and you turned it upside down, it would douse you in fuel. I think you were so pleased to get rid of the thing you didn’t think about how you did it.”



A Hurricane pilot prepares for battle, Air Force Museum of New Zealand.

as ‘the Boss’, applied compassionate pragmatism.

“Employing handpicked staff and co-opting local townspeople into his plans meant the Boss was able to create an environment that side-stepped medical conventions of the times, but ultimately eased the airmen back into a life beyond their injuries.”

Yet not everything in this account is dark. The Battle of Britain was ultimately won, and along the way these young men accumulated a record of courage and of boy’s-own derring do that still astonishes.

Let Gibson, a pilot who “gathered bale outs like prized possessions” stand as an example. (He was one of many pilots who made a custom of generously tipping their parachute packers.)

Gibson earned the Distinguished Flying Cross for steering a flaming Spitfire, which he had earlier used to shoot down eight enemy aircraft, away from the town of Folkestone, baling out at the perilous height of 1000 feet.

How do you bale out? Gibson described it thus:

“Some people said you turn the thing upside down and fall out, some people climbed over the side. Some people thought that if there was fuel in the

On one ill-fated sortie, at the end of which he had to bale, Gibson happened to be wearing a brand-new pair of handmade shoes from Duke Street in London.

“Fearing a sea landing, and hence damage to his shoes, he had the presence of mind to take them off and drop them over land before his parachute carried him over the Channel. Remarkably, an astute farmer sent them on to the base – a greater reward than the DFC in the mind of the New Zealander.”



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