MASSEY

The magazine for alumni and friends of Mas• Issue 24 • April 2008

Leader of the pick

Revolutionising the kiwifruit industry

Honouring Sir Ed

The Nepalese connection

Making babies

Engineering and IVF

Massey University
www.massey.ac.nz

The robots are coming! Industrial robots have been around now for almost half a century. In large part it is they who build our cars and assemble our computers and consumer goods. As Dr Rory Flemmer points out in the pages of this magazine, while we may think of many products as being made in China by people, the description 'made in China by robots' is probably more accurate.

But with industrial robots having been largely confined to the factory floor, our personal experience of them is limited. That is about to change.

In early 2007 there was welcome news for Dr Flemmer and his colleagues in the School of Engineering and Advanced Technology (SEAT): the private funding had been found to allow them to pursue the development of a robotically-controlled kiwifruit picker. Today, as this magazine goes to print, the prototype is being readied to take to the orchards.

That picker, so swiftly developed, is a harbinger. Soon robots will begin to play a prominent role in agriculture and horticulture, the industries New Zealand largely depends on for its prosperity.

Robots will be used in dairy sheds, packhouses, orchards and fields. They will establish themselves as a useful adjunct to human labour in the same that way that other less autonomous forms of mechanisation have. Indeed, we probably won't think of them as robots – a word with some unwanted associations – at all. Like electric fences, farm bikes, tractors and milking sheds, they will become another accepted part of the landscape. And like those earlier technologies, robots will bring production efficiencies that could not be found otherwise. They will form a crucial part of our national competitive advantage, especially in meeting the challenge presented by lower wage economies.

But to use robotics to full advantage you need to understand the technology and integrate it with your production processes. Some pundits estimate that a fifth of the cost of deploying a robot is the cost of the robot itself; the remainder lies in programming the robot and developing the surrounding manufacturing processes.

Where will those skills come from? From Massey. Massey began offering farm engineering papers in 1928, established a department of industrial management and engineering (as part of food science and biotechnology) in 1971, and established a Bachelor of Engineering in 2000.

This year a new major, Industrial Automation, joins the BE. I believe the major and its graduates have a bright future.

Professor Ian Warrington
Acting Vice-Chancellor

MASSEY

MASSEY is published twice yearly by Massey University, Private Bag 11-222, Palmerston North, New Zealand
www.massey.ac.nz
Current news: Visit news.massey.ac.nz for news from Massey University and past issues of *MASSEY*.
Editor: Malcolm Wood
m.wood@massey.ac.nz
Writers: Kereama Beal, Di Billing, Lindsey Birnie, Leanne Fecser, James Gardiner, Adam Gifford, Jennifer Little, Amanda McAuliffe, Patrick Morgan, Jacqueline Rowarth, Regina Scheyvens, Helen Vause, Malcolm Wood
Photographers: Graeme Brown (including cover), Patrick Morgan, Sam Pullara (cover photo of child), Helen Vause, Dionne Ward, David Wiltshire, Malcolm Wood
Design: Grant Bunyan
For changes of address or to send in your news visit alumni.massey.ac.nz or e-mail alumni@massey.ac.nz.

Massey journalism graduate Will Robertson, whose profile of alumnus Joko Parwoto appears on page 42, keeping company with an Indonesian tiger. Robertson's placement with papers and wire agencies in Jakarta was courtesy of a Journalism Professional Practicum offered by Australian study group ACICIS (linked to Murdoch University) to study Indonesia's news media. His place was funded by the Asia New Zealand Foundation, a non-profit group set up to promote links between New Zealand and Asia. Robertson was also assisted by a grant from the Auckland-based Pacific Media Centre.

The scholarship is one of several opportunities regularly made available to Massey's journalism school students. Also courtesy of the Asia New Zealand Foundation, four new graduates are selected each year to work on Asian newspapers, Cambodia's Phnom Penh Post and China's Shanghai Daily. The scholarship winners last year now off to Phnom Penh were Priyanka Bhonsule (now a reporter on the *Hutt News*), Stephanie McKay (New Zealand Press Association) and Will Hine (*Southland Times*). Tom Fitzsimons (the *Dominion Post*) is off to Shanghai.

The big man

Sir Edmund Hillary's work in Nepal shows the benefit of aid and development done well, writes Associate Professor Regina Scheyvens. This is what he wanted to be remembered for. If we are looking for ways honour him, we should look no further.

Sir Edmund Hillary K.B.E., by Edward J Halliday, 1955.
Image courtesy of Auckland Museum. The Museum has mounted an online tribute to Sir Edmund www.aucklandmuseum.com/?t=583.

If you are a fan of what-ifs, it is worth thinking about what would have happened if the weather in the Himalayas had been a little different on May 22 1953. If the wind been that bit lower – and the oxygen sets worked that bit better – it might have been Englishmen Charles Evans and Tom Bourdillon who would be remembered as the conquerors of Everest. They were the two climbers chosen to mount the first attempt on Everest; the 33-year-old New Zealand beekeeper and the Sherpa would get their chance two days later.

Had that happened, some other icon would occupy the space filled by Hillary's craggy features on the $5 note, mountaineering would have had some other ambassador, and there might never have been the extraordinary link that exists between Nepal, a small landlocked country in the midst of the world's highest mountain chain, and New Zealand, an island nation in the midst of the world's largest ocean.

Sir Edmund Hillary was a remarkable mountaineer, physically gifted, experienced, and absolutely determined. The ascent of Everest put him among the pantheon of New Zealand sporting greats, and he would go on to many other adventures.

But that is not why he occupies such a special place in the hearts of New Zealanders and Nepalese alike. That story begins on another expedition, three years after Everest. In Hillary's words, "a group of us were huddled around a smoky fire on the Tolam Bau glacier and the conversation turned idly to the welfare of the Sherpas".

"What will happen to you all in the future?" Hillary asked one of them. He paused and then replied: "In the mountains we are as strong as you – maybe stronger. But our children lack education. Our children have eyes but they cannot see. What we need more than anything is a school."

In 1961 Hillary built the first permanent school in the remote Solu Khumbu region and in 1964 he banded together with friends, family and other mountaineers to form the Himalayan Trust.

During its lifetime the Himalayan Trust and its affiliates together with hundreds of volunteers have constructed 27 schools, two hospitals, and numerous health clinics, airstrips, and water supplies. They have repaired monasteries; run teacher training programmes and women's literacy classes; funded university scholarships; and planted more than a million trees.

The first ascent of the world's highest mountain was, as Lady June Hillary reflected, "…a stepping stone. It made it possible to raise the money needed to assist the community".

Was this charity? In development circles, the word charity has some unfortunate baggage. It smacks of patronage, of favour bestowed on a passive recipient. Charity, in this sense, is anything but the relationship Sir Ed struck up with the Sherpa communities.

His connection was very personal. Until a few years ago, the Hillarys made annual visits to Nepal where they trekked through familiar Sherpa lands, visited old friends, and both supervised and provided hands-on assistance with Himalayan Trust projects.

Although many development agencies today pride themselves on partnership, it is difficult to think of any other that can lay claim to such an enduring partnership between the community it serves and a senior member of the management team.

From the outset, Hillary regarded the Sherpa communities as partners. He recognised and respected their knowledge and skills and never tried to impose anybody else's ideas about how they should 'be developed'. The Himalayan Trust responds to requests for assistance, and plans and implements development initiatives together with Sherpa communities; the communities own the projects. Communities that want the Trust's help with a new school or clinic commit to allocating the land and organising people to work on the construction.

At the management level of the Trust, it is notable that the Sherpa Advisory Committee has taken over a greater range of responsibilities.

Some of the work carried out by the Trust comes in part to ameliorate the problems created by the growth of the tourism that followed in Hillary's wake.

One of Hillary's first projects was the Lukla airport (apparently soon to be renamed Tenzing-Hillary airport). Lukla, he later

wrote, hastened the onset of officialdom and tourism into the Everest area. "Already the Khumbu has received many of the blessings of civilisation – forests are being denuded, rubbish is piled high around the campsites and monasteries, and the children are learning to beg. The Sherpas have a hospital and half-a-dozen schools, and more work is available – but is it sufficient recompense? At times I am wracked by guilt."

There were 4017 tourists to Nepal in 1960. In 1970, with Kathmandu on the hippie trail, there were 40,000. In 1995, in the age of trekking and cheap air travel there were over 363,000. In 1999 – before the Maoist insurgency intervened – it was 491,504.

Such a rapid increase in the number of tourists puts particular strain on small communities and the fragile environments in which they live.

In academic circles it has been common to criticise tourism to developing countries. Tourism, it is argued, highlights the inequitable power relations between tourists and the people who live in regions they visit. Often the businesses are foreign owned and the profits repatriated. And tourism leads to social disruption and environmental degradation.

Certainly the last of these – as Hillary observed – is a very real problem for Nepal. Trekking may seem like a low impact activity, but lodges must be built for them, food cooked, and water heated. Every trekker consumes six to seven kilograms of wood per day; wood harvested from dwindling slow-growing alpine forests, and every trekker creates wastes, which if left untreated break down only slowly in the chilly mountain environment.

The Himalayan Trust has trained Sherpas to be wardens in the national parks declared to conserve parts of the alpine environment, and the Trust has helped the Sherpa community take ownership of the tree nurseries central to reforestation efforts.

No one seriously argues that Nepal can or should forgo tourism, the country's number one foreign exchange earner. Tourism has given the Sherpa people viable alternatives to their traditional activities of raising yaks and trading salt. Along popular trekking routes, the Sherpa communities have prospered. Sherpas work as porters and mountain guides, they run small lodges and teashops. A number of the more enlightened tour operators devote part of their income to the charitable work of the Himalayan Trust and other development agencies.

The question for Nepal and for the development community is how we maximise the benefits to the Nepalese – remembering that most of the trekking happens in a limited area within the country – while minimising the social and environmental costs. In development circles the talk is of 'pro-poor tourism', a new approach which seeks to increase the net benefits of tourism to the poor.

Image courtesy of Rose Scheyvens

Nepal sits at 142 out of 177 countries on the Human Development Index, and the World Bank estimates that 31 percent of the population of 29 million live in poverty. The years of the Maoist rebellion battered the tourist industry, with arrival numbers almost halving between 1999 and 2002, but with a new multi-party system in place, tourist confidence is slowly returning.

New Zealand has a chance to build on our country's special relationship with Nepal by finding ways to contribute to the country's development in this current period of stability. For evidence that the link first forged by Hillary between New Zealand and Nepal lives on I do not have to look far. In Development Studies at Massey, two Nepalese have completed postgraduate degrees on scholarships funded by NZAID (one addressed urban waste management, the other sustainable energy supplies in rural areas) and a number of New Zealanders who hold postgraduate Development Studies qualifications from Massey have worked in Nepal in health care, tourism, food technology, and community development.

NZAID, our government bilateral aid agency, already supports several development agencies that work in Nepal, including the Himalayan Trust. In 2003, to mark the 50th anniversary of the ascent of Everest, NZAID committed $290,000 annually to support the work of the Trust. In recent years, much of this has gone towards upgrading and operation of schools in the Solu Khumbu district.

Why should we honour Hillary and how are we best to do so? The man himself articulated it better than anyone: "I haven't any doubt that the most worthwhile things I have done have not been climbing mountains or going to the Poles or so on. It has been helping my Sherpa friends, building the schools and medical facilities. I think that is what I would like to be remembered for."

In the rush to be seen to honour Hillary, a range of proposals was floated. Should we rename Mount Cook or Mount Taranaki? Were these proposals serious? We all know that Hillary would never have wanted this.

The best tribute we can pay him is to continue the work he began.

The Himalayan Trust: www.himalayan-trust.org.np
The Development Studies Programme at Massey: dev.massey.ac.nz

Associate Professor Regina Scheyvens heads Massey's Development Studies Programme.

The price of milk

The rising price of agricultural commodities offers an unparalleled opportunity for New Zealand to establish a sustainable competitive advantage, writes Professor Jacqueline Rowarth. But first certain conditions must be met.

Supermarket prices are causing shock and indignation. In the last quarter of 2007 the price of milk rose almost 5 percent, the price of cheese 17 percent and the price of butter a massive 41 percent. Milk price rose again at the beginning of the year – another 4 percent. Cheap dairy products, something New Zealanders have come to regard as a birthright, are cheap no longer.

The consolation: if we are paying more, so is the rest of the world. As the economists point out, New Zealand's saving grace is its agricultural industries. Without them – and particularly without the current high dairy payouts – our economy would be in severe trouble.

So what will happen when the price of dairy products sinks to more accustomed levels? It may not. This time the prices we are seeing may not be an expression of market cycles but of something more sustained, a phenomenon the *Economist* magazine has headlined as "the end of cheap food".

The reasons for the global price rises? One is the substantial use of maize as a feedstock for ethanol, with knock-on effects throughout the market; the other, the increasing affluence of emerging economies such as China and India. When people earn more, their diet changes. They move away from food grains and towards products such as meat and dairy.

In 1985 the Chinese consumer ate 20kg of meat per year (FAO statistics); by 2000 consumption per capita was 50kg per year. By 2050 it is projected the world will have to produce twice as much meat as it does today to meet demand.

One estimate has it that by 2020, developed countries will be consuming 32 million tonnes more milk products than they did in the '90s and developing countries will be consuming 177 million tonnes more.

All of this should bode well for the New Zealand farming industry, which, since the '90s, has become a poster child for efficient subsidy-free farming.

In fact, I and many others believe the opportunity is at hand for New Zealand to achieve a sustainable competitive advantage over its competitors, an advantage that lies in ever more efficient production, in the uncompromising pursuit of quality, and in environmentally sensitive, low-carbon footprint production and export. But before this can happen, certain conditions must be met: we must produce more science and agriculture graduates and we must do more to support agricultural research.

What should New Zealand be trying to produce? We do need to do more than just rely on price rises occurring in all agricultural commodities. Professor David Hughes, of London's Imperial College, told a conference in Napier last year that New Zealand should be producing the kinds of food for which consumers are prepared to pay a premium.

Which consumers are these? The supermarket giant Tesco segments its shoppers into a number of categories: the price sensitive shopper, the traditional shopper, the convenience shopper, the healthy shopper and the finer food shopper. Of these, two should be of particular interest to us – the 'healthy' shopper, willing to pay for organic and sustainably-grown attributes, and the 'finer foods' shopper, who wants well-packaged foods of uniform colour and shape as well as exclusive access to premium gene-stock associated with taste. Taken together they make up 26 percent of Tesco's shoppers.

And we should think about how best to take our 'story' into our key markets.

But there is a complication. As Claude Lévi Strauss put it, "food has to be good to think as well as to eat". The discerning consumer is buying not only the product, but also the story attached to it. The shopper who purchases New Zealand lamb has, in the past, bought the story of an animal raised in the open air, in a near-pristine environment, in a far distant country – with spring as winter sets in for the northern hemisphere increasing the allure.

Sadly for New Zealand, that narrative is changing. Just look at the food shows starring Jamie Oliver, Gordon Ramsay or Hugh Fearnley Wittingstall. These are chefs who exercise so much influence on the British consumer that supermarkets now do their utmost to stock up on particular products featured on these programmes before they go to air.

The celebrity chefs are encouraging consumers to eat locally and seasonally and it is a message that has found increasing political support. The encouragement is not confined to Britain. Read the writings of Michael Pollan (e.g., *The Omnivore's Dilemma*) for the American equivalent.

If we do nothing to counter these arguments – and an AgResearch study has shown that in many instances the imported New Zealand dairy product has a smaller carbon footprint than its British equivalent despite the travel costs (because New Zealand cows are not housed for several months a year) – the only answer will be to wait until the considerations of cost or supply are overwhelmingly persuasive and trump environmental concern and patriotic conscience.

We need to put the New Zealand case – and we need to establish our credentials as an agricultural and sustainable producer.

Agriculture, like any other human activity, has environmental impacts. The UN's Food and Agriculture Organisation estimates that livestock production directly and indirectly uses 30 percent of the earth's ice-free land and generates nearly one fifth of the world's greenhouse gases. Closer to home, the recently released *OECD Environmental Performance Review of New Zealand*, while noting the progress that had been made in integrating environmental concerns into the daily management of agriculture and forestry operations over the past decade, also implicated livestock production in deteriorating soil and water conditions.

So here are some challenges for New Zealand agriculture. We must promote the fact that we have high quality products and sustainable production systems. We must continue to improve our production efficiency to maintain cost competitiveness. And we should think about how best to take our 'story' into our key markets.

But to do any of these things well we must produce more science and agriculture graduates and we must do more to support agricultural research.

There are now more than 2000 students a year graduating in the 'creative and performing arts', while in 'agriculture, environment and related studies' there are just 355. That might not be such a concern

if those graduates stayed in New Zealand, but many will not.

Twenty six per cent of New Zealand's tertiary graduates are now overseas (in comparison with a mere 3 per cent of Australia's), and 28,000 New Zealanders emigrated to Australia last year, a significant number identifying themselves as being aligned with agriculture.

Australia is going to continue to be a potent lure for agriculture graduates. Professor Les Copeland of The University of Sydney has calculated that Australian agriculture will have 123,000 new jobs in the next five years. Who will fill them? Julian Cripps of Sydney's University of Technology has written about Australia's shortsighted slashing of agriculture research, the many agricultural scientists now entering retirement age, and the collapse of university agricultural science enrolments. While Australia has been preoccupied with its drought and the forecast consequences of ongoing climate change, he writes, a second drought is nearing: "an agricultural knowledge drought". This is a mirror image of what has happened in New Zealand.

Professor Cripps also points out that in the past 15 years most conflicts and many refugee movements have had, at their core, a scarcity of food, land or water. "Australia has not yet understood that agriculture policy is defence policy. It is refugee policy, immigration policy, as well as health, food and economic policy. We persist in seeing it as an issue all on its own."

It is not surprising that students are choosing to take degrees other than agricultural science. They want to be associated with industries which they perceive to be growing, exciting, and offering challenges, opportunities and material reward. That has not been the image associated with agriculture. During the turmoil that surrounded the withdrawal of subsidies, agriculture was deemed a sunset industry. Instead, information technology, biotechnology and the creative and performing arts were regarded as the great hopes for the economy. Agriculture lacked the silver screen factor.

In fact the agricultural sector has a lot to offer. Although choosing to study agriculture, agricultural science, agribusiness or food technology at university is not the easy option, the primary sector offers careers with responsibility, challenge, variety, money, work-life balance, caring for the environment, and doing social good, for instance, as well as the excitement of working for a dynamic and expanding sector. These are all the things that members of the younger generation say that they want in work.

Massey Agriculture is doing what it can to spread the word on the importance of agriculture. We are constantly keeping our subjects and degrees up to date in consultation with industry. We have appointed four new professors in soil, pasture and animal science (as well my own professorship in pastoral agriculture). We do our best to make sure the University promotes agriculture and the opportunities it offers, particularly among the 85 percent of the New Zealand population who live in towns and cities.

Professor Jacqueline Rowarth holds the Foundation Chair of Pastoral Agriculture and is the Director of Massey Agriculture.

However, this isn't enough. If wider society fails to recognise how important our agricultural expertise is in managing the complexities of land use or does not properly acknowledge the overwhelming importance of agriculture to our economy, students will continue to make other choices.

Fast Forward, the Government's new endowment fund for science-food-farms, currently standing at $700 million and building, is a statement about value. The Government has shown that it recognises the importance of the primary sector for the future development of New Zealand. Industry is investing in the fund and the aim is to achieve a $2 billion pool.

The Fast Forward initiative sends the very clear message to society that New Zealand's future is about innovation in food and farms – and that very good, well-funded science is needed to achieve a truly sustainable productive competitive advantage.

With this endorsement, people deciding on where to put their working lives can again choose the primary sector, and all it embraces, with confidence.

The primary sector, from paddock to plate, farm to fork, laboratory to lips, studio to stomach… offers all that people need want and desire from work – and Fast Forward makes it clear that the Government regards the sector as a vital part of New Zealand's future

If we value the research system and environment managers (farmers) as we should, I foresee a bright future. New Zealand can and will lead the world as an innovative, environmentally aware, cost-competitive agricultural producer.

Emperor penguins on the march at Cape Washington near the largest emperor penguin colony in Antarctica. "On the day I took this photo I lay down 30 metres in front of penguins playing 'follow the leader'. They tobogganed to within two metres from me and the lead penguin then stood up. The rest did likewise," says Dr Potter of Massey's Institute of Natural Resources. The image earned him a Highly Commended in the Animal Behaviour category of the 2007 ANZANG Nature and Landscape Photographer of the Year competition.

FEEDBACK

MASSEY readers will know that Associate Professor **Tony Whincup**, Head of the School of Visual and Material Culture and noted photographer (one of whose works appears on the final page of this magazine), has a second existence: the summers he spends in the tiny low-lying Pacific nation of Kiribati.

WATER ON WATER – Kiribati in crisis?, an exhibition being held at Pataka museum and gallery in Porirua City until 22 June, is intended to provoke thought about the devastating effects that climate change could have upon those living on the outer islands of Kiribati.

Interest in the marathon migration of the godwits from New Zealand to Alaska has not receded, and Dr **Phil Battley**, who contributed to the last issue of *MASSEY*, is becoming used to his role as an ambassador for the birds. However, a reader has written to tell us that his comment in passing that Napier airport is to construct a godwit statue is incorrect. A godwit statue is already in place.

To follow the 2008 godwit migration visit http://data.prbo.org/cadc/shorebird/btgo.php.

MASSEY welcomes letters and feedback from readers. E-mail the editor at m.wood@massey.ac.nz. Also welcome are overseas alumni magazines.

Professor **Barrie Macdonald** (pictured at left with Professor Ian Warrington) has retired. Professor Macdonald had been the Pro Vice-Chancellor of the College of Humantities and Social Sciences. Among the many tributes paid to Professor Macdonald at his farewell was one from Associate Professor Peter Lineham, who described him as someone able to write with extraordinary clarity and exceptional realism. Those who have encountered Professor Macdonald's writing in these pages or elsewhere will surely agree.

Professor Macdonald, who has been with Massey since 1971, is to be appointed a Professor Emeritus by the University Council.

ONE DAY SCULPTURE

Ambushed by art

Between June 2008 to June 2009 a series of sculptures will be held across five New Zealand cities. Yes, that is 'held' – don't expect chiselled stone, carved wood, or cast metal. These sculptures are staged and ephemeral events, each occurring within the space of 24 hours.

The *One Day Sculpture* series was launched in Wellington during the New Zealand International Arts Festival with an enactment of artist Roman Ondák's *Good Feelings in Good Times (2003)*, in which a queue of people formed for no apparent reason at several city locations, intriguing and perplexing passers by.

So what can we expect?

In **Auckland** there will be works by Mexico City resident Santiago Sierra and Bik van der Pol – the name given to the pairing of Rotterdam-based artists Liesbeth Bik and Jos van der Pol. Sierra is known for provocative, sometimes controversial installations, while Bik van der Pol's earlier works have taken the form of a library, public picnic space and outdoor hangout.

In **New Plymouth** the Govett Brewster Art Gallery has commissioned Venezualan Javier Téllez (best known for a work in which a human cannonball was 'shot' over the border fence between the US and Mexico) to produce one work, and Liz Allan, the Gallery's New Zealand Artist in Residence, to produce another.

In **Wellington** Amy Howden's *Flood of Tears* will incorporate mass participatory onion chopping and Maddie Leach will explore our fascination with the daily weather. From Spain, Lara Almárcegui will shine a light on parts of the city that residents overlook and from Wales, Bedwyr Willliams, whose works are known for their sense of humour, will seek out its quirkier side. Native American Indian James Luna will create a work for Te Papa.

Roman Ondák's, *Good Feelings in Good Times* (2003), taking place on the Wellington waterfront for the launch of One Day Sculpture, March 2008. *Photo by Steve Rowe*

In **Christchurch** the Christchurch Art Gallery and the contemporary art project space The Physics Room have commissioned work by the Swiss artist Thomas Hirschhorn, who is known for adopting the format of spontaneous public memorials and commemorative roadside shrines to pay tribute to his intellectual heroes.

In **Dunedin** the Blue Oyster Art Project Space will host a three-way collaborative project between Douglas Bagnall (New Zealand), Adam Hyde (New Zealand/The Netherlands) and Walker + Bromwich (United Kingdom).

The One Day Sculpture series was initiated by Massey's Litmus Research Initiative and Claire Doherty, a UK-based curator and director of Situations (www.situations.org.uk). Twelve art galleries and organisations are partners.

To learn more and to follow the progress of the One Day Sculpture series, visit www.onedaysculpture.org.nz.

Massey farewells Vice-Chancellor Professor Judith Kinnear

In February 2008, after a series of staff farewells, Vice-Chancellor Professor Judith Kinnear left Massey to return to Australia. Professor Kinnear who became Massey's Vice-Chancellor in March 2003, said she looked back with satisfaction on five years during which the university has achieved a remarkable record of accomplishment and development in teaching and research and has formed some significant international partnerships

"Thanks to the enterprise and hard work [of our scientific researchers] I have been able to take part in events and developments of real significance and national importance.

"They include, amongst many examples, the opening of the Hopkirk Institute and the Microscopy and Imaging Centre last year, the Prime Minister's 2005 announcement of two Partnerships for Excellence between the University and the equine and agricultural industries, the launch of the new Bio-NMR spectrometer facility – New Zealand's first high-field NMR microscope – in 2004 and some of the extraordinary discoveries by scientists at the Allan Wilson Centre for Molecular Ecology and Evolution, as well as Massey securing the only new Centre of Research Excellence in 2007, the Riddet Centre: Advancing Foods and Biologicals."

During her term, Deputy Vice-Chancellor (Māori) Professor Mason Durie introduced the Māori@Massey strategy, followed last year by Kia Maia (Key Initiatives for a Māori Academic Investment Agenda). She regards her invited attendance at two Rotorua hui on Māori educational issues, as "a great privilege for a vice-chancellor".

She takes a particular – and personal – pride in the University's advances in internationalisation: the academic agreement between Massey and Peking University signed in 2005 providing for teaching and research exchanges was a signal honour for an Australasian university. Massey and Peking universities have since signed two tripartite agreements with ShiHeZi University and the University of Inner Mongolia respectively.

Professor Kinnear, a music lover, also remembers fondly the opening of the New Zealand School of Music, with Victoria University of Wellington, and the "sheer excitement and fun" of the benefit opening at the Wellington campus Museum Building in October 2003 of a photography exhibition by *Lord of the Rings* actor Viggo Mortensen attended by most of the cast and crew of the film trilogy, including Peter Jackson and Fran Walsh.

Former cabinet minister the Hon Steve Maharey will take up his appointment as Vice-Chancellor later in 2008. In the interim, Professor Ian Warrington will be Acting Vice-Chancellor.

Journalism student Matt Chisholm has won the *Dominion Post*'s 2007 Alex Veysey Memorial Prize. The prize, for which only Massey students are eligible, was awarded by editor Tim Pankhurst, who paid tribute to the memory of Veysey, a journalist, writer and editor known for his old fashioned journalism and his zest for life.

New graduate Katherine Ross is the first recipient of the French Embassy medal in recognition of outstanding achievement in French. Ross, a Massey Scholar who graduated in Palmerston North with a BA in French and Linguistics, received the medal from head of the School of Language Studies Professor Phillip Williams, Dr Colin Anderson, Dr Ute Walker and Dr France Grenaudier-Klijn.

Fourth-year Industrial design student Amy Robinson has been awarded the 2007 Zonta Design Award of $5000. Robinson plans to work in Melbourne over 2008 before heading to Europe for postgraduate study.

A new industry-standard audio/visual studio at the University's Wellington campus has been a hit with design students and film production companies. The studio's green screen is used in the background replacement techniques seen in music videos, television weather reports and films such as *The Lord of the Rings*. Pictured is hip hop musician Dartel, the subject of a project by design student Steve Butler (visit digitalmedia.massey.ac.nz).

Thirsty work: Tasting the first brew at the new microbrewery in the Institute for Food, Nutrition and Human Health (from left) are Dr Richard Lloyd, who wrote the software for the plant, Institute head Professor Richard Archer, then Vice-Chancellor Professor Judith Kinnear and brewing adviser John Rutland. Professor Archer said the tasting was arranged for Professor Kinnear to sample the brew on her penultimate day at Massey, after she signed the application for a licence to brew beer on the Palmerston North campus. "The beer was still actively fermenting, cloudy and over-bitter but sweet and flat. But it was recognisably on the way to being beer, and at least we chilled it." Mr Rutland has worked with Professor Archer on the project, donating equipment and encouraging contributions including tanks, a keg filler and a mill from contacts in the brewing industry garnered during his 12 years in the trade. In the background is the mash tun clad in matai staves for insulation, woodwork completed in traditional-style by technician Steve Glasgow from wood salvaged from a now-demolished section of the Riddet building.

Director Ralph Johnson, Massey's summer artist in residence, (at right) illustrates a point to Leigh McLennon playing Lady Capulet, while Samuel Gordon plays the dying Tybault. Summer Shakespeare has become a Palmerston North institution.

Paramount chief of Ngāti Tuwharetoa Tumu te Heuheu received an honorary doctorate from Massey University in a special ceremony held in November at the Waihi Marae, a venue chosen by Ngāti Tuwharetoa. More than 50 University staff travelled to the shores of Lake Taupo to gather with Dr Te Heuheu's whānau to mark the occasion. In the Graduation address, Minister of Māori Affairs, Parekura Horomia acknowledged the major contribution of Dr Te Heuheu to New Zealand and especially his leadership in the protection of national and international heritage. Dr Te Heuheu is chair of the United Nations Education, Scientific and Cultural Organisation's World Heritage Committee. He succeeded his father Sir Hepi Te Heuheu as paramount chief in 1997.

Five-year study will support troubled youth

The most comprehensive ever study of troubled young New Zealanders is to be led by Massey, with a focus on support and interventions for struggling youth. The Pathways to Resilience project will receive $3.75 million of the total $8.1 million announced by the Foundation for Research, Science and Technology in late March as part of the Building an Inclusive Society portfolio.

Principal investigator Dr Jackie Sanders says the Resilience project will run for five years, following 480 troubled young people – those known to government agencies including Child, Youth and Family – to find what works to overcome adversity and turn their lives around.

"It's really trying to understand from young people what makes the most difference to them – what distinguishes young people who can overcome adversity from those who don't. This will provide us with information on the kinds of things we can do … the sorts of things that are most likely to make a difference for young people."

Dr Sanders says the team, which includes collaborators from Victoria and Otago universities and the Donald Beasley Institute, will interview more than 1600 people from statutory agencies including education, welfare and justice, and non-government organisations to identify the protective factors that support a positive outcome.

"Practitioners know in their gut," Dr Sanders says, "but this study is designed to tap into the wisdom that's out there and verify it with case records of young people. To be able to say 'if we can do this and do it properly these are the outcomes we can expect' is a huge step forward. Outcomes can and do change for young people but it's difficult to know what made the change."

The study is part of the international resilience project, flowing from a lead study in Canada led by Dr Michael Ungar. The aim is to identify the combination of services and interventions to support better outcomes for troubled youth.

Dr Sanders says that intervening reduces both cost and the damage troubled young people inflict upon themselves. "Not intervening effectively means that a number of these young people will graduate into the adult criminal justice system. We also hear from professionals in services that it appears that children and young people are starting to show signs of distress at younger ages and that their behaviours are starting to become more serious sooner.

"While many of these youth commit only one offence or come to the notice of authorities on relatively few occasions, a small group come to attention repeatedly. For this group the average number of convictions is 51 and the costs of intervening are high; on average they cost $3.1 million and the top 10 per cent cost $6 million each."

Dr Sanders says that a comparison group of 480 young people who are doing okay will also be followed.

"One of the things we are interested in is what are the differences, where is the edge that young people fall over where their situation becomes high-risk? Where is that tipping point?"

Dr Ungar visited Dr Sanders and Professor Robyn Munford at the University's School of Social Work and Social Policy last year to identify opportunities for the resilience project. He is returning to New Zealand later this year to assist with establishing the project.

Wide awake

Sleep researcher Dr Sarah-Jane Paine has been awarded the Health Research Council Eru Pomare Research Fellowship in Māori Health, worth $463,000 over three years.

Dr Paine, from the Sleep/Wake Research Centre in Wellington, will continue her research into the circadian body clock and how it regulates sleep timing. She will also compare the prevalence of circadian rhythm sleep disorders in Māori and non-Māori, and examine relationships with age, sex, night work and socio-economic deprivation. Dr Paine also plans to develop best-practice guidelines to improve health service delivery for Māori, using sleep disorders as a case study.

The fellowship honours the legacy of Professor Pomare and his contributions to gastroenterology. It provides funding for emerging leaders in Māori health research with a PhD or equivalent, for clinical or medical research.

Industrial Design students race their designs for pedal-powered watercraft on the rowing club lagoon in central Wellington.

The snail's tale

On a small, barren, mist-enshrouded plateau edge on the South Island's West Coast there once lived a small population of large carnivorous snail.

Beneath them lay a rich seam of coal worth many millions of dollars to the local economy. What would you have done? Left the habitat untouched and forgone the income? Mined the coal and accepted the loss of the snails? Tried for a compromise and transferred the snails to some habitat not threatened by economic development?

This is no class exercise – these event have taken place. The snails are members of the endemic New Zealand genus *Powelliphanta*, the place is Mount Augustus on the South Island's West Coast, the mining company is Solid Energy and the compromise solution was chosen: about 60 percent of the population were captured, with a third transferred to land beneath the existing colony (marginal land occupied naturally by few snails), a third translocated to another plateau (where they will be in competition with another snail species), and a third remain in storage.

How do you assign a value to a population of native snails? Partly it depends on your philosophical standpoint, partly on what you know about those snails. In a paper in *Conservation Genetics*, Steve Trewick of Massey, who is with the Allan Wilson Centre for Molecular Ecology and Evolution, Kath Walker of the Department of Conservation, and postgraduate Corina Jordan describe work to determine whether the Mt Augustus *Powelliphanta* is "a distinct evolutionary lineage and therefore a unique part of New Zealand's biodiversity or a genetically undifferentiated but isolated population of a more wide-spread taxon". Just 1.5 kilometres away from Mt Augustus beneath the forest line is a population of another snail, *Powelliphanta patrickensis*, and, in the lowland forest, *Powelliphanta lignaria* looks very similar. Was the Mount Augustus snail a near relative of either of these or something more interesting?

Trewick and his colleagues compared the ecology, form, habits and mitochondrial DNA of a number of *Powelliphanta* species before concluding that "the combined weight of evidence indicates that it [the Mt Augustus snail] should be treated as a separate species".

So what happens now? As the paper's authors note, by the time the species is formally recognised "the land where it lived will have ceased to exist"; the habitats the snail has been transplanted to are characterised as "at best suboptimal".

Not entirely drowned

Has New Zealand always been above water – as the more traditional scientific viewpoint holds – or, as some now argue, was there once a time when it was entirely submerged. Both sides agree on the existence of the so-called Oligocene drowning period, some 26-38 million years ago when the New Zealand landmasses were greatly reduced in size. But were there still fragments of land where plants and animals held out?

Now a new witness has been called to the stand: the New Zealand kauri, *Agathis australis*. A DNA analysis conducted by the Massey-hosted Allan Wilson Centre has shown that *A. australis* diverged from its Australian near relative in the ancient past rather than during the comparatively recent Oligocene.

"The simplest explanation for the molecular clock findings is that New Zealand has existed ever since it rafted away from Gondwana, more than 80 million years ago," says Professor Peter Lockhart (pictured at right).

"If this is so, New Zealand kauri may well have a whakapapa that traces back to 95-million-year-old South Island fossils."

The study, part of a PhD dissertation by Dr Michael Knapp in Massey's Institute of Molecular BioSciences, was published recently in the journal *Systematic Biology*.

Another odd thing about tuatara...

A study of New Zealand's "living fossil", the tuatara, has revealed that at the DNA level the tuatara has the highest evolutionary rate anyone has ever measured.

Evolutionary biologist Professor David Lambert and a team from the Allan Wilson Centre for Molecular Ecology and Evolution recovered DNA sequences from the bones of ancient tuatara up to 8000 years old and compared them with present-day tuatara. The significant changes in the DNA (molecular evolution) over time have not, however, equated to significant changes in physical form (morphological evolution). In fact, to look at, the tuatara has hardly changed at all over long periods of evolution.

"We would have expected that the tuatara, which does everything slowly – they grow slowly, reproduce slowly and have a very slow metabolism – would have evolved slowly," says Professor Lambert. "In fact, at the DNA level, they evolve extremely quickly, which supports a hypothesis proposed by the evolutionary biologist Allan Wilson, who suggested that the rate of molecular evolution was uncoupled from the rate of morphological evolution."

The research appears in the international journal *Trends in Genetics*.

Smelling a rat

A novel experiment using laboratory rats to attract wild rats could pave the way for rat-perfumed bait capable of reducing the millions of rats threatening New Zealand's native species, say Massey conservation researchers. Using caged lab rats as decoys – so-called Judas rats – Anna Gsell and Mark Seabrook-Davison, Auckland-based PhD researchers at Massey's Institute of Natural Resources, placed a series of cages near private bush on a farm north of Albany and used inked track pads to see whether wild rats were attracted.

Many were – and cages containing rat-scented bedding also proved good lures. "The idea is based on the mate searching behaviour of rodents in the wild," they say.

"We wanted to see whether we could use the odour of lab rats to attract wild rats," says Gsell, who hopes the positive results of the study will lead to the synthesis of a rat scent that can be commercially used in baits and traps.

Word of their study also reached the Department of Conservation, which recruited the researchers and their rats for an emergency rat-catching mission on a pest-free island in the Hauraki Gulf when a rogue rat was seen. The University's Judas rats were walked on leashes around areas of the island, leaving their scent in the hope of attracting the vagrant wild rat, which was caught the following day 50 metres from where the rats were placed in cages.

Gsell and Seabrook-Davison say the results look very promising. Norway and Ship rats are major predators of many of New Zealand's indigenous animals.

Luis Ortiz-Catedral from the Institute of Natural Resources tracks orange-fronted kakariki on Maud Island in the Marlborough Sounds after a successful translocation. Ortiz-Catedral is now planning a large-scale translocation of their relative, the red-crowned kakariki. 100 kakariki are being resettled from Little Barrier Island, where they are abundant, to Rakino Island, Motuihe Islands and the Tawharanui conservation reserve north of Auckland.

Easy with Eve

Meet Eve, a virtual teacher whose near-human performance has drawn the attention of scientists across the computing world. Eve, who is designed to teach eight-year-olds mathematics, as an intelligent or affective tutoring system. If the child facing her across the keyboard becomes frustrated, angry or confused, then Eve will pick up the cues and adapt the way she teaches to suit. Eve asks questions – in a remarkably 'natural' voice – gives feedback, discusses questions and solutions, and shows emotion.

Dr Hossein Sarrafzadeh who led the Massey team that developed the system they have called "Easy with Eve" is with the Institute of Information and Mathematical Sciences on the Auckland campus. To develop Eve, he and the team captured thousands of images of children and teachers interacting and analysed the facial expressions, gestures and body movements. Then they developed programs to capture and recognise facial expression, body movement, and (via a mouse) heart rate and skin resistance.

"When we interact with people we expect them to take note of our feelings and reactions. Soon we will be able to expect the same from a computer," says Dr Sarrafzadeh.

The e-learning market is worth an estimated $25 billion.

The introductory video of virtual Eve can be viewed at news.massey.ac.nz/quicktime/eve-intro.mov.

Engineering students from Wellington campus Chris Robertson, George Buurman and Guy Meuli hunt for electronic ducks. Duck for Cover is a game of fighting an 'enemy' while protecting 'civilians'. The game comprises a Gamekeeper, and numerous ducks of three breeds: Desperado, Donald, and Daffy. The students' task is to design the Gamekeeper. Each duck transmits a coded infra-red signal. The Gamekeeper must locate the duck, detect the signal, decode the identity, and if it is Desperado, transmit a signal that deactivates it.

Remote possibilities

You're on holiday but wondering if all is well at your home, or you want to check if the bach has weathered a storm. Technology developed by engineering graduate Tom Yu Guan means you now have an extra pair of eyes when you can't be there, able to move anywhere you choose, with distance no object.

Guan designed and built the Smart Eyes robot for his honours engineering project. An off-the-shelf remote-control rally car with a cellphone-capable videocam mounted on the roof has been modified to allow it to be operated via cellphone, feeding footage to a video-capable cellphone anywhere in the world.

Guan says he had always planned to manufacture a surveillance product, and after he realised there were no products on the market that allowed the camera to move, he knew what he wanted to create.

"Visual data is very valuable to people and this thing captures visual data very easily – one picture paints a thousand words, they say! I hope it could be used for fun, or for security – even for entertaining pets while you're at work."

Guan, who started work in March for a major global technology company, purchased the remote control car off the shelf. He then designed and built the upgrade, putting additional technology "on top" and getting the system working in a matter of weeks. The Ford-modelled rally car proudly displays the Chinese flag, a gesture acknowledging Guan's homeland, and displays 'Guan' as the driver in the style of the World Rally Car flags.

Guan has tested the car around the university and in his Palmerston North home, using the video to scout around his property. He is also planning to operate the car in New Zealand from Europe. "So long as the cellphone is in range it should work," he says.

School of Engineering and Technology lecturer Amal Punchihewa supervised the project, and says he is impressed with the concept.

"My wife and I have her mother at home and one day when we phoned there was no answer. Wondering what was happening we had to get a friend to go home and see what was going on. If we had something like this we could just have dialled in and known she was fine."

Punchihewa says the standard of fourth-year projects was very high in 2007, with others including smart home monitoring and control systems.

"It's a chance to apply what they have learned in theoretical papers to practice, and to learn how to manage a project."

Guan has won several competitions so far with Smart Eyes, and will be competing in Australia soon to see if he will represent the South Pacific at the global IET competition in Europe, where Massey engineering graduate Stephen Irecki took second place last year. In the meantime, Guan is working at the Institute of Information Sciences and Technology at Massey to build one more Smart Eyes robot.

"And I have an idea of putting a video system into a model helicopter, controlled robotically, to see if we can do that and avoid things like furniture or obstacles," he says.

Success and succession – small business owners plan to move on

Thirty four per cent of the country's small business owners indicate they intend to exit their businesses within the next five years and 64 per cent want to exit within the next decade, according to a report by Professor Claire Massey and researcher Dr Martina Battisti of the New Zealand Centre for Small and Medium Enterprise Research.

The report examined the succession plans of New Zealand's small and medium-sized business owners, many of whom are now nearing retirement age. In New Zealand 350,000 small and medium sized enterprises make up more than 99 per cent of all business and account for about 50 per cent of employment.

The Centre has recently completed a report on the succession perspectives from small enterprises for the Ministry of Economic Development. This was based on a survey which had more than 1300 respondents.

Small and medium enterprises are defined as: micro enterprise – fewer than five staff, small enterprise – between six and 49 staff, medium enterprise – between 50 and 99 staff.

Of the 1330 respondents, the majority (67 per cent) were aged between 41 and 60. Twenty-two per cent were more than 60 years old. Average turnover in the businesses surveyed was slightly in excess $3 million with the top earner at $80 million.

Asked about plans for exiting their firms, 58 per cent of the owners indicated they were thinking of selling, 36 wanted to pass the business on and 7 per cent said they were intending to sell or wind the business down. Forty seven per cent had an exit plan but mostly these plans were unwritten or informal.

The greatest barrier to exiting a business, owners reported, was the dependence of the firm on the owner's involvement. This was the case for 62 per cent of those surveyed. Fifty-six envisaged problems finding a suitable successor or buyer and 42 per cent said they found the thought of leaving the firm unpleasant.

Of those who had no plans to exit their business, 75 per cent said that it was too soon to make a plan and 38 per cent said they didn't have time to deal with the issue.

Compared to the micro firms with fewer than five staff, the small firms were more likely to have an exit plan. They believed that an exit plan provides financial stability to the firm, maintains harmony with employees, increases the value of the firm and improves the financial standing of the firm.

Not many mothers and daughters chill out after work by discussing the intricacies of algebraic formulas and revolutions in mathematical pedagogy, but Bobbie and Jodie Hunter (pictured left to right) cannot help themselves. To say the love of learning and teaching maths is a way of life for the pair would be an understatement. In April the two graduated together in Auckland – Dr Bobbie Hunter with a PhD in Education and her daughter Jodie with a Master's in Education. Both have researched different aspects of teaching maths – something they are passionate about improving in New Zealand. Their research interests intersected over how best to match teaching tools and methods with the social habits and perspectives of various ethnic groups. And they both conducted research in "inquiry classroom" settings, whereby students work in groups to question, argue and reason their way through mathematical problem-solving. Dr Hunter, a senior lecturer at the College of Education on the Auckland campus, says the notion that some people are just naturally good at maths while others are not is false. "People who are good at maths are those who have been taught well. Most of those who aren't good, or don't enjoy it, have been taught badly," she says.

A nice cup of tea

Shiromani Jayasekera of the Riddet Institute has entered into a research partnership with tea producer Dilmah.

Jayasekera, a PhD student at the Riddet Institute, collected tea samples from Sri Lanka's main Ceylon tea growing regions over a 12-month period, shipping them to the Institute's home laboratory on the Palmerston North campus for further analysis.

Jayasekera assessed the effect of altitude, soil type, weather, processing and freshness on the tea's antioxidant properties,

Dilmah marketing director Dilhan Fernando says the research proves that the quality, flavour and composition of tea is affected by many things in the same way wines are affected.

"Dilmah is keen to continue to learn more about the complexity of its teas," Fernando says, "so it can offer tea drinkers as much information as possible about its health-giving properties."

Co-director of the Institute Distinguished Professor Paul Moughan says the Riddet Institute has had a long and productive association with Dilmah. "The results of the tea research are so encouraging that it is planned to follow up with in vivo tests in humans next year," Professor Moughan says.

From left: Dilmah marketing director Dilhan Fernando, researcher Shiromani Jayasekera, Distinguished Professor Paul Moughan, with Dilmah founder Merrill Fernando.

Partners for peace

A 'Rainbow Warrior' scholarship has been awarded to Massey PhD student Laura Jacobs-Garrod (pictured above) for her work on improving the way military and humanitarian organisations work together in complex emergencies. The Peace and Disarmament Education Trust scholarship provides $21,000 to support Ms Garrod's study, funded from the $1.5 million received from France in recognition of the events surrounding the destruction of the Rainbow Warrior. The trust's aim is to advance education and thereby promote international peace, arms control and disarmament.

Ms Jacobs-Garrod, a Centre for Defence Studies graduate student, is completing her thesis on *The Humanitarian and the Soldier: Partners for Peace?* Case studies on Somalia, Bosnia, East Timor and Afghanistan have been developed to compare US and New Zealand military and non-governmental organisations.

"In the past military forces and NGO professionals have been at odds as to how to carry out their respective mandates – often they have very different goals. It's a relationship of necessity so the question is how do we enable them to work together more effectively."

Ms Jacobs-Garrod completed her BA in political science at the University of Oregon, and an MA in international relations at Victoria University on a Rotary International Ambassadorial Scholarship. Originally from the US, Ms Jacobs-Garrod's father was in the United States Marine Corps and her mother worked for the Red Cross.

"My real interest in this subject stems from a UN peacekeeping course I did during my undergraduate study," she says, "looking at the problems post-Cold War and ways to improve our approaches to complex emergencies.

"Complex emergencies are continuing to emerge, that's the unfortunate trend so how we respond is only going to become more of a pressing issue."

Jazz thesis tells of a little man with a huge talent

Legendary jazz pianist Michel Petrucciani was but three-feet tall. He played with his chin near the keyboard and his short legs attached to a special contraption enabling him to use foot pedals. The poignant story of his short life and remarkable musical career, which began in France where he was born and ended in the United States with his death at the age of 36 in 1999, is captured in a Master of Philosophy jazz thesis by one of New Zealand's leading jazz pianists.

Auckland-based Jazz Studies tutor and jazzman Phil Broadhurst revisited Petrucciani's haunts in Paris and the south of France for his study of how this extraordinary Frenchman's musicianship earned him widespread acclaim in Europe and the United States, despite his overwhelming physical limitations.

"Colouring any discussion of Michel Petrucciani's music is the fact that throughout his life, he suffered from *osteogenesis imperfecta* (glass bones disease)," writes Broadhurst in his thesis titled Against All Odds – the life and music of Michel Petrucciani.

"He had to be carried on to the stage in his early career before gaining enough strength to walk with the aid of crutches. His stubborn refusal to allow his incapacity to limit his talent was an inspiration to all, but to what extent the novelty of his disability contributed to his fame is open to question."

Petrucciani, who was already playing at festivals with top French jazz musicians in his mid-teens and soon after performing at jazz clubs in Paris, made the big time when he moved to the US where he first joined forces with renowned saxophonist Charles Lloyd and later recorded with iconic jazz label Blue Note.

He impressed those around him by living life to the full rather than dwelling on his physical suffering. He never complained about his aching joints and muscles but sometimes sought relief from severe pain by soaking in a scalding bath as a distraction. He had numerous romantic relationships and a penchant for partying, as well as a generous, gregarious nature which infused his music.

"His enormous appetite for life spilled out on to the keys. He could be, in turn, playful, spontaneous, joyful, serious, humorous, tender, direct, romantic, dominating, crafty, bawdy and self-indulgent. All these characteristics emerge at one time or another in his music," writes Broadhurst.

Bringing together a rich tapestry of interviews translated from French publications as well as his own face-to-face interviews in France with Petrucciani's friends and fellow musicians, Broadhurst – a fluent French speaker, self-confessed Francophile and former high school French language teacher – provides detailed analysis of Petrucianni's original compositions, musical style and influences.

"Any consideration of Michel Petrucciani's greatness as a player has to take into account the ailment that dogged his career..." he writes, adding that years after his death "it remains difficult to divorce his physical struggle from the musical evidence that Petrucciani left behind. Hearing the piano keys hit with such clarity and force cannot help but remind us of those large hands extending from his relatively bulky torso contrasting so dramatically with such thin, ineffective legs dangling in mid-air."

Michel Petrucciani outlived medical expectations, exuding boundless energy almost until his death and with a focus on pleasing the audience in concert.

"I always play for people," Petrucciani is quoted as saying. "I hope that after every concert they go away happy and want to come back. My music isn't intellectual; it's sensual and full of song."

Sculptor Brett Graham (Ngati Koroki Kahukura) and video artist Rachael Rakena (Ngai Tahu, Nga Puhi), a Massey visual arts lecturer, stand before their work *Aniwaniwa* now installed in Wellington's City Gallery. Displayed as part of last year's Venice Biennale, the work employs a sequence of video projections contained within five suspended wakahuia (treasure boxes) and a haunting soundtrack to evoke the flooding and loss of the Waikato village of Horahora to the rising waters of the Lake Karapiro dam. Visitors to the gallery recline on black mattresses and pillows laid out marae fashion to view Rakena's video footage, which was shot inside a scuba-diving training pool using students, friends and her family to represent the ghosts of the community that was. The soundtrack is by musician Whirimako Black, opera singer Deborah Wai Kapohe and Paddy Free of Pitch Black. The work can also be seen as a mediation on rising sea levels and global warming.

Aniwaniwa will be on display at the City Gallery until June 15.

Image courtesy of Jennifer French

Taking it to the bank

Adam Gifford talks to banker, soldier and adventurer Paul Bayly

On a Monday morning Paul Bayly is building an M26 Supermarine Spitfire.

Not a full-size Spitfire, but an 80-percent-scale kitset replica of the plane that kept the Luftwaffe from seizing England's skies in the Battle of Britain.

Working at the Museum of Transport and Technology with a team of four volunteers, he is assembling aluminium components, getting ready to drop in the 380 horsepower motor that will one day get the plane travelling at more than 200 knots.

"Every boy grows up, but when I saw this for sale, I thought 'why not'," he tells me.

Paul is also involved in MOTAT as a board member who chairs the fundraising sub-committee.

"We need about $20 million for a new hangar so it's a big project, lots of governance. When you're accepting a lot of money from people it needs to be spent well."

Bayly is a director of the merchant bank Cranleigh, which he founded in 1996 with twin brother Andy, another Massey BBS graduate. Bayly has been in the money game for more than 20 years.

I am next scheduled to meet Bayly at Cranleigh's Vulcan Lane offices, but a call comes through at 7am. "I'm going to be at Arch Hill this morning. Can we meet there?"

That's how I discover Bayly, in addition to being a banker, is the Commander of the Auckland and Northland Regiment, overseeing two battalions of Territorials.

"It could be a full-time job. My predecessor did that, more or less, but I try to work this round everything else," he says.

For a soldier he's not physically imposing, but he's wiry and obviously fit and he projects an air of easy efficiency as he attends to his paperwork, gets a quick update from staff on various projects, and then takes me on a tour of the headquarters, with its battle standards, photo memorabilia, and prized pieces of ancient weaponry.

Bayly talks about the people who have passed before him, including another Bayly, this one a not-so-distant relative, who commanded the Auckland Company in World War I and died when a stray machine gun bullet hit him while on board the boat taking him to shore at Gallipoli.

Bayly didn't know of the connection when he joined the Regiment. But the Bayly family have been well represented in the military. His father was in the Royal New Zealand Air Force in the Solomon Islands during World War II, a grandfather was at Gallipoli and the Western Front, and his great-grandfather fought in the New Zealand Wars.

"There are some families where the generations fall at the wrong time so they get called up," he explains.

Bayly joined the Regiment as part of 1985 Territorial intake immediately after graduating from Massey.

"I thought, 'where else can I get experience leading people'," Bayly says.

"I thought I would only be in for a few years. Give it a go, have a bit of fun, and here I am into my 22nd year. It's the longest thing I have done in my life."

Bayly spent a year in the ranks – "I was hopeless, couldn't march, real country boy, overlong steps" – before taking a commission. When he later moved to Britain he joined the Queen's Regiment in London

"I had a wonderful time. It was real British stuff. Officer training every Tuesday night, you wouldn't miss it. A wonderful meal, five courses, brandy, port, cigars, the whole lot.

"The cocktail parties were fun."

Later still, during a stint in Australia, he would join the Australian Commando Regiment, which is part of their Special Forces. "That was a tougher game and much more satisfying."

When Bayly calls himself a country boy, he is being no more than literal. The family farm was at Kai Iwi, near Wanganui, and Bayly and his brother went to Wanganui Collegiate before heading off to Massey.

"I did accounting and finance for my first degree. I had a bloody good time, rowed for Massey, I was in the New Zealand Universities Rowing VIII for three years, so that was my other big thing."

On graduation, rather than join an accounting firm – the choice made by every other graduate in his class – he joined New Zealand Steel. It was the middle of the Think Big era, and the steel mill was in expansion mode.

"It was a fantastic operation, very exciting. I was living at Glenbrook, auditing, looking at business proposals and company acquisitions, and that crystallised my thinking. I knew I wanted to get into merchant banking.

"I worked for a year and then went back to uni. I did 11 papers that year, worked incredibly hard. I think you need that year somewhere in your life."

With chartered accounting and cost management accounting tickets to his name, Bayly then joined Citibank's New Zealand branch as a management trainee.

"It was great training. I did two months in the Philippines, and when I came back to New Zealand they said 'Why don't you set up the world corporate group?'" With one of his colleagues, he went on to do just that, targeting multinationals that had global relationships with Citibank and weaning them off the local banks they had been using.

"I learned a lot about multinationals, how they shift money around, the way they manage tax liabilities."

In late 1987 Bayly began postgraduate studies in economics at the prestigious London School of Economics, helped by a Portuguese flatmate who tutored him in mathematics in exchange for English lessons.

"In other places economics is all theory, but LSE wants to see the maths so I really needed to bone up. The only way to do it was to get in donkey deep. I got a distinction in maths that year."

(Antonio Franco, the helpful flatmate, is now the World Bank country manager Timor-Leste.)

continued overleaf

At the end of the year, in the wake of the sharemarket crash, Bayly took up contract work for small merchant banks, carving out a niche in the City.

Here he found being a Kiwi had its advantages. "They don't know how to handle colonials," he says. Humour and a healthy disregard for the establishment helped him negotiate the complexities of the British class system.

Next came Africa, where Bayly took on a two-year contract to facilitate trade of plantation-based forestry products across eastern and southern Africa for the UN Development Programme and the Food and Agriculture Organisation.

"It was interesting work. I had the info, I had the money and the contacts. I went around Africa putting people in touch with one another."

When his time in Africa drew to a close, Bayly had a watershed decision to make – take up a job running a timber mill in Swaziland or head Down Under to pursue a relationship with a woman he had first met at a London party before his African contract began.

The heart won out, and Bayly ended up in Australia with wife-to-be Laura, working for a range of firms.

He returned to New Zealand in 1996 and immediately started some projects with twin brother Andy, who had made his own way in the financial world at KPMG, Southpac and Lloyds Merchant Bank in London.

"We bought a print finishing company, invested in a waste bin business, did a luxury townhouse development in Parnell, and all the time people who knew Andy from Southpac would come for business advice.

"Most of our time was spent in the print business in south Auckland. It had a big boardroom, with a double pane window looking out at the factory.

"It was great advertising. People would come to talk about their problems, and they could see we understood business – after all, our own successful business was on the other side of that glass.

"After some time we thought we should do it properly, so we set up our merchant banking firm and it's grown from there

1980 – 82, 84	Massey University, Bachelor of Business Studies (Accounting and Finance)
1987 – 88	London School of Economics, Bachelor of Science (Economics) – Passed Postgraduate Diploma with Merit, including a Distinction in Mathematics
1997 – 00	Massey University, Master of Philosophy (Defence and Strategic Studies)
2008	Harvard University John F Kennedy School of Government, Senior Executive Fellows Programme

continued from previous page

to include investment banking, corporate advisory and latterly getting into asset management following the launch of our first fund to invest in clean energy technologies." The firm has its main office in Auckland servicing clients throughout New Zealand. They have also recently opened an office in Sydney as they are increasingly advising on international deals.

He says Cranleigh's strength is its understanding of New Zealand conditions.

"We do offer advice, but we're more interested in achieving an outcome. We want to make sure there's some implementation."

Bayly says the elegant models and flow charts presented by some of the big name international consulting firms aren't necessarily appreciated by New Zealand business.

"They want practical stuff like 'how do I address issues to do with economies of scale or foreign exchange? How do I address succession planning when my family is against me and my children aren't interested? Or, I've worked 50 years and it's going down the gurgler? How do I merge my business or sell it? How do I list it? What can I do to grow it? How do I de-risk it? How do I get my weekend back?'

Good information, he says, is key – and good information is something many businesses lack.

Bayly has also been a member of the Small Business Advisory Board since early 2007. The board, its members appointed by Cabinet, scrutinises government policy that affects small businesses. Government departments are required to consult with SBAG before they submit their policy recommendations to Cabinet.

"We report annually on Government's performance in developing and implementing small-business friendly government policy and legislation. It is a responsibility that you have to exercise carefully."

One of the organisations Bayly advises is Massey, helping his alma mater think about its business more commercially, not just managing its balance sheet but getting to grips with issues like long term financial forecasting.

He would like to see more research partnerships between universities and the private sector. "There's the potential for us to do more here. We've got some bloody good minds here. But it's so fragmented and dispersed. We need a concentration of effort and a New Zealand Inc. perspective."

www.cranleigh.co.nz

In history's wake

A few nights into the Indian Ocean, Paul Bayly was starting to question what he was doing.

The wind had risen, and, hauled along by its massive mainsail, the Borobudur, a reconstruction of an Indonesian double hulled ship from the 7th century, wasn't handling the conditions well. "Every so often the outrigger would catch on a wave and haul the ship over," Bayly says.

"The night watch guy said he'd seen the speed gauge showing 13 knots as we hoofed down these huge waves. Late that evening someone said they'd seen 16 knots. The highest speed over 24 hours was 22 knots.

"It was fast, noisy and scary."

In the cold light of morning, the question was asked: "Is this a race or something?"

"We decided to trim the sail at night, and after that it got safer," Bayly says.

The voyage was the dream of Philip Beale, an ex Royal Navy, ex sharebroker and banker, Bayly had met during his time in the City of London. Beale had seen the design of his vessel-to-be in a carving on the Borobudur temple in central Java.

"He talked for years about sailing from Indonesia to Africa," says Bayly.

"He rang me in 2002 and said 'I've left my job and I'm going to do it'."

If boats like the Borobudur had been used to trade with Africa, that might help explain the presence of Indonesian plants and cultural influences in Madagascar and mainland Africa.

Bayly was brought in to do logistics and safety. "I had done a lot of amphibious ops with the Commandos so I knew about things water and safety issues.

"The safety briefing was 'don't fall off, and if you do, grab something, because it will be two or three hours before we can turn round and get you – if you are lucky'."

The Borobudur left Jakarta on August 15, 2004, arrived in the Seychelles in late September before heading south to Madagascar and on to Capetown, arriving there the following January. The voyage finally finished at Accra in Ghana.

"Phil had the idea they could have got round the Cape of Good Hope with the technology that was available at the time, and he proved they could."

Beale now wants to recreate the circumnavigation of Africa by a Phoenician trireme in 600 BC. The ship is being built on an island off Syria.

"It's due to launch in June 08, and the difference this time is we will have rowing as well. I can't wait," Bayly says.

"I'm going to beat the drum or something."

www.phoenicia.org.uk

Defence expert

Malcolm Wood talks to Melbourne-based medical researcher Jane Oliaro

Notwithstanding all of those advertisements for washing powders and cleaning agents, the very best defence against infection is the one the body mounts itself. Every day we inhale or swallow many thousands of bacteria and viruses that would, in the absence of an immune response, make short work of us, not to mention the body's own rogue cells – cancers and tumours – that must be kept in check.

How does the immune system work? The complexity and sophistication of our multilayered immune system and the way it deals with pathogens have been a career-long fascination for Jane Oliaro, who in December 2007 was honoured with an achievement award by Australia's National Health and Medical Research Council (NHMRC).

The award came as the icing on the cake for an ebullient Oliaro, a researcher at Melbourne's Peter MacCallum Cancer Centre. She loves Melbourne, loves what she does. Down the long distance line her voice fizzes with enthusiasm.

Among the people celebrating Oliaro's success is Associate Professor Alan Murray of Massey's Institute of Veterinary, Animal and Biomedical Sciences, who in 1993 employed Oliaro as a Research Assistant. Murray, who specialises in a hardy group of bacteria called *Mycobacteria*, needed someone to help with work on *Mycobacterium paratuberculosis*, a bacterium which causes Johne's disease in sheep and cattle.

The young woman he employed might have been a godsend. A first class honours graduate from Melbourne's Monash University, Oliaro had been working in a series of casual jobs in Palmerston North, a city she had relocated to for reasons of the heart. ("I was young," Oliaro laughs.)

Murray was principally interested in *M. paratuberculosis* as an animal disease, but the bacterium is also a principal suspect in Crohn's disease in humans, and in Wellington's Wakefield Clinic gastroenterologist Professor Vinton Chadwick began taking an interest in the laboratory's work.

It was Professor Chadwick who proposed that the laboratory should take a look at another bacterium, *Helicobacter pylori*. In the early 1980s, as is now the stuff of scientific legend, two Australian scientists (Drs Robin Warren and Barry Marshall, who would later win the Nobel Prize for their work) had broken with the conventional medical wisdom: stress, worry or diet, was not the principal cause of stomach ulcers, they said, *H. pylori* was.

The implications? If you suffered from ulcers, there was suddenly the prospect that your condition could be cured with a short-term course of antibiotics rather than held at bay with a lifetime's worth of medications. *H. pylori* was suddenly a hot research topic.

For her PhD at Massey, Oliaro set out to identify proteins expressed by *H. pylori* which initiated an immune response. The idea was that if the body were producing antibodies to one of the bacteria's proteins, then this could be used in diagnosis – a blood test is a less unpleasant procedure than a stomach biopsy – or in the eventual creation of a vaccine. Eventually Oliaro was successful in detecting a candidate lipoprotein which gave rise to antibodies in 70 percent of the *Helicobacter*-infected patients tested.

Oliaro then took up a postdoctoral fellowship at the University of Montpellier in the South of France. This time her research subject was the host response to Brucellosis, a disease of farm animals that can be passed on to humans via animal products. "It was fantastic. I loved France, the lab was great and the work was really interesting."

That must have been a study in contrasts: Manawatu versus the South of France; Palmerston North versus Montpellier? Strangely enough, says Oliaro, there were likenesses. Both Palmerston North and Montpellier are very much student cities, full of bars and pubs, bustling with life during term time and falling quiet during the breaks.

In 2002 Oliaro returned to Melbourne to join the Peter MacCallum Cancer Centre, the largest cancer research group in Australia, where she is now a member of the cancer immunology division and works in the immune signalling laboratory.

Oliaro is particularly interested in a category of immune cells called T cells, the 't' standing for thymus, where the cells mature. Some subsets of T cell direct and regulate immune responses; others directly attack infected or cancerous cells, injecting them with packets of cell-killing molecules.

"We are trying to understand how T cells generate the multitude of different kinds of cells that are required in an immune response.

"One of the viruses we are interested is measles, which we have shown can influence the immune response by confusing the signals that the T cell gets."

One source of signals are antigen-presenting cells, which prime certain T cells to mount a response to an invading pathogen. "They tell the T cells to activate, to proliferate, and to go off and kill," says Oliaro.

"When some viruses, like the measles virus, bind to the T cell they can tell it to change its form in such a way that it can't respond properly to the antigen presenting cells any more, which we think might be a cause of suppressed immunity in these patients."

Oliaro's work might lead to ways of fine tuning the immune response to better combat infection or cancer.

The NHMRC achievement award came about almost by accident. Oliaro had applied to the NHMRC for a category-one career development award, a fellowship open to postdoctoral researchers two-to-seven years out of their PhDs. Oliaro was seven years out and she knew that of the 300 applicants perhaps 30 would be successful. In 2007 she learned she was one of them. But it did not stop there. The NHMRC then decided that whichever of their applicants was ranked most highly should be honoured with the achievement award. "It turned out I was the top," says Oliaro with amused aplomb.

Why the ranking? First, that measure of academic success, her publication record. In the last three years she has been a co-author of papers in *Immunity*, the *Proceedings of National Academy of Science*, and, most prestigiously of all, *Science* magazine. Second, her ability to attract funding. "The year before the award I received a research grant of half a million dollars."

Does she still keep in touch with Massey? Yes, it's the place where arguably her research career began, e-mails do make their way across the Tasman, and she visited Alan Murray when she was last in New Zealand, "what... three years ago?"

Leader of the pick

Massey-developed robots will soon be working in New Zealand orchards.

By Lindsey Birnie and Malcolm Wood.

It was a bulletin on Radio New Zealand's 6.30am rural report that made Garth Atkinson pause. The kiwifruit industry was going through one of its perennial crises. The fruit were ripening on the vines, but growers could not find the labour to pick them.

During the course of the 13-week season, the newsreader said, 100 million kiwifruit would be picked by hand.

By hand, thought Atkinson. In an age of automation the idea seemed an anachronism Perhaps, he thought, Massey could do something about that, and as a business development manager with the School of Engineering and Advanced Technology he had an idea about who to approach.

Dr Rory Flemmer, the expert in robotics to whom he took the problem, was more certain.

With what he knew and the expertise he had to hand, an automated picker was definitely do-able.

In a industrial workshop on Massey's Palmerston North campus the proof of Flemmer's assertion is taking shape. At a series of workstations postgraduate students are designing the specialised circuitry that will link the picker's servomotors to its central controller. In a forecourt, PhD student (and project managing director) Alistair Scarfe is fabricating the four articulated arms that will do the picking. Close by is the gleaming metal chassis with its oversize Tonka-toyish tyres on which the picker will manoeuvre.

Some time in mid-2008 the picker will despatch itself on its maiden voyage out into an orchard. Its instructions, says Flemmer, will be simple: go to a set of GPS coordinates; identify a row of vines; pick that row and successive rows; if your bin is full, go and change it; and when you have finished picking, come back and stop.

"The picker is completely autonomous," says Flemmer. "It will go out and follow thinking behaviour patterns."

The lineage of industrial robots goes back almost half a century to 1961 when Unimate, the first of its kind, unobtrusively entered

The visionary

Ask development manager Garth Atkinson about his colleague Rory Flemmer and he will at one moment describe him as someone who never stops thinking and at the next as someone who knows how to *do* things. In fact, over his career Flemmer seems to have amassed an almost perfect command of practical hands-on experience and theoretical skills.

Born in South Africa, Flemmer graduated with a BSc and MSc in mechanical engineering and a PhD in chemical engineering at the University of Natal.

But Flemmer could, as he puts it, see the writing on the wall, and in 1985 he left his increasingly violent and anarchic homeland for the US. His girlfriend Claire, whom he had met at university, followed to pursue her PhD, and the two married and together established both a family and a company specialising in building advanced automation machinery.

The Flemmers soon accrued clients such as General Motors, Siemens and Bausch and Lomb. Machines designed by the Flemmers were used for everything from processing timber to handling precision optics (in harsh, hot, glycol-and-glass impregnated environments).

The family migrated to New Zealand in 2005, where the Flemmers both took up positions with Massey's School of Engineering and Advanced Technology.

"We have pretty much shared an office almost all our lives. A day spent apart is a day wasted," says Flemmer.

Flemmer was a leading light in introducing Massey's new engineering major of Industrial Automation.

Currently he has five PhD students. The first of these – Alistair Scarfe – is working on the kiwifruit picker. The others are working on translating the visual field into an aural field so that blind people can 'see'; on pure artificial vision in a project called "If there is an object in this field, what is the object, and what is the orientation of the object?"; on applying spectral analysis to Landsat images of kiwifruit orchard canopies to determine the state of the crops; and on one of the big issues, robotic consciousness.

service with General Motors. Unimate was first used as a pick-and-place robot to transfer hot metal parts from a die-casting machine. Six years later it was being used for spot welding, and in 1970 the carmaker opened an automated spot welding line of 28 robots.

In the early 1980s, when the Japanese became converts to the new technology, the field began to take off.

Since then the numbers of industrial robots has burgeoned. A survey published in 2004 estimated that at least 800,000 were in use within industry worldwide, 350,000 of them in Japan, close to 250,000 in Europe, and about 112,000 in North America.

In the automobile industries of Japan, Italy and Germany the ratio is one robot for every 10 production workers.

It is not unusual for an industrial robot to have a pay-back period of as little as one to two years.

"The picker is completely autonomous," says Flemmer. "It will go out and follow thinking behaviour patterns."

"The modern economy is completely dependent on robotics," says Flemmer. Everything you purchase is made by robots. If it weren't made by a robot you couldn't own it – it would be too expensive. If you had a car that was made by hand it would cost you hundreds of thousands of dollars. And in fact it couldn't be made by hand. All of the electronic aspects are made by robots because the components are too small to see, never mind place and solder.

"We think [a product] is made in China by people; it's not, it's made in China by robots."

But those robots are largely in foreign factories. We don't see them.

Picture this then. You are driving through the green Bay of Plenty countryside when you see a far off movement among the vines.

Continued overleaf

Alistair Scarfe uses an arc welder on the forks that carry the picker's bin. The picker will be powered by either a generator or the low-carbon-footprint option of a rechargeable battery. The controller is quad-core-chipped computer – a high-end PC – running the open source operating system Linux. Like the computer and generator, the cameras and electric motors are also off-the-shelf. What won't be off-the-shelf are the picking arms, each of which will work in three axes. Arms like these are commercially available, but the team will fabricate these themselves at a fraction of the cost. Also being assembled is the base station that the pickers will interrogate remotely whenever instructions are needed. It is the base station that will coordinate the picking paths when two or more pickers are in action. Once the prototype is perfected, the fabrication of the more specialised parts (but not of the final assembly) is likely to be outsourced to local manufacturers. The Massey-designed pickers and packers (see page 24) will be owned by an independent commercial enterprise, which will lease them to industry.

Manoeuvring itself through the kiwifruit trellises at a measured walking pace, pausing when it needs to, is an extraordinary machine, its four grey powder-coated arms dancing from vine to bin and back. The only sound is the gentle pulse of a generator. Elsewhere another picker goes about its business.

Even from the distance of your car window, these machines seem to behaving oddly. There is an apparent intelligence to their actions. Choices and decisions are being made.

The picker only pauses to return its bin to the orchard headland and collect another. The uncanniness of the sight becomes still stronger when, after a while, you may notice that the two pickers appear to be coordinating their picking paths.

And if you were to approach the machines, the detail of their actions would come in to focus. The pickers are choosing particular fruit: fruit that is neither over- nor under-ripe; fruit that falls in a given size range; fruit without blemish. Four kiwifruit a second are being placed in the bin. That's 14,000 kiwifruit-an-hour-per-machine, picked from the moment the dew dries on the vines until late into the night.

During spring these same machines carrying modified arms will be used to dispense puffs of pollen into the waiting flowers. And in the off season? The machines will be packed into containers and shipped to the kiwifruit orchards of Italy.

It is all a far cry from the traditional bucolic images of harvest time, of good-spirited communal labour. But then those times are long past anyway. Nowadays it is a struggle to find enough people to pick.

Four kiwifruit a second are being placed in the bin. That's 14,000 kiwifruit-an-hour-per-machine...

Kiwifruit Growers Incorporated general manager Mike Chapman sketches the industry's labour needs. "Through winter into spring we have repacking and winter pruning, and we have about 11,000 full-time workers. We need about 9000 extra workers for the kiwifruit season, starting from the end of March to a finish mid-to-late June. Every year it's a challenge finding those additional workers. We expect this year 5000 of that 9000 will be from existing staff, and approaching 2000 brought into New Zealand under a recognised seasonal employers scheme. The rest are people on working holidays – backpackers."

A fruit picker in New Zealand may not earn a fortune, but he or she earns far more than someone in China or Chile and the cost of wages, a large component of the cost of production, must be passed on to the producer and ultimately the consumer.

Then there is the problem of quality assurance: making sure the fruit is picked in optimum condition and carefully handled from then on. Like so much of the work for which robots are well suited (the word robot comes from the Czech word for drudgery), picking is highly repetitive, even tedious, work. Humans are notoriously intolerant of boredom; sometimes there are lapses of attention.

Continued on page 24

The business development manager

An industry worth hundreds of millions of dollars has a problem. A university-employed engineer fresh from a commercial career in North America proposes to build a solution. You would think someone could be found to fund the development?

Not so. Grant Atkinson describes the early days of looking for funding as "encountering one brick wall after another". FRST (the Foundation for Research Science and Technology) had a fund that seemed to fit called Technology for Business Growth, but for some reason the proposal for a robotic kiwifruit packer that Atkinson took to the Foundation wasn't seen as fitting an export emphasis. Atkinson suspects that the very rapidity with which it was proposed to develop the packer caused the unease. ZESPRI, another potential investor, also baulked at what was now a packer-and-picker proposal; it already had ties to HortResearch and it was reluctant to risk its shareholder funds in other ventures.

In the end the project was rescued by an angel investor – Atkinson will not name him – from within kiwifruit industry. "At that stage he was interested in robots for pollination. We said we can build that, but why not let us build a robot picker and we can change the arms. Then he became interested in the kiwifruit packer as well."

Atkinson is a relative newcomer to the world of university commercialisation. For the past twenty years his career has been in aid and development, first as an employee and in later years as a much-travelled consultant based out of Auckland. His move to Massey was happenstance: a daughter studying at Massey in Palmerston North had been in a car accident and needed his support. Atkinson moved to Palmerston North, and when his daughter graduated and left to pursue her career, he stayed on.

Atkinson's career as a consultant had given him some experience in cutting through bureaucracy and, while his experience was not explicitly within the commercial sector, he had worked in developing commercialisation initiatives for rural communities. He had been at Massey for little less than a year when Rory Flemmer arrived on staff. Atkinson was soon impressed by the newcomer. "Rory can just do things.

"He wanted to do something here – something with a bit of wow to make people start taking notice."

This was the partnership: "Rory with his ability to see exactly what is needed and what has to be done, and me to think my way through the bureaucracy."

How does Atkinson view New Zealand's ability to fund commercial research and development? A fundamental problem, he says, lies in scale. Most New Zealand businesses fit the category of Small to Medium Enterprises, and with ten or fewer employees most lack the resources to support research and development.

Within the universities there is a subset of problems that arise from the expectations and obligations placed on academic staff: teaching, research and commercial development.

Academic careers – and the Tertiary Education Commission's Performance Based Research Funding – are built around publication records rather than commercialisation initiatives. If a government wishes to encourage commercial development within the university system then it must arrive at a balanced set of incentives.

Ideally, says Atkinson, people like Rory Flemmer should be able to migrate from industry to academia and back, cross fertilising both, without sacrificing their career prospects.

Atkinson also believes that universities should be more measured in their expectations of return from successful commercial ventures.

How does he feel about his career shift? The months ahead are going to be hectic. The first of the apple packers will be installed in Washington State as part of an alliance with a group of Nelson growers.

He's looking forward to seeing the picker out among the vines – a shared achievement that began as "a few drawings on a piece of paper after discussion in a packhouse".

"I think lots of New Zealanders have that I-want-to-be-an-inventor feeling," he says.

The managing director

No one who knows Alistair Scarfe's background should be surprised at his choice of career. Scarfe grew up on a series of dairy farms in the Wairarapa and his father, he says, always had a basic workshop.

What is more, a family friend who lived a couple of kilometres away had a full machine shop of mills and lathes. "He showed me what to do, and he'd bring me home steel off-cuts from his work."

Scarfe built a number of projects in his father's workshop (a trailer was one) and when someone gave him a motorbike that had burnt out after an encounter with an electric fence he removed the forks and installed them on his mountain bike. His verdict: "Heavy but effective." He also tinkered with electronics, again with the assistance of his father, a former ham radio operator.

Senior lecturer Rory Flemmer, who is working with Scarfe on the kiwifruit picker, describes him as driven, grounded, and extraordinarily smart. "He's a very fine fellow. He can look at a mechanism, understand it and build it. His skill in mechanical design has raised the picker from the merely utilitarian to a work of art – if you like that sort of art."

For Scarfe, the picker is a dream assignment. "There is just nothing else that I could think of doing that includes mechanical engineering and electronics and ties them together in a package this advanced in all of its aspects."

Scarfe, who graduated from Massey in 2007 with a BE in mechatronics with first class honours, will use the kiwifruit packer project as a means of pursuing his PhD. His academic investigations are likely to address aspects of artificial vision and of managing 'swarming behaviour', using algorithms to calculate the optimum path for each picker to follow when several are working in an orchard.

Previous attempts at mechanisation have proved difficult in the orchard, Chapman says, but he's "interested" in how Massey's kiwipicker pans out.

"Anything is useful that will improve the dynamic and the quality of work done, anything that maintains the quality of fruit is most welcome, anything that makes utilisation of labour better."

Why is a kiwifruit picker so late in arriving on the scene? Why, when there are tens of thousands of robots welding car components, are so few used in agriculture and horticulture?

Flemmer believes it has to do with one problem in particular – realising effective artificial vision.

Robots may have become smarter, faster, stronger, smaller, cheaper and more accurate, he says, "but you don't hire blind workers. Robots really need to see what they are doing."

And artificial vision is complicated and demanding.

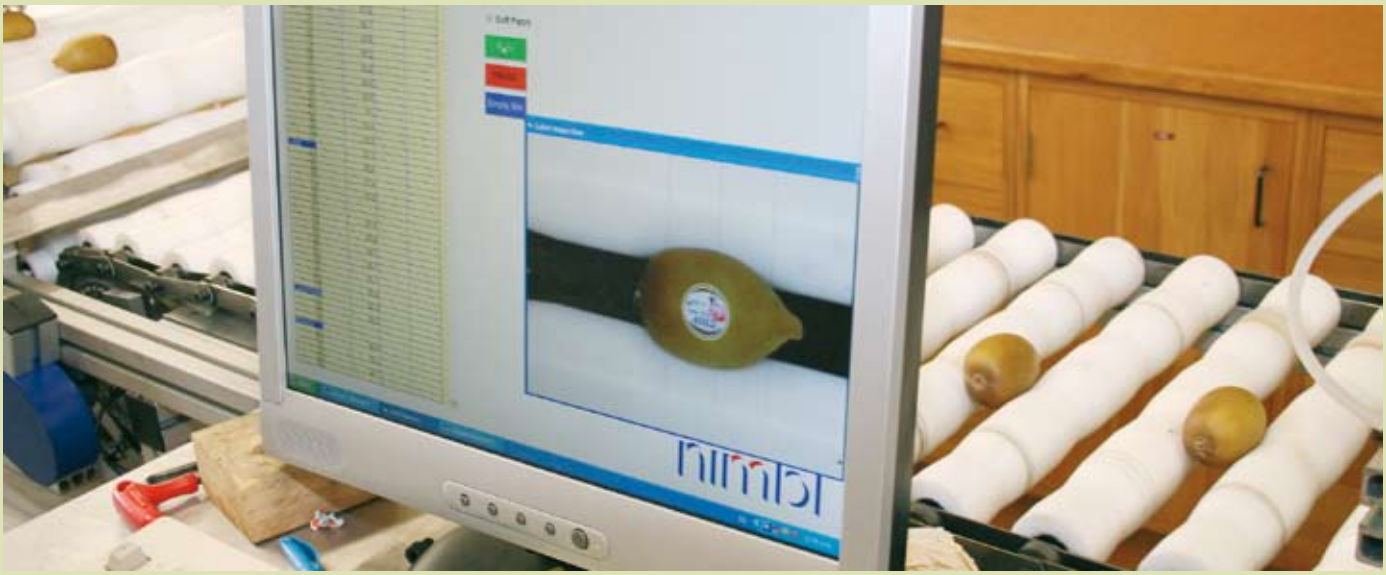
This is Massey's competitive advantage. Flemmer and his wife Claire understand artificial vision to a highly unusual degree, the result, he says, of a 20-year pedigree in building commercial industrial robots.

The kiwifruit picker employs a panoply of cameras: two are mounted looking forward and enable the picker to make its way around the orchard; two are mounted looking toward the rear "because sometimes it has to go find itself a kiwifruit bin, figure out its orientation and then drive in to pick it up with its forks", and there are "a number of cameras that look up at the canopy to see what is going on – and of course there has to be hand-eye coordination with the picking robots".

Robots may have become smarter, faster, stronger, smaller, cheaper and more accurate, he says, "but you don't hire blind workers. Robots really need to see what they are doing."

A particular technical problem is dealing with the extreme fish-eye effect of the very short focal length wide-angle lens the picker uses when identifying and picking fruit.

The short focal length allows the lens to take in a usefully wide span – around 120 degrees – but an uncorrected image looks like a reflection from a fun-house mirror. To locate objects such as fruit in three dimensional space the picker must reconcile the information from two of these lenses and hence two of these highly distorted images in real time.



Leader of the pack

Judicious, diligent, untiring, and very, very gentle with fruit, the latest recruit to New Zealand's kiwifruit industry is a welcome arrival. Run by 27 computers, the $125,000 packing machine with its 10 robot arms and advanced artificial vision will eventually be able to pack 250 to 400 trays per hour.

The packer grades fruit to within 0.1 gram and using its artificial vision to grade to ZESPRI standards, it can assess blemishing, detect soft spots, and label, pick and pack complex orders.

"The robot will not only reduce packing costs but will inspect and pack more consistently for 24 hours every day. It will also collect data that will enable coolstore operators to decide which fruit to market and at what time," says Flemmer, who more than anyone else has been responsible for the packer's design.

The packer can custom-pack and label fruit according to the specifications set for a particular market and assess the quality of the fruit that comes down the processing line.

"For example we will know how many fruits are coming in too large or small, too ripe or too blemished," Flemmer says.

It has been estimated that spoiled fruit costs the New Zealand kiwifruit industry up to $20 million a year.

The packer will also help solve a perennial problem for the industry: the shortage of seasonal labour. A conventional packing line can require as many as 120 workers; the packing machine will need a couple of skilled workers in attendance.

The economies offered by automation should also equip the industry to outperform overseas producers who are advantaged by very low cost labour.

Update

Although the packer was first designed for kiwifruit, it will in fact first see use in the New Zealand apple industry. The first apple line will be automated this year with 16 robots and more installations are likely swiftly to follow. Plans are also advancing for the packer to be installed in Washington State, where each year the apple industry harvests between 10 and 12 billion apples.

Solving this problem has been Claire Flemmer's particular interest. Flemmer says he and his wife have a balance of strengths: "She is more theoretical; I am more mechanical."

The kiwifruit picker has been carefully designed to avoid any risk to the people or animals that enter its operating space.

It can detect the movement of people or animals using infrared sensors and the picker will instantly stop if the soft bumper system running round the edge of the picker encounters an unexpected obstacle.

Then there is the conventional stop mechanism: the red button. The picker will have a number of strategically placed red buttons. You can even stop the picker by telling it to – the picker's control module allows for voice control

Flemmer and Atkinson are now eyeing other automation projects. Work has already begun on automating the apple industry – which will, in fact, install their packing machines before the kiwifruit industry.

Flemmer anticipates having eight packing cells working this packing season and a specialised apple picker ready for the season beyond.

Apples are New Zealand's third most profitable horticultural export, coming after kiwifruit and wine.

Atkinson says strawberries would be "easy".

"They are just sitting there so all you'd need is the machine to see a flash of red …"

For enquiries about the Bachelor of Engineering with Honours (Industrial Automation) contact Dr Huub Bakker at the School of Engineering and Advanced Technology.
E-mail: H.Bakker@massey.ac.nz

Kiwifruit

Although the Chinese gooseberry has been in New Zealand from the beginning of the twentieth century and was first exported to Britain as early as 1952, it was in the 1970s and particularly the 1980s that New Zealand's export industry rose to prominence. Four million trays of kiwifruit (the name adopted for the fruit after a 1959 publicity campaign) were exported in 1982, 10 million in 1983 and 46 million in 1987. With the money to be made from kiwifruit, many people invested in plantings, but in 1988 as production in the rest of the world overtook New Zealand, things began to change. As the European market became oversupplied in the early 1990s, prices slumped, and the boom became a bust.

However the kiwifruit industry has proven itself resilient. It launched the brand name ZESPRI, corporatised itself, honed its production, supply chain, marketing and distribution skills and launched a new variety, ZESPRI™ GOLD. ZESPRI kiwifruit earn a premium over their competitors in the European market.

In the year ended June 2006, kiwifruit exports were worth $699.4 million, 24 percent of which came from ZESPRI™ GOLD. Exports of New Zealand wine in the same year amounted to $510.2 million.

In 2007, 13,170 hectares of New Zealand were planted in kiwifruit.

Worldwide, New Zealand is second to Italy in the volume of kiwifruit grown.

Apples

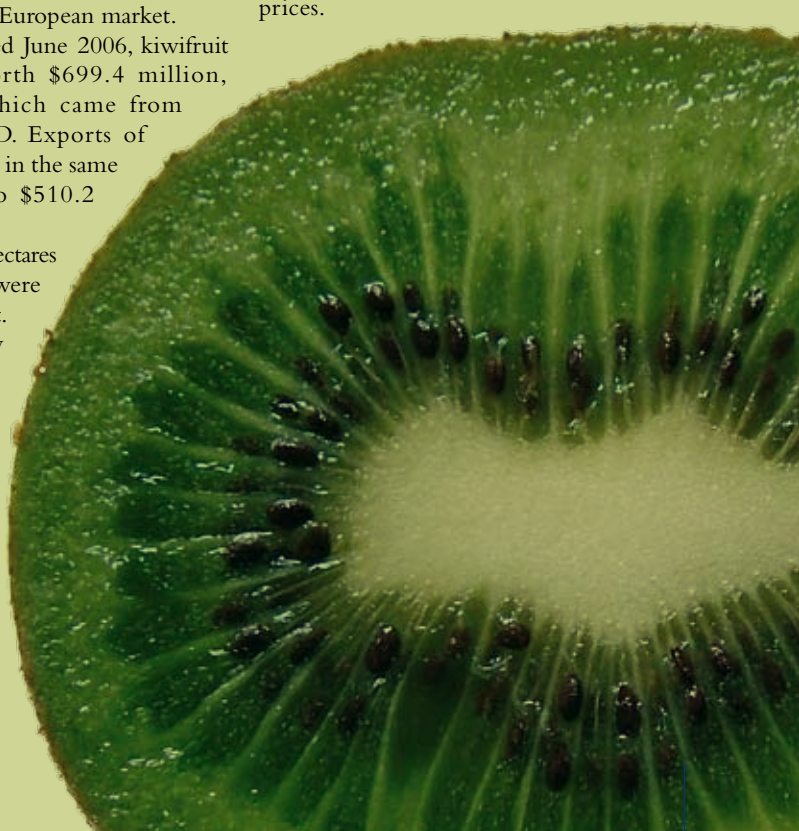
In recent years the New Zealand apple industry has been going through difficult times, with export returns for a number of commonly planted apples varieties falling below the cost of production and exports having trended down since the 2003/2004 season.

In June 2007 New Zealand had approximately 9340 hectares of apple orchards, a decline of 15 per cent on the area in orchard in 2005.

Nonetheless, for the year ended June 2006 apple exports were still worth $330.2 million, and a number of newer apple varieties, such as Jazz, are commanding premiums and returning healthy profits.

In the international marketplace the New Zealand industry is hampered by relatively high costs of production. Chile, New Zealand's most closely comparable competitor, has costs per 18kg carton which are 50-60 per cent of New Zealand's. China's are 25-35 per cent.

These lower cost producers are still able to make good profits at current world prices.



Making babies

Bioprocess engineer Gabe Redding has found an unexpected career in IVF research.

An honours degree in bioprocess engineering has taken Dr Gabe Redding in an unusual direction: fertility research. As a PhD student, he mathematically modelled the human oocyte – aka the ova or egg – and its immediate environment. Now a postdoctoral fellow, he is soon to head away to France to digitise the world's largest collection of cross-sectioned slides of ovarian follicles. His work at the interface between engineering and medical science may crucially affect decisions about how oocytes are cared for in the laboratory and about how embryos are selected for transfer – decisions with huge implications for the would-be parents who turn to IVF as their treatment of last resort.

Do you know someone who is undergoing fertility treatment? If you do, you are not unusual. Infertility is a product of the times, as women have increasingly chosen to delay child bearing. In the early 1970s the most common age for child bearing was 20 to 24; today it is 30 to 34, and many women are bearing children – or trying to – in their late thirties and early 40s.

But biology conspires against the older intending mother. All else being normal, on average it takes three to four months for a 25-year-old woman to conceive, double that for a thirty-five-year old, and four times that – the average time to conception rising to 15 months – for a 39-year old.

As many as one in 15 couples have a fertility problem at some point in their reproductive life. But medical science has advanced apace, and there is now a range of medical interventions, from changes in life style and diet through to the procedure known as in vitro fertilisation – *in vitro*, literally 'in glass', being the counterpart of *in vivo*, 'in life'.

Typically in the course of in vitro fertilisation a regime of injections will be used to first stimulate the development of multiple follicles of the ovaries and then trigger ovulation. Harvested using a thin needle, the eggs are fertilised in the laboratory and one or more embryos are transferred back to the – with good fortune – mother-to-be.

Louise Brown, the first 'test tube' baby was born in Britain 1978. Five years later New Zealand had its own first IVF birth. In the succeeding decades the techniques have become more and more sophisticated. Every year hundreds of New Zealand babies are conceived and delivered as a result of IVF.

Massey's involvement with IVF research began with an approach to Associate Professor John Bronlund of Massey's School of Engineering and Advanced Technology by Alan Hart of AgResearch, which had been funded by the New Zealand Foundation for Research, Science and Technology to develop sensors to measure the oxygen levels in the fluid of human ovarian follicles.

AgResearch had been chosen because of its long experience in IVF with farm animals, and Hart knew Bronlund as someone who could simplify any problem down to its basic engineering components.

Shortly afterwards Redding visited Bronlund's office enquiring about possible PhD projects. Bronlund said he might have just the project for him to consider.

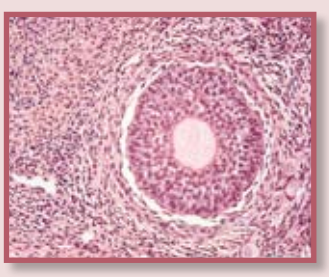
That this was not a standard engineering project was something Redding soon came to understand. Bronlund and Hart suggested that the new boy should see something of the practical reality of IVF, which is how Redding, who is needle phobic ("I cringe when I see a needle on TV"), came to find himself an awkward spectator in the corner of a surgery in the presence of *very* long needle which was being used to take the eggs from a female patient.

Aspiration, as it is known, is an uncomfortable, sometimes painful procedure. "I was quite glad to get out of there and back to the laboratory," says Redding.

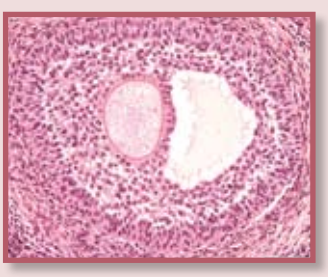
But the experience underlined the human reality of IVF. The commitment of couples to having children no matter what. The cycle after cycle of treatment many couples

Associate Professor John Bronlund

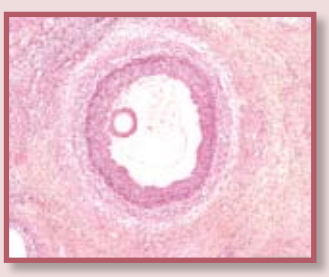
Sophie Blomfeld



The developing follicle shown as it begins to fill with fluid.



A follicle in the early stages of development, with the circular follicle and the egg, at centre, being surrounded by a thick red membrane. Encircling the egg is a thick rind of granulosa cells, and around that a thin moat of follicular fluid.



As fluid builds up inside the follicle, the egg and follicular cells can be seen to be pushed off to the left hand side. In a preovulatory follicle the central fluid-filled space will be much larger still, and very many times the size of the egg.

Dr Gabe Redding

undertake, often at their own expense. The roller coaster of emotions: hope, despair and elation.

The ovarian follicle is the base unit of female reproduction: this is the structure that contains and nourishes the single egg or ovum. The follicular fluid, contained within the follicle, surrounds the ovum. This is the soup of sex steroids, glycoprotein hormones, plasma proteins, mucopolysacharides, enzymes and dissolved gases that provides the ovum with nourishment and guides its growth.

Understand the composition of the fluid and you should be able to better mimic conditions within the follicle inside the laboratory and, by measuring the composition of the fluid drawn from a follicle, make predictions about the health and viability of the egg.

But using physical methods is awkward. The health and reproductive success of the woman can in no way be threatened. Quite properly, there are rigorous ethical protocols that must be met.

However there is another approach – mathematical modelling – and this is what Redding, supervised by Bronlund and Hart (the ideal combination of creativity and rigour, Redding says) went on to do.

The egg and its follicle have a particular problem, says Redding. Unlike most body structures, they lack a network of capillaries to pump oxygen-bearing blood through their cells. Instead they must rely on passive diffusion of oxygen from the follicular fluid, and this imposes certain limitations, one of them being the size a follicle can reach.

In fact, says Redding, there is a stratagem that part-way allows the follicle to grow larger. "Think of a potato. Here is this big lump of cells without any capillaries for circulation, and because of this a potato can grow only so big and no bigger. Now think of a pumpkin. It too lacks capillaries, but it can get much bigger. Why? Because it has this big airspace in the middle."

In the same way, the follicle becomes a sac of cells, filling with fluid at its centre until the pressure ejects the egg into the fallopian tube in ovulation, an event so physically dramatic that many women actually feel it take place. The build up of fluid has always been seen as part of the mechanism of ovulation; Redding's mathematical modelling for his PhD has shown that physics holds sway as well: without the build up of liquid at the follicle's core the egg would be starved of oxygen.

(Oddly enough, cancer tumours are the other place where this structure is seen: a layer of live cells surrounding a liquid filled "necrotic core".)

Redding's work, published in *Reproduction*[1] attracted wide interest and may help account for his success in gaining a postdoctoral fellowship worth $261,000 over three years from the Foundation for Research Science and Technology.

During his fellowship, Redding will develop models of the transport of glucose and the products of its breakdown, CO_2 and lactate, and of the key hormones in follicle development.

But this time he intends to include the detailed structure of the follicle within his modelling.

The virtual follicle – the first ever – will be constructed after Redding has made a visit to France, where he will digitise one of the world's few collections of slides of cross-sectioned follicles, most likely applying the same work ethic that sustained him through his PhD: often rising at 5.00 in the morning and working until exhaustion sets in. And a holiday? Perhaps, time allowing.

Once the model is complete, Redding intends to put it at the disposal of other researchers.

"If I am going to put in the effort, no one should have to repeat it."

The other by-product of Redding's research is the cluster of IVF engineering expertise now beginning to form within Massey. During the course of Redding's doctorate, he and his supervisors formed links with New Zealand's Fertility Associates, who provided their entree into the intricacies of IVF.

Massey PhD bioprocess engineering student Sophie Blomfield is currently hosted by Fertility Associates where, funded by Fertility Associates and a Technology in Industry Fellowship, she is following the IVF process from egg collection to embryo transfer, identifying where the eggs, sperm and embryo are most vulnerable to stress and how to reduce what stresses there may be. Her supervisors are Drs Bronlund and Redding from Massey and scientists Drs John Peek and Bert Stewart from Fertility Associates.

"Because IVF grew from zoology and biochemistry, embryologists have largely focused on improving embryo culture solutions", says Peek, "with only cursory attention to what happens to eggs and embryos during handling in the laboratory. Moreover, biologists like to measure things before they believe them. Many of the steps in IVF are too intricate to lend themselves to measuring changes in temperature, pH or oxygen concentration. The engineer's perspective that you can model what you can't measure is very liberating."

In the past 10 years IVF pregnancy rates have doubled due to advances in the culturing of embryos, says Peek.

"We are hoping that the knowledge gained from Gabe's and Sophie's work makes another significant improvement."

A small group of engineers with expertise in reproductive technologies – that would be good for Redding, good for Massey, and good for New Zealand, which, he says, while unable to compete on economies of scale can yet host clusters of world-leading research excellence. From the time Bronlund first invited him to take on his PhD, everything has worked out to out to an extraordinary degree.

"I have been so lucky."

1. Redding G. P., Bronlund J. E., and Hart A. L. (2007). Mathematical modelling of oxygen transport-limited follicle growth. Reproduction. 133, 1095-1106.

TAKING THE TEMPERATURE

The early days of IVF entailed a series of engineering problems. How do you locate and remove an egg from the follicle in which it grows? How do you keep it at body temperature? But as these problems were surmounted and the methods became well established, the advances increasingly came from molecular biology.

Generalisations are risky things, but there are differences in approach between engineers and medical professionals, one of them being that whereas engineers are inclined to work through problems from first principles, medical science is often more conservative, preferring to place its faith in long established practice.

Redding experienced the difference in world view early on when he submitted a paper to a journal of reproductive science on the changes in temperature an egg is subjected to when being aspirated – sucked from the follicle using a fine needle. Anyone versed in the physical sciences, he says, would expect applying a vacuum to a fluid to lead to a drop in temperature, and sure enough this was what happened, both in his mathematical models and when he conducted experiments using cow's follicular fluid.

In fact, the drop in temperature was so sudden and dramatic that he was certain the IVF community would want to take notice. Using a standard aspiration kit, he found the temperature fell abruptly from about 37 degrees to 29 degrees Celsius.

"And then the practice is to place the egg on a heated platform."

So he was nonplussed to have his paper refused by first one journal and then another. The rationale behind the refusal? Humans and cows may both be mammals, but cow follicular fluid is not human follicular fluid. Yet from an engineering standpoint, says Redding, both fluids are essentially the same thing – water.

In the end, his findings were published as a short communication.

The world in a window

Di Billing talks to Geographic Information Systems senior lecturer Derek Williams and GIS graduate Derek Phyn.

By what magic does the Wellington Tenths Trust rediscover the long-forgotten Kumutoto stream and the pa site of the same name beneath Wellington's urban Woodward Street?

What allows historians to calibrate the exertions of soldiers in the Battle of Messine in World War I? Were they charging (or limping) uphill or downhill at the strategic moments?

What is it that allows the Maungatautari Ecological Island Trust, steering one of New Zealand's most significant ecological restoration projects, south of Cambridge in the Waikato, to more accurately assess the risk of erosion as they plan strategies for the total and permanent removal of all pest mammals and subsequent restoration in the area?

It is a tool called Geographic Information Systems or GIS. A GIS is an information system – in today's world usually computer based – that is capable of integrating, storing, editing, analysing, sharing, and displaying geographically referenced information.

In the past twenty years GIS has become a ubiquitous and indispensable aid to planners, scientists, government, utilities managers, environmentalists, explorers, statisticians, educators, developers, businesses, executives and even sports event managers.

Derek Phyn, a GIS Officer in the Spatial Analysis and Modelling Services unit of Environment Waikato, who graduates this year with a Postgraduate Diploma in Arts (GIS), says he enjoys the liberty GIS gives him "to manipulate the data and see the results".

This could include physical or human factors, perhaps to establish what land use outcomes or conditions are more likely in the future.

When I meet with him, Phyn has stopped by the Palmerston North campus to show his lecturers the dynamic land use model he began work on as his double-semester final project.

"GIS is now a vital tool for planners," he tells me. "It can be used to help us see things in terms of suitability, priority and risk, to explore how things may change and what impact that change may have. For example, a bypass may be planned: GIS could be used to map and identify the possible impacts. It's a way to explore scenarios – and then to use that knowledge to assist us in making better decisions.

"For land use, for example, exact mapping or predictions are hardly ever possible but GIS can get you closer to picturing the truth. It allows us to identify and explore the relative merits of proposed solutions to problems."

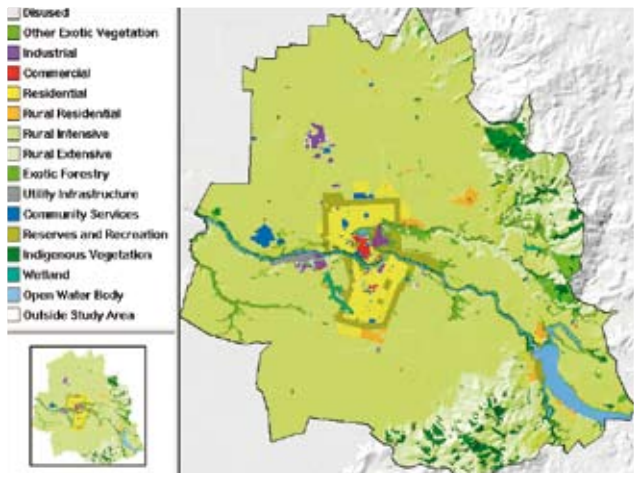
Despite having had a fascination with maps and geography from his childhood, Phyn only became a GIS adherent in relatively recent times. In the late 1990s, as an undergraduate at Massey (working towards his Bachelor of Science with Honours majoring in Geography) he had tried some GIS papers: "But back then the systems were DOS command-based rather than Windows 'point and click'-based and trying to type perfect commands in order to get things to work really wasn't my thing."

In 2001 he started work at Environment Waikato. Here he quickly realised that the GIS he was seeing was very different from the GIS he remembered. This generation of GIS offered a much more user-friendly experience, and he could see that it had huge potential for the tasks required of a large regional council.

In 2004, encouraged by his manager, he enrolled again at Massey, this time studying extramurally, for the Postgraduate Diploma in Arts (GIS).

Massey's Geographic Information Systems Programme, which Phyn would join, was founded by Senior Lecturer Derek Williams and his colleague Rachel Summers.

Williams had his personal GIS epiphany in the early 1990s. A bell ringer by avocation, he was researching the locations of early bell founders in Britain. "Mapping by hand was not realistic", he says. "GIS was new and I immediately got into it."



Screen shot from a dynamic land use model developed by Derek Phyn. Called CLUMP, the model began life as his double-semester final project. The model shows Cambridge and its surrounds using the Metronamica model designed by RIKS in the Netherlands. It has been used to calibrate and test the Metronamica model and how well it can be applied in a small, rural New Zealand context. CLUMP was developed with assistance from the Research Institute for Knowledge Systems (RIKS), Landcare Research, Waipa District Council and Environment Waikato.

Derek Phyn and Derek Williams

Using GIS he was able to show that bell foundries were usually sited centrally in the markets they served rather than close by the resources of metal ore and charcoal they needed.

He also used his new skills to analyse British tithe maps – the tithe being the tenth part of income delivered to the church – to analyse the social and economic conditions that influenced land use patterns in early Victorian England.

Summers, on the other hand, used GIS to analyse the Battle of Messines.

In the early 2000s the two of them began working on a Tenths Trust project, helping the Trust set up a GIS system to support its Waitangi Tribunal claims in the Port Nicholson area (Wellington and Hutt cities). Drawing on the Trust's historical research, they digitally mapped more than 600 pieces of added data including pa sites, vegetable gardens, waka landings, burial grounds and streams. It allowed the Trust to restore tribal names in areas now covered by cityscape.

In the model Derek Phyn has brought along to Massey he has explored the development of Cambridge area of Waipa district: taking data drawn from 1991 and feeding into a model; using the model to predict the land use in 2006; then comparing the predictions with what actually occurred.

He has also used the exercise as a test case for the use of Metronamica, an as-yet relatively little-used software package in New Zealand.

Williams describes the case study – a GIS exploration of development in a small settlement in a reasonably rural area – as novel and pushing the boundaries.

For a paper in an earlier year, Phyn created overlays within a GIS to assist a trust in its ecological restoration of the bushland of Maungatautari Mountain in the central North Island.

Phyn is not atypical of the profile of the average diploma student. Most are employed (in the likes of local authorities, government agencies or consultancies), most study extramurally, and many of their projects are real world.

"We encourage them to use what they are doing at work as part of the course or to do something that is useful to their work," says Williams.

And for those not already employed in GIS, he says, the field offers job prospects for both the behind-the-scenes system administrators who run the GIS systems and for the analysts who employ GIS: "they might be business people wanting to know where to open a bank branch or they might be planners wanting to know where they should allocate housing. They might be DOC people wanting to know where particular species are under threat."

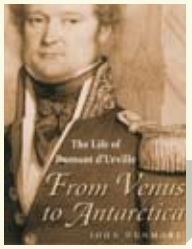
So what happens now? Williams sees the field rapidly expanding as computing power and storage becomes ever cheaper, the software becomes more sophisticated, and the use of advances, such as GPS systems, becomes more widespread.

GIS has even arrived for the masses in the form of applications such as Google Earth. The people who use Google Earth to create composite maps – so-called mashups – showing their genealogy, for example, are unwittingly employing their own GIS systems.

"The great thing now in GIS is that there is a lot of data around. In the past it took a lot of money or time to acquire data. These days there is such a lot of data around you can do lots and lots of analysis very, very quickly.

"It is a very dynamic field."

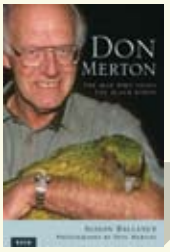
For enquiries about the Graduate Diploma in Geographic Information Systems or the Postgraduate Diploma in Arts (GIS) contact Derek Williams at the School of People, Environment and Planning. E-mail: D.Williams@massey.co.nz



From Venus to Antarctica: The Life of Dumont D'Urville

by John Dunmore. Exisle, $49.99.

For a case of history being written by the victors – or maybe the settlers – it would be hard to go past the case of Jules-Sebastien-César Dumont Durville. Dumont D'Urville (1790–1842) undertook three global voyages of exploration and is the navigator who made the single greatest contribution to perfecting the map of the Pacific in the 19th century. If he had been English, no doubt we would have had a full-length English-language biography long ago. As it is, the wait has been worthwhile. Emeritus Professor John Dunmore has masterfully chronicled the life of this aloof, intelligent, complex man. In doing so he pulls off a hat trick of French 19th-century Pacific explorers. Dunmore's earlier works include biographies of the Louis de Bougainville and Jean-François de La Pérouse.



Don Merton: The Man Who Saved the Black Robin

by Alison Ballance, photographs by Don Merton, Reed Books, $60

During a remarkable 50-year career in conservation, Don Merton has helped bring endangered birds back from the brink of extinction, both in New Zealand and overseas. There could hardly be a better choice of author than Massey alumna Alison Ballance, who is an established author and an award-winning producer for Natural History New Zealand, and with Merton's extensive photo archive to draw on, the book is beautifully illustrated.

Looking Flash

Bronwyn Labrum, Fiona McKergow & Stephanie Gibson (editors), Auckland University Press, $49.99

On page 80 of *Looking Flash* there is a strange fashion plate from 1868. A Mrs Jewell is shown outfitted in a smart fitted jacket with a small upright collar and set-in sleeves that are cut in the typical banana-shape of the period; a low-crowned hat with upturned brim; and a full skirt, somewhat shortened but otherwise conforming to the fashionable silhouette of the period – or so the text tells us.

So why strange? The material is hand-cured sealskin, the thread New Zealand flax, its place of manufacture, the Auckland Islands where Jewell and her fellow survivors of the wreck of the General Grant lived for the 18 months before their rescue by the Amherst. Although perfectly serviceable, these clothes are about much more than their utility. As Bronwyn Labrun puts it in her introduction to *Looking Flash*, "Even under the most adverse circumstances, a concern for contemporary expectations and the fashions of the day remained important to those who feared being seen as wild and uncivilised."

From *Looking Flash*: Two male models in Auckland, 1956. Sparrow Industrial Pictures Ltd, Auckland Museum

Clothes maketh the man – or woman. What we wear – even those us who forswear fashion – is a window into culture. *In Looking Flash: Clothing in Aotearoa New Zealand*, Labrum and her fellow contributors – 14 historians, museum curators and researchers in all – examine the cultural content of a number of clothes-related topics. Take the kilt, arguably a faux-Scottish icon anyway (its origins lie in English Victorian nostalgia as much as anything else), and now transmogrified into a popular choice of girls school uniform, and, in the past couple of decades, an item of fashion among the gay community. Or the black singlet (also, the reader is informed, now appropriated by the gay community). Or the resplendent uniforms of that peculiarly New Zealand institution, the girls marching teams, melding the militaristic with the feminine. Or, for that matter, to hare off in a different direction, the manner in which an extraordinary collection of '60s '70s and early '80s New Zealand *haut couture* came to occupy one Mr Eden Hore's converted tractor shed in Otago.

Labrun's own chapter 'Hand-Me-Downs and Respectability: Clothing and the Needy' is a corrective to those who see clothes only through the prism of fashion. Nowadays, when we are awash with cheap clothing made in Asian factories, it is hard to remember those not-so-distant times when clothing was a much more significant item in the family budget and "looking decent" meant "home sewing, adaptive reuse and passing on clothes within and between families". Author Janet Frame, writing about her 1940s childhood, voiced the feelings of many of her generation when she wrote of the humiliation of wearing of "day after day the same hand-me-down tartan skirt that was almost stiff with constant wear" and of the alarm and worry that went with looking different, while from the 1880s Labrum takes the instance of the casual labourer James Cox, who, as he set out in his diary, though he hankered for decent clothes, could afford to buy clothes only in a good earning year and otherwise got by patching and altering what little he had.

Clothing, which means one thing to the comfortably off, as Labrum observes, may mean something quite different to the marginalised and impoverished.

Looking Flash is lavishly illustrated with fashion photographs, advertisements and cartoons.

Creative Science Writing award winners

The winners of the fiction and non-fiction sections of the 2007 inaugural Royal Society of New Zealand Manhire Prize for Creative Science Writing both have Massey associations. Alison Ballance, a producer at Natural History New Zealand in Dunedin and a well established author is a Massey alumna. Bryan Walpert is a lecturer at the School of English and Film Studies at Massey in Palmerston North. The winners were announced by *New Zealand Listener* editor Pamela Stirling at the Science Honours Dinner in Dunedin in November.

Helping hands

In the wake of co-editing a book on social policy and history in New Zealand, Professor Margaret Tennant found she had something of a problem: "I had grossly over-researched things". Over the course of a host of early mornings spent at her laptop, her cat in faithful attendance, that left-over research – extended by further investigation – has been transformed into her recently published book, *The Fabric of Welfare: Voluntary Organisations and Welfare in New Zealand, 1840–2005*. She spoke to Malcolm Wood.

Before the arrival of the welfare state was New Zealand a better, more generous place?

Some organisations have tried to promulgate the idea of the 19th century as a golden age of charity before it was corrupted by the welfare state. It wasn't.

We lacked that tradition of wealthy philanthropists giving to the poor. On the whole, 19th century New Zealand was a place where status was gained by making money, not by giving it away.

And right from the start charities seem to have expected state support. Take the Auckland Ladies' Benevolent Society formed in 1857: within four or five years of its formation it was off to the provincial government asking for a subsidy. And the emergence of the welfare state didn't spell an end to voluntary welfare. The architects of the welfare state saw the state and charities as working hand in hand. Then, as now, the voluntary sector was seen as being more human and more flexible than the state in delivering community-based and face-to-face services. Whether this is so in every case today can be debated, but certainly that's the rhetoric still informing the devolution of welfare services.

What about the influence of the church?

Churches were the mainstay of the voluntary welfare sector until quite recent times. But early on they had their own problems. Some have argued that the processes of churchgoing were broken by immigration, and in any case the churches had to establish themselves and their own infrastructures before they could involve themselves in social service work beyond their own congregations.

They also found it very hard to sustain ongoing effort. It was one thing to raise money for emergency needs – say a family's house burns down, or a man is injured and can't support his family while recovering, or a widow with children needs the fare to return to her extended family back in England. It's quite another to give long-term assistance to the more unpopular elements of society – that's where charities really stumbled.

It wasn't really until the late 19th century that the churches were able to take on more of a social welfare role. When they did, it was at first in providing for moral reform for prostitutes, so-called 'fallen women' – the popular understanding of a 'women's refuge' in the 19th century was very different from today's. Then the churches tended to get into work with orphans, partly perhaps as a way of sustaining their own numbers. After World War II government subsidies led to the church providing a wave of welfare and residential services for the aged – services from which they are now increasingly exiting in order to provide community support and counselling services.

How do you think New Zealand compares with less secular, more faith-based societies like the US?

How secular are we? It depends on your measure, whether it's church attendance or personal belief. As a historian, one of the things that struck me was that many in the voluntary sector were very active indeed, and that they acknowledged their strong Christian belief as a motivating force. And there were individuals within the public sphere – politicians and public servants – whose Christian faith influenced them in an official capacity. And yet, many denominational social services agencies today no longer require Christian belief of their workers, and struggle to articulate just what is different about 'Christian social services'.

Do you have any thoughts about the changing role of women?

Women have always been the backbone of the voluntary social services, out on the street collecting or dealing with clients face to face; the men would more typically be on the executive deciding how the finances would be spent. That said, there were some men whose involvement was more direct, in dealing, say, with discharged prisoners or recalcitrant youth, and I'm interested in the gender dynamics which decided the division of labour within various organisations.

One of the challenges today is the declining availability of women's voluntary labour as women have moved into the paid workforce, both generally and within the voluntary sector.

How do you think the nature of volunteering will change, particularly as the baby boomers enter their retirement years

I think the trend has been for people to be involved more in individual pursuits at the expense of more communal endeavours. For

Professor Margaret Tennant is Professor of History and Dean of the Graduate Research School. She has published widely on New Zealand social history, with a particular emphasis on women's history, and the histories of health, disease and social policy. Previous books include *Past Judgement: Social Policy in New Zealand History* (co-edited with Bronwyn Dalley, 2004), *Children's Health, the Nation's Wealth: A History of Children's Health Camps* (1994), *Paupers and Providers: Charitable Aid in New Zealand* (1989) and two collections of essays on women's history, co-edited with Barbara Brookes and Charlotte Macdonald (1992,1986).

example, organisations like the Boy Scouts – with its strong tradition of service and helping others – have declined in vigour. In the past these youth associations provided a training ground for a strong 'other-directed' voluntary ethos in adult life.

So just because there are retired people able to volunteer doesn't mean that's what will happen. Some overseas studies have shown that volunteering in retirement is predicated on experience of volunteering in earlier life. In retirement it's just as easy to sit in front of the television or follow your own interests.

The nature of volunteering may also be changing. Workplace volunteering, one-off volunteering, or event-based volunteering – as opposed to more sustained volunteering for a single cause or cluster of causes – may be the patterns we see emerging.

The fourth and final section of your book is called the contract crunch. Why "crunch"?

Angst just seeps from the records of the organisations I was studying from the late 1980s on. The governmental contracting requirements and the need for more professional approaches created deep conflicts. Organisations had to change their entire ethos and culture. In the early days the compliance costs associated with contracts were enormous, and many saw the way in which contracting was rolled out as inflexible and heavy-handed.

Looking at things from the other side, the issue for public servants today is the same as it was in the nineteenth century – making sure that taxpayers' money is properly accounted for. The issue of accountability makes public servants very nervous, particularly when, as occasionally happens, there are disclosures in the media about expenditure that's misappropriated or that's regarded as a weird or inappropriate use of public funds.

More and more people are being employed to do jobs that once would have been undertaken voluntarily. Partly this is because the legislative requirements and expectations of professionalism have increased so enormously. It's one thing to volunteer thinking you are going to be making cups of tea and another to find you are on a committee and suddenly responsible for large sums of money and have to comply with the law and OSH requirements.

Or volunteering because you want to make a difference and then discovering you are only allowed to make cups of tea?

Yes, the rise of professionalism and a managerial ethos have seen some organisations sideline volunteers, many of whom have considerable practical experience. Managers of organisations are concerned nowadays that errant volunteers might damage the 'brand identity'!

How has the "crunch" affected New Zealand's best known home-grown charities, Plunket and Children's Health Camps?

Children's health camps started out as the idea of a public servant, Dr Elizabeth Gunn. She brought a whole raft of volunteers on board, running and staffing the camps and selling health stamps. Then the movement was drawn closer to the Government in the late 1930s when legislation was passed and a central board was assisted by a secretariat from the Department of Health. In the 1980s and 1990s, the Government pulled back and now the health camps movement is back to being, if you like, a purer form of non-profit under a charitable trust [the New Zealand Foundation for Child and Family Health and Development/Te Puna Whaiora]. Whether the children's health camp movement will survive and regain the iconic status it once had remains to be seen.

Plunket was the main women's organisation for much of the 20th century; it flourished remarkably despite decades of Health Department opposition. Many of its leading women advocates had the ear of the Minister of Health of the day. They were very effective politically, but the leadership of these women volunteers was undermined by professional and managerial appointments from the 1980s.

The controversy surrounding the loss of Plunket's contract to run what is now termed the 'Well Child' telephone support service [to a branch of the multinational helpline McKesson Corporation in 2006] was hugely symbolic. But then even the wording 'well child' sounds odd to my generation. Once upon a time everyone knew that Plunket meant infant health.

We now have a contestable environment in which such dominant entities as the children's health camps and Plunket are two providers among many.

How do matters now stand between the state and the voluntary sector?

They've improved. In the early 2000s there was a deliberate softening of the Government's approach, part of which was the appointment of Steve Maharey as the first Minister for the Community and Voluntary Sector. However, I don't think the softening has gone as far as he had anticipated or the sector would like.

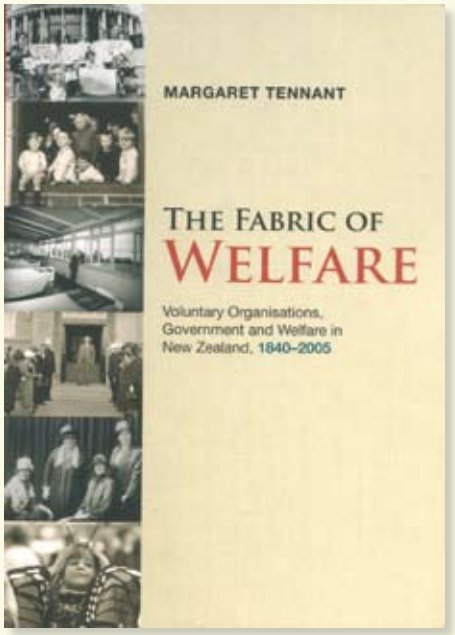
Do you see your book leading on to other things?

I'd hoped to move historical analysis away from the history of the welfare state and more towards voluntary effort. One of the nice things about writing such a wide-ranging survey is that it uncovers a whole range of other research topics. I'm already having other academics ringing up and saying 'I see there's a reference to something on page such-and-such, do you think there's a PhD or masterate topic in this?' It's lovely to feel part of an on-going research conversation – that's what I hoped would happen.

Has writing the book changed your thinking about the roles of the state and the voluntary sector?

As the title of my book puts it, the provision of welfare in New Zealand is a fabric: the activities of the state and voluntary organisations have been particularly closely interwoven in New Zealand. I came to see the immense value of the voluntary sector as both a supplement and a complement to the state.

But I still certainly believe in a welfare state and I don't think the voluntary sector could ever replace it, even if the boundaries between the sectors are getting increasingly blurred. Still, there was also something wonderful for me as a historian to see an organisation like the Onehunga Ladies' Benevolent Society, which goes back to 1863, still hanging in there as a symbol of continuity and voluntaristic commitment.



The Fabric of Welfare: Voluntary Organisations and Welfare in New Zealand, 1840–2005
by Margaret Tennant, ISBN 978-1-877242-37-3, Bridget Williams Books, $49.99

MASSEY UNIVERSITY
FOUNDATION

MAJOR SCHOLARSHIP CAMPAIGN
To support & fund post-graduate student research

Research is the key to the future in so many ways. Massey University is committed to providing research in areas of importance to our country's development. There are many such areas in science, business, education, the arts, and - close to the University's origins - pastoral agriculture. A key to research in any area is the availability of talented post-graduate students to work with our scientists and other senior staff. Massey University is seeking to increase the numbers of high-achieving post-graduate students. As costs of post-graduate study are often daunting to many students, the University is asking for your donation towards this campaign. Massey University Foundation has launched a scholarship funding campaign to support our research initiatives. The campaign features a range of scholarship appeals to enable alumni and friends to contribute in their areas of interest. All funds are invested and the income spent on scholarships.

The campaign comprises a number of scholarships which are outlined below. Please indicate which scholarship you wish to support in the form provided.

THE FIRST FIFTY YEARS REUNION SCHOLARSHIP FUND

FIRST 50 YEARS

Fund target: $1,000,000

Are you a member of the 'First Fiftiers'? Alumni who attended Massey during 1927-1977 are donating to a fund in support of science research. Acknowledging the benefits from their successes at Massey, alumni are now contributing to the successes of today's students. If you wish to support senior science students in their research, then please consider this fund.

THE AUSTRALIAN ALUMNI SCHOLARSHIP FUND

Fund target: $500,000

Initiated by Australian alumni, this fund will support senior pastoral agriculture students. A number of Australians studied at Massey under the Victorian Government cadet scheme, beginning in the 1950s. You may be part of that group which benefited from the cadet scheme and now have some ability to contribute to the development of talented students. Or perhaps you would like a part in contributing to future pastoral agriculture research at Massey.

THE SIR NEIL WATERS SCHOLARSHIP FUND

SIR NEIL WATERS SCHOLARSHIP

Fund target: $1,000,000

This scholarship was launched late in 2007 to coincide with the beginnings of the New Zealand Institute for Advanced Study at Massey University. Former Vice-Chancellor Sir Neil Waters, honorary patron of the Institute. The Institute is dedicated to providing a platform of pure research, initially in the fundamental sciences, led by world-leading Massey staff. The scholarship fund will support senior students working with Institute professors. You can help support leading-edge science by contributing to this fund.

THE PROFESSOR BRIAN MURPHY MEMORIAL SCHOLARSHIP FUND

Fund target: $300,000

A new initiative from the College of Business and named in memory of staff member the late Professor Brian Murphy, this fund is being organised by Pro Vice-Chancellor Larry Rose and Brian's son Andrew, in association with the Foundation. If you are alumni or staff of the College of Business or from the wider community of Brian's friends and academic colleagues, please consider supporting senior students completing research in marketing, business ethics or future studies at Massey.

THE MASSEY UNIVERSITY FOUNDATION SCHOLARSHIP FUND

MASSEY UNIVERSITY FOUNDATION SCHOLARSHIP

Fund target: $500,000

This fund is designed to support post-graduate students in all academic disciplines at Massey. The Foundation will work with University staff each year to identify areas needing senior students to pursue research initiatives. If you have a particular area of research you would like to support, you can specify it within this fund.

FOR MORE INFORMATION

Freepost 114094
MASSEY UNIVERSITY FOUNDATION
Private Bag 11 222
Palmerston North, New Zealand

T: +64 6 350 5865
F: +64 6 350 5790
E: massey.foundation@massey.ac.nz
www.masseyuniversityfoundation.org.nz

EXCITING CHANGES TO TAX LAWS

Supporting the work of Massey University Foundation becomes easier

Changes to New Zealand's tax laws take effect from 1 April 2008. The changes provide greater incentives for individuals and companies to donate more to charities and other non-profit organisations. The changes now align the New Zealand tax relief provisions for charitable donations with those offered in other OECD countries. Major changes include the removal of the $1,890 threshold, meaning individual donors can now claim a 33.3% tax rebate for donations up to their annual net income. This simply means you can donate a greater amount this year and claim a tax rebate. The 5% limit on deductions that companies can claim for cash donations to charitable organisations has been removed. Companies are now limited only by the amount of the company's net income.

For more information visit **www.beehive.govt.nz/release/fostering+culture+charitable+giving**

THE UNIVERSITY ALSO HAS OTHER NEEDS

The University Libraries always benefit from contributions enabling the purchase of books and other resources. If there's a specific area of interest you would like books to be purchased within, please specify in the form below.

Funding is required for a Heritage Building Fund. The University has a number of very special buildings dating from its origins. They are much loved by staff and students and require work to ensure their longevity. Enquiries are welcome for further details.

please detach

MASSEY UNIVERSITY FOUNDATION

MAKING A CONTRIBUTION

Scholarships Campaign _____ **$50** ☐ **$100** ☐ **$500** ☐ **Other** $ _____
(please specify which appeal)

University Libraries _____ **$50** ☐ **$100** ☐ **$500** ☐ **Other** $ _____

Heritage Building Fund **$50** ☐ **$100** ☐ **$500** ☐ **Other** $ _____

By **credit card** (Visa or Mastercard) ☐

By **cheque** (please make payable to Massey University Foundation) ☐

I request that my donation remain anonymous ☐

Card number _____

Name on card & expiry date _____

Your contact details (name, address, email)

_____

_____

_____

Please detach and send to Massey University Foundation

All donations made to Massey University Foundation within New Zealand are tax deductible up to the maximum set by the Inland Revenue Department.
A tax receipt will be issued for all gifts, including anonymous gifts.

Our five alumni chapters in New Zealand (Auckland, Hawke's Bay, Canterbury, Palmerston North and Wellington) are now active and we look forward to an exciting range of events around the country during 2008.

Plans are underway to organise After-5 Functions in Brisbane, Sydney and Melbourne this year to continue the development of our Australian networks.

We have been working on a strategy to enhance communications with alumni and friends. We are already introduced the bi-monthly electronic newsletter and look forward to the possible introduction of an on-line communication tool which will enable alumni and friends to update their own details, chat on-line with classmates, register for events on-line and many more exciting features.

Remember, you need to keep in touch with us so you can be invited to all the fantastic reunions, events and dinners that we and others organise.

We look forward to hearing from you soon!

Leanne Fecser
Alumni Relations Manager

Coming events

15 – 17 April	**Auckland Graduation** Bruce Mason Centre, Takapuna.
12 – 16 May	**Palmerston North Graduation** Regent Theatre, Palmerston North.
28 May	**Wellington Graduation** Michael Fowler Centre, Wellington.
11 – 14 June	**Mystery Creek Fieldays** Drop in and see the Massey University site PA1-4 in the Mystery Creek Pavilion.
12 June	**After 5 Function (Hamilton)** There will be a function at Mystery Creeks Fieldays from 5.00–6.30pm hosted by the Pro Vice-Chancellor, College of Sciences, Professor Robert Anderson and the Office of Development and Alumni Relations.
15 August	**Old Rivals dinner – LA Brooks Trophy** A dinner is being organised in Palmerston North by both Massey and Lincoln alumni offices for the Old Rivals of the LA Brooks Trophy from 1952-1966 and recent players from 2005-2007. Invitations for this dinner have been sent out.
16 August	**LA Brooks Trophy Rugby Match** Massey and Lincoln universities will compete once again for the LA Brooks Trophy on Massey soil. We would like to see as many Massey alumni as possible come and support our team. The kick-off will be 2pm on the Massey University grounds.
1 November	**Alumni End of Year Dinner (Wellington)** The Wellington Alumni Chapter Committee has tentatively organised an end of year dinner and dance at Tussock Cafe, Wellington campus from 6.30pm.
28 November	**Palmerston North Graduation**

Please note these details are provisional and should be confirmed with the Office of Development and Alumni Relations. To this list we will continually be adding events, so to confirm a reunion or event contact us at alumni@massey.ac.nz or visit our website at http://alumni.massey.ac.nz.

New Zealand Chapter events

Auckland

The Auckland Chapter organised an After-5 Function in February at the KPMG Centre on the Viaduct which was attended by 48 alumni and friends. The evening was hosted by KPMG partner Braham Sharma. Guest speaker Ben Jacobsen, Professor of Finance at Massey's Auckland campus delivered an address, "Recent Developments in Stock Market Return Predictability".

Hawke's Bay

The Chapter held its first After-5 Function in Napier with 35 attending. Professor Hugh Blair, Director of Research and Commercialisation and Professor of Animal Sciences, Institute of Veterinary, Animal and Biomedical Sciences, was the guest speaker. The Chapter also met to elect an executive. The committee consists of Dennis Oliver (convenor), Gerry Townsend (secretary), Roger McNeill, Rhys Dysart, Pania Hammond, Nanyang Lee and Sookhua Lee.

Palmerston North

Christmas was celebrated by the Chapter at Wharerata in November. The audience sang along to Christmas Carols accompanied by Morva Croxon on piano and vocalist James Battye. Eighty alumni and their families attended the first alumni open day of the Veterinary Teaching Hospital in February. Guest speaker Dr Frazer Allan spoke about "Training Veterinarians to Care for Your Animals". Alumni were then taken on a 45-minute tour of the Veterinary Teaching Hospital to understand how the hospital operates both as a teaching hospital and also as a commercial business providing veterinary care to the community. Donations given on the day will contribute to the Wildlife Health Centre Trust and the veterinary institute's scholarships fund.

Wellington

The Wellington chapter AGM was held in December. The new committee consists of Trevor Stone (convenor), John Shrapnell (deputy convenor), Leanne Fecser (secretary), Clive Palmer, Nigel Strand, Joyce Gibson, Susan Gray and Grant Jones. Others can join by contacting the Alumni Relations office.

Christchurch

The first After-5 Function was held in Christchurch at the Speights Ale House, with 34 attending. Bruce Ullrich, Court of Convocation representative on the University Council, was guest speaker.

Alumni Relations • Private Bag 11 222 • Palmerston North • New Zealand •Phone: 64 6 3505865 • Fax: 64 6 3505786
E-mail: alumni@massey.ac.nz • Web address: http://alumni.massey.ac.nz

Palmerston North alumni visit a star patient in the Wildlife Ward.

In Auckland, Ken Wood, Braham Sharma,and professors Ben Jacobsen, and John Raine

Christchurch alumni

Wellington alumni dinner

If you would like to be invited to events in your local area please register as a chapter member.

--DISTINGUISHED ALUMNI AWARDS --

Massey University is to introduce Distinquished Alumni awards later this year.The awards will honour alumni who have made significant contributions to their fields of work, to their communities and their nation. Information about the awards, the eligibility criteria and the nomination process will be available on our web site and from the Alumni Relations office from June onwards.

If you are associated with a business or service that would like to provide a benefit to Massey alumni and friends, staff or students, please contact us.

E-mail: alumni@massey.ac.nz

KEVIN BILLS PHOTOGRAPHY LTD

Kevin Bills Photography Ltd in Palmerston North offers a 10 per cent discount on the cost of the sitting fee plus print order over $250 or the choice of an extra 18 x 12cm print. Kevin Bills Photography Ltd will donate $10 to the Massey University Scholarship fund for print orders over $400. Different packages are available to help you commemorate those special occasions. This benefit applies to all individual, business, family, child and parent portraits in the studio or at a Palmerston North location. Visit Kevin Bills Photography Ltd on-line http://www.kbphotography.net.nz or contact them by phone on (06) 357 8757.

DUTY FREE STORES NEW ZEALAND

Duty Free Stores New Zealand

Duty Free Stores New Zealand offers a 20 per cent discount on phone and internet orders, a 5 per cent discount at all stores across New Zealand, and a 5 per cent discount on electronic products and cameras (discounts do not apply to tobacco products and can not be combined with other offers) to Massey alumni and friends. For every $50 or part thereof that you spend in their outlets, Duty Free Stores New Zealand donates $1.00 to the Massey University Scholarship Fund. Simply present the required coupon when making a purchase, or use the required code when placing an order over the Internet or telephone. Contact the alumni office for your coupon or required code.

Bi-monthly Electronic Newsletter

The alumni office invites you to subscribe to our bi-monthly email newsletter. The newsletter contains articles and updates on Massey University, and about our alumni chapters around New Zealand and the world, giving you an exclusive lead on what's happening in your region. In addition, we will be including commentary from our alumni. It only takes a few seconds to register, and it's free!

To subscribe visit alumni.massey.ac.nz and follow the links or e-mail us at alumni@massey.ac.nz

Hunter's Wine

Support our new PhD Scholarship

Support our new Alumni Doctoral Scholarship

Last year the university began a new scholarship appeal based on the sales of Hunter's Massey wine. Support our Massey University Alumni Doctoral Scholarship by ensuring you download an order form at our website **http://alumni.massey.ac.nz.**

Marlborough Sauvignon Blanc 2007

$18.00 per bottle

The wine shows gooseberry herbal aromas balanced with ripe tropical fruit flavours of passionfruit, peach and melon. The palate has crisp acid and is textured with herbaceous, citrus and tropical fruit flavours.

The Chase 2005

$16.20 per bottle

Pinot Noir strawberry and cherry flavours, combined with the earth and plum of Merlot and cassis/chocolate aromas of the Cabernet blend together to form a wine of medium weight with light oak and berry fruit flavours. The delicate flavours and aromas will increase in complexity over the three years following.

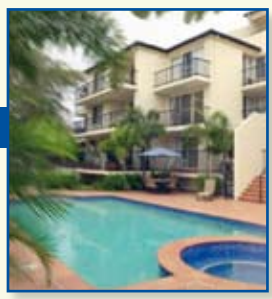
Alumna Jane Hunter began supplying us with our own Massey label in 2006. Sales have been impressive since. The wine is extremely well priced and very good drinking!

sunset island RESORT APARTMENTS

Discounted Rates for Massey Alumni

Massey University Alumni receive a minimum 10 per cent discount with increased discount for longer stays.

To enquire about this offer contact
E-mail: vacation @sunsetisland.com.au
Phone +61 7 5592 1744
Website: http://sunsetisland.com.au



Massey University

ORDER FORM

ITEM	PRICE PER UNIT	QTY	SIZE	SUB TOTAL
APPAREL *(Please indicate XS, S, M, L, XL, 2XL, 3XL)*				
1. Beanie (merino) One size	$ 20.00			
2. Beanie (possum-merino) One size	$ 35.00			
3. Cap One size	$ 20.00			
4. Hoodies (navy/grey) XS-3XL	$ 70.00			
5. Parker (wind and shower proof) XS-3XL	$ 65.00			
6. Polo Shirt (navy) S - 3XL	$ 35.00			
7. Polo Shirt (quick dry) XS-3XL	$ 35.00			
8. Polarfleece Sweatshirt S - 3XL	$ 60.00			
9. Polarfleece Vest XS - 3XL	$ 50.00			
10. Men's Polarfleece Jacket XS-3XL	$ 60.00			
11. Women's Polarfleece Jacket 10-18	$ 60.00			
12. Rugby Jersey (striped/harlequin) S - 3XL	$ 75.00			
13. Scarf (merino)	$ 30.00			
14. Scarf (possum-merino)	$ 45.00			
15. Swanndri men's jacket S - 3XL	$225.00			
16. Swanndri women's jacket XS - XL	$225.00			
17. Swanndri men's vest S - 3XL	$145.00			
18. Swanndri women's vest XS - XL	$145.00			
19. Swanndri shirt navy/white long-sleeved S-3XL	$ 75.00			
20. Swanndri shirt navy/white short-sleeved S - 4XL	$ 65.00			
21. Black women's V neck T-Shirt 8-18	$ 25.00			
22. Black men's crew neck T-Shirt XS-3XL	$ 25.00			
23. T-Shirt (navy or white) XS-3XL	$ 25.00			
MEMORABILIA				
24. Back Pack	$ 29.00			
25. Bookmark	$ 10.00			
26. Business Card Holder	$ 18.00			
27. Briefcase (men's)	$285.00			
28. Briefcase (women's)	$285.00			
29. Coasters (Rimu set of 4)	$ 50.00			
30. Coffee Mug	$ 13.00			
31. Degree Frame	$120.00			
32. Key Fob	$ 7.00			
33. Lanyard (red/blue)	$ 4.00			
34. Leather Purse	$ 75.00			
35. Leather Wallet	$ 45.00			
36. Pen (in gift tube)	$ 19.00			
37. Pen (in sleeve)	$ 5.00			
38. Photo Frame (8in x 10in)	$ 45.00			
39. Umbrella	$ 23.00			
40. University Crest	$ 60.00			
41. University Tie	$ 30.00			
42. William Bear (in full graduation regalia)	$ 45.00			
43. William Bear (PhD regalia)	$ 55.00			
44. Wine Glasses (boxed set of 2)	$ 40.00			
JEWELLERY				
45. Charm (silver)	$ 15.00			
46. Earrings (silver)	$ 26.00			
47. Earrings (gold)	$ 50.00			
48. Lapel pin (silver)	$ 29.00			
49. Necklace (silver)	$ 35.00			
50. Tie slide (silver)	$ 80.00			
51. University ring (silver, men's)	$105.00			
52. University ring (silver, women's)	$ 75.00			

Postage & handling NZ $5.00 • Overseas $30.00 **$**

Prices subject to change **Total** **$**

All prices GST inclusive • GST number 11-205-615

MASSEY UNIVERSITY FOUNDED IN 1927

ALUMNI AND FRIENDS

Massey University

ORDER FORM

To place an order:

FAX this form to: +64 (06) 350 5790

POST this form to: (no stamp required)

Free Post Authority 114094

Alumni Relations Office, Old Registry Building, Massey University

Private Bag 11 222, Palmerston North, New Zealand

Or drop in and see our range at the following locations:

Alumni Relations Office

The Old Registry Building

Palmerston North Campus

Contact Office

Ground Floor, Block 4

Wellington Campus

Contact Office

Cashiers, Quad A

Albany Campus

You can also download the order form from our website:

http://alumni.massey.ac.nz

If you have any queries please contact us at:

alumni@massey.ac.nz

DELIVERY DETAILS

Name (for order) _____

Delivery Address _____

_____

_____

Country _____

Phone (work) _____

Phone (home) _____

Email _____

Signature _____

Date _____

PAYMENT METHOD

☐ Cheque (made payable to Massey University)

☐ Visa

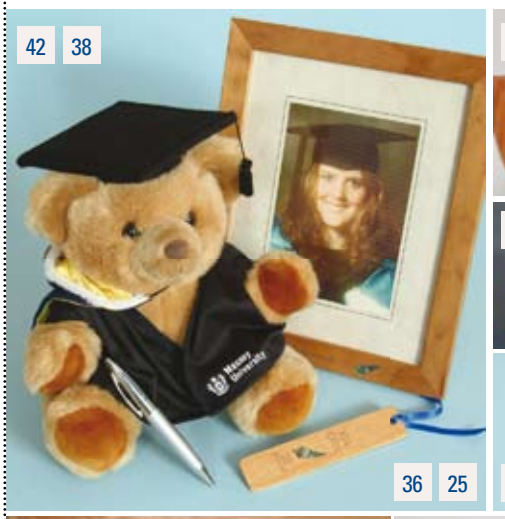
☐ Mastercard

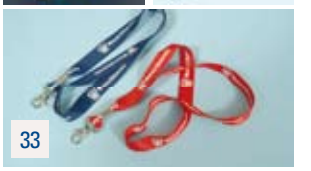
Credit Card Number

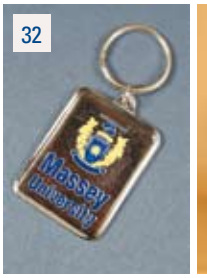
Expiry Date | | | | 2 | 0 | | |

Cardholder's Name _____

Cardholder's Signature _____







Send us your news

To appear in notes and news either

- *visit the alumni website alumni.massey.ac.nz and fill in the online form*
- *send your information to*
  Alumni Relations
  Private Bag 11 222
  Palmerston North
  New Zealand
- *send an e-mail to alumni@massey.ac.nz.*

Information may be edited for clarity and space.

NZUniCareerHub

If you are an employer, then NZUniCareerHub will allow you to easily distribute information about your organisation and vacancies to job-searching students and recent graduates throughout New Zealand. To find out about NZUniCareerHub point your browser at www.nzunicareerhub.ac.nz.

If you are a student or recent graduate, then the Massey CareerHub makes it easier for you to connect with employers and find out about their job vacancies, graduate programmes and employer events. Visit careerhub.massey.ac.nz.

Join the Massey Library

Massey University Library offers alumni and friends a 50 per cent discount on membership. For only $100 per year you can have the same borrowing privileges of an undergraduate distance student. Borrow books in person or have them delivered to you anywhere in New Zealand. Contact the Alumni and Friends Office for more information.

Find a classmate

With a database of over 96,000 names, there is a good chance that we can help you to get in touch with your former classmates.

Contact us with information about who it is you would like to catch up with and, if it is possible, we will help you to get in touch.

To protect the privacy of alumni, this process is carried out in accordance with the Privacy Act (1993).

1950

Will Hunt, Diploma in Agriculture 1950, is a sheep and beef farmer and a keen skier. He won the NZ championships six times, competed in the Winter Olympics in Oslo in 1952 and at Squaw Valley in 1960.

1951

Pat Smith, Diploma in Agriculture 1951, left NZ in November, 1950 and arrived in Kenya in January, 1951. He has been General Manager and Director of two of the leading cattle ranches in Kenya at different times, and visiting agents on another big ranch. He has been seriously involved in the beef industry in Kenya, as a judge and inspector for Kenya Stud Book and various committees and showing field days.

1975

Kevin Barnes Graduate Diploma Science 2001, Bachelor of Science 1975, writes that he continues to integrate nutritional science into his practice and has attended quite a few NSNZ Annual Conferences including the one in Brisbane.

1978

William Kersten, Masters of Science 1980, Bachelor of Science 1978, took up the position of Head of Rathkeale College at the start of the 2008 school year, after nine years as Associate Rector of Palmerston North Boys' High School.

Brian Mitcherson, Diploma in Horticulture 1980, writes: "Although I am retired I enjoy getting news of Massey. I enjoyed my time studying for the Diploma of Health Administration. I have missed local 'get togethers' so far due to clash of dates."

1981

Rosemary Zissler Sofio/Briden-Jones, Master of Arts 1981, Bachelor of Arts 1977, has had a varied career in secondary and tertiary teaching (polytechnic), mainly teaching English and some French. "I am currently seeking a full-time teaching position in Christchurch/North Canterbury. I recently gained a Certificate of Commerce from Lincoln University through the Regional Education programme, and I'm not ruling out further study in the future!"

1982

Martin Harvey, Bachelor of Business Studies 1982, moved to Singapore with his family in 2008 to take up a three-year posting as NZ High Commissioner to Singapore and the Maldives.

1983

Leslie Buckley, Bachelor of Arts 1983, has spent the past 15 years working in brewing in Asia for APB in China, Philippines and Singapore. "I am now Regional Director for SE Asia and Oceania (and Mongolia). So I finally get to come back to NZ regularly and do a bit of work with DB Breweries, our company in NZ. Thanks for sending the magazine through – it does keep me up to date with Massey."

Gladys Cheah-Liaw, Master of Business Admin 1983, migrated to Australia after graduation, where she pursued a career in academia. She obtained her PhD in 2000 in International Management and went on to public practice in accounting. She now has a small business in accounting and financial planning and still keeps in touch with academia on part-time basis.

1987

Alan Brake, Bachelor of Science 1987, writes that he has gone back to grad school and should graduate with Master's in Biomedical Science – Embryology and Andrology from Eastern Virginia Medical School in May, 2008.

1990

Nick Yoon, Master of Business Administration 1992, Bachelor of Arts 1990, returned to Malaysia after graduation, where he worked with various companies, primarily in the areas of business research and planning. He has been living in Switzerland since 2002.

1983

Mike Godfrey, Master of Arts 1994, Bachelor of Arts 1983, writes that after graduating with a BD from the Melbourne College of Divinity and ordination into the Anglican Church in Australia, he spent most of 1983-2006 working around South Eastern and Central Australia as a priest and, for a stint, as a radio presenter (ABC Radio National in Adelaide). Since January 2007 he has been Vicar of Whangarei. He is married to Anne van Gend, and they have two sons. "I am perilously close to completing a PhD with the Australian Catholic University."

1995

Ashley Walker, Bachelor of Science 1995, has just completed a Master of Science in Management at the Florida Institute of Technology, USA, while living in Richmond, Virginia for all of 2007.

1996

Phil Rennie, Bachelor of Veterinary Science 1996, spent three years in mixed veterinary practice in Northland and the Waikato after graduation. "Subsequently I went on an OE for three years, based working in the UK. On my return to NZ, I spent a further year in clinical practice before taking up my current position as a veterinary adviser for Pfizer, which I have been in for the past four years."

1998

Harumi Shimada Beltran, Bachelor of Science 1998, went on to complete a PhD in Cinvestav, Mexico. "I am now a postdoctoral researcher at the Plant Pathology Department at Cornell University and enjoying it a lot!"

Stuart Crosthwaite, Post Graduate Diploma in Applied Science 1998, has worked with two different dairy processing companies as a field office/farm consultant, and now manages and operates his family's dairy farm. He is also currently involved in extension activities in northern Victoria.

Peter Lehrke, Graduate Diploma in Science 1998, has now had 25 years' experience in food and pharma product development and management. He is director of consulting company PharmaTech specialising in formulation development and technical project management.

1998

Linda Elliott-Ghadami Elliott / Harris, Bachelor of Science 1997, writes that after working in the community for several years in NZ she headed to Iran to live with her husband's family for a year before finding work in Australia. "I undertook the Queensland Psychologist Registration program and I am now a registered psychologist. Again I worked in the community with the long term unemployed then as a sexual assault service Manager before obtaining my present position of Student Services Manager in UQ Ipswich. This is one of the University of Queensland's satellite campuses. My current role includes providing personal counselling, careers and disability advice to students."

Patrick Kelly, Bachelor of Arts 1998, was an elementary school teacher in the Palmerston North area from 1975-1979, a business owner in Campbell River, British Columbia from 1979-1998 and an adult education instructor and administrator in Campbell River, British Columbia from 1998-present.

Driving force

On an Asia New Zealand Foundation funded exchange to Indonesia, Massey journalism graduate Will Robinson met alumnus Joko Parwoto.

These days, when Joko Parwoto (PGDip Bus Admin - Human Resource Management 1997) goes to the luxury Djamawangsa Hotel where he once worked as a concierge, it's for high tea.

The now successful entrepreneur served at the gilded get-away when he arrived home in 1997 after a year-and-a-half long stint studying business at Massey.

It was the only work he could find, despite years of study behind him in Indonesia, the United States, New Zealand and Scotland at the prestigious Edinburgh University.

At the Djamawangsa, he smilingly lugged customers' bags determined to make the best of circumstances, while traditional Gamelan musicians intoned the sounds of the impoverished Javanese heartland he thought he had left behind for good as a teenager.

Joko had returned home at a difficult time in his country's history. It was 1997 and the Asian financial crisis had come down harder on Indonesia than on any other Asian nation. The crisis swept away jobs, sent the Rupiah into a tailspin and stimulated a political revolution ending the cruel but firm 32-year reign of military dictator Soeharto. It was not a time of great business confidence.

Born into a poor family of 10 in Yogyakarta, central Java, Joko had been hardened by a difficult childhood and was not easily dissuaded. A stroke of luck – a chance meeting with a wealthy Belgian benefactor – had enabled him to go to university and he was confident that the sound education he had received at Massey and elsewhere would see him through difficult times.

But determined to make a go of things, Joko worked his way up to head concierge at the hotel and using his business nous found a way to benefit from his country's tenuous situation while less creative thinkers floundered.

Ordinary Indonesians lost out miserably to the crisis; a decade on the economy has yet to return to pre-crisis levels. Joko was among the canny few to actually profit from it.

Joko says he got inspiration from the hotel.

A lot of foreigners were arriving in Jakarta to deal with the economic crisis that year and staying at the plush Djamawangsa – hired suits from JP Morgan, UPS and other multinationals. "A concierge usually organises transportation and so I get an idea – why don't I buy one or two cars?"

As a concierge, he had frequently dealt with customer complaints and understood their needs well. The crisis had driven down car prices as well as wages and with the steady stream of economic fixers checking into the hotel the climate was perfect for his own transportation venture.

The first car he leased for hire was an old Volvo 960. He quickly added to his fleet a series of increasingly high end automobiles. Ten years on, Joko has twenty classic cars – including a Jaguar and a Mercedes – sitting at the ready outside some of Jakarta's top hotels.

Joko says his business proved popular with foreigners because he ensured when he set it up that his drivers spoke English and took customers to their destinations directly; Jakarta taxi drivers have a reputation for taking foreigners on unplanned scenic tours. The novelty of riding in classic cars distinguished him from the competition.

Business was so good that last year he started a new business, a laundromat aimed at mid-level customers.

Joko says that the skills he picked up while studying at Massey have contributed to his current success.

In New Zealand, he was expected to get up in front of the class and talk about his work, something he was not used to doing back home.

Apart from improving his English communication skills, the classes helped him think more creatively about potential business opportunities, though it was a struggle at times. English was his fourth language, and he found himself working day in, day out just trying to understand his lecturers.

"New Zealand is quite a tough country to study. You have case studies that you have to do. You have to analyse and report and so on and so forth, for one-and-a-half years," Joko says.

"It felt like I was spending all my life in the library. In Indonesia, they don't like making notes."

He says the discipline instilled in him at Massey helped him develop the organisational skills he needed to run a successful business.

Joko says that despite all his hard work, he did find some time to go out and enjoy Palmerston North's temperate environment and lively social scene.

The rarity of Indonesians in Palmerston North was an unexpected benefit. His first period in the country was spent in Auckland, where he melded easily into the Indonesian community, and, he says, "partied too much".

Palmerston North was more conducive to serious study. There were few people around with whom he could speak his native tongue and he was forced to improve his English, something that could be avoided in some of the bigger urban centres where he had studied. He says the lack of countrymen to lean on meant he took up extra curricular activities he might not have – such as Taikwondo – and forged strong friendships with New Zealanders, many of whom he still keeps in contact with, 10 years on.

He looks forward to taking his children to the "marvelous" country where he once studied, providing he can find the time between running two businesses and acting as the personal assistant to the honorary consul for the Solomon Islands.

"I intend to go again, when I have the money, because I just feel fine in New Zealand – so comfortable."

He says he greatly admires New Zealand's long-time leader, Helen Clark, whom he regards as a strong and honest leader. And he misses the fresh food and the clean air. Most of all, though, he misses New Zealanders' welcoming nature.

"But they need, perhaps, to take lessons in smiling," says Joko, grinning.

"In this way they are like the Japanese".

1993

Bruce Attwell, Master of Arts 1999, Diploma in Humanities 1995, Bachelor of Arts 1993, writes that heeding Dr Macdonald's urging to "get stuck into those histories", he recently published a history of the Port of Wanganui. "I am currently racing asbestosis to complete a short history of the Ruapehu Gliding Club 1960-2006. Thanks Massey for the wonderful extramural years."

1999

Julia Ebbett, Bachelor of Nursing 1999, is now undertaking her Master's thesis with Otago University: The patient perception of self management within a semi-funded programme currently known as careplus.

2000

George Tudreu, Bachelor of Aviation 2000, writes: "Bula from the Fiji Islands. Having just browsed through the Massey School of Aviation website, I noted that there was a section on graduate success. I thought I'd take this opportunity to share my story. After graduating in 2000 with a Bachelor in Aviation majoring in Flight Crew Development, I spent the next several years as a Flight Safety Officer for the Civil Aviation Authority of the Fiji Islands

and a brief stint as a flight instructor with a local (Fiji) flying school. I joined Air Pacific in 2002 as Manager Quality Assurance – Flight Operations, and in October last year became Manager Quality for the whole Operations Group. My education and training at Massey University provided me with all the 'tools' I needed to get me to where I am now. My goal now is to ensure that I am sitting on the flight deck of the B787 when it is introduced into Air Pacific in 2011."

Mohammed Khan GDip Science 2001, graduated in MPH (Masters in Public Health) in Bangladesh and is now teaching as assistant professor at Sapporo Dental College, Dhaka, Bangladesh."

2002

Jennifer Crowley, Master of Philosophy 2002, had a contract position in nutrition lecturing before obtaining her present position. She attended a sport dieticians course at AIS in 2004, is a Registered Nutrition Practitioner with SESNZ and is a competitive athlete in half and full marathons and cycle racing.

Jacqui Henshall, Bachelor of Aviation 2002, writes: "Mine is a success story with a twist. I undertook a Bachelor of Aviation Management in 1998 to formalise 16 years in the airline industry including being Airport Manager (1989-1992) for American Airlines, Auckland and setting up the first ground handling company in the South Pacific as Inaugural Manager Passenger Services (1992-94) for Ogden Aviation NZ Ltd (now Menzies Aviation). I also took the opportunity to gain my PPL through the flight centre at Ardmore (somewhat harrying for an older bird with all that unchecked testosterone flying about!) The twist – I graduated and relocated to the United Kingdom just before September 11, 2001. However, armed with my degree I was quickly picked up through a London agency and six years later am now a senior manager within the NHS with a much higher earning potential than the local aviation market, something that would not have happened without my 'interesting' choice of degree. I believe the perseverance of also obtaining my PPL showed I was open to the varied challenges of today's NHS!"

Vicki Hirini Hughes, Bachelor of Arts 2002, writes that she is a grandmother of 14 and has just finished her third tertiary certificate. "I also have a BA from Massey which took me 15 years to complete part-time while raising my seven sons on my own, and working part time! But I can't seem to get work in my preferred area (health promotion) despite my qualifications. Employment seems to go to YOUNG UNqualified people."

Brien Keegan, Bachelor of Business Studies 2002, writes that since graduating from Massey he has worked in the recruitment industry in both New Zealand and Australia. He is currently employed by LINK Recruitment, an Australian company. He is in the process of establishing a New Zealand office in 2008 and will lead the team in the position of business manager. "Throughout my recruitment career I have held various roles including management, consulting and account management and am looking forward to the challenges that this opportunity presents. LINK's philosophy enables clients to attract, develop and retain quality staff with a specialist approach to recruitment (www.linkrecruitment.com)."

Noel Saunders, Bachelor of Arts 2002, worked as a career counsellor/vocational rehabilitation in Wellington for five years and has now moved to Abu Dhabi. He will be job seeking once his residence visa comes through.

2000

Christine Jones Chandran, Master of Management 2003, Post Graduate Diploma Banking 2001, Bachelor of Arts 2000, had a successful launch of a business retention and expansion programme for the Manawatu region with the attendance of the Prime Minister and Steve Maharey.

Vicki Douds, Post Graduate Diploma in Arts 2004, Bachelor of Arts 2000, is continuing studies into discursive therapies and rehabilitation. She works as a private consultant supporting individuals and families with autism spectrum disorders and started a support group for ASD people known as ASD Empowerment Group Taranaki. She is currently the adviser for Taranaki for autism spectrum disorders through the new service known as Altogether Autism. She is also undertaking postgrad study in Educational Psychology (Special Education).

2001

Cameron Douglas, Bachelor of Education (Adult Education) 2001, has been awarded the internationally recognised title of Master Sommelier. Douglas, who received the American Chapter's John Unger Memorial Scholarship, was awarded the UK's Laurent Perrier Grand Siècle trophy for passing the exam with the highest aggregate marks. He becomes one of the 158 people in the world who have earned the title since the first exam was held in London in 1969. Douglas, who runs AUT's wine and beverage programme, is a wine consultant to many of Auckland's top restaurants including Meredith's, Tribeca, and the Q Restaurant and Bar at the Westin hotel. His also writes for *Hospitality* magazine, is a member of *Cuisine*'s wine judging panel and was a judge at the Air New Zealand Wine Awards.

2003

Ruth Spelman Cotterall, Post Graduate Diploma Business Admin 2003, is now working as a coach and mentor with managers in both the public sector and not-for-profit sector. "I also enjoy governance work as a board member and I currently sit on the board of Sisters of Mercy Win and I am a lay member of the board of Optometrists and Dispensing Opticians."

Daniel Myers, Master of Arts 2003, has recently published his second novel, Corporate Blue, which was originally part of his master's thesis. "I am also a literary agent, and one of my clients, Paul Cleave, has become an international bestseller – selling over 250,000 books in Germany. His book *The Cleaner* is number one on the audio book bestseller list over there. A colleague and I have started our own publishing company, AE Link Ltd, to publish aviation training material. Please check out my websites. Contact details: Daniel Myers Word-Link Worldwide Ltd. PO Box 15024, San Luis Obispo, CA 93406, USA. Ph: +(805) 781-0877, Mob. +(805) 234-1993. Email: Wordlink@ihug.co.nz Websites: www.myersfiction.com, www.a-e-link.com, www.wordlinkww.com"

2004

Lynnie Galloway, Master of Midwifery 2004, is currently working for the Ministry of Health in Oman as a senior midwife helping to develop midwifery practice and has just started a pilot project on midwifery-led care.

Don Jones, Master of Philosophy 2004, is Lt-Colonel, Deputy Commander CRIB 11, NZDF deployed in Bamyan, Afghanistan with the Provincial Reconstruction Team (PTR). See: www.nzdf.mil.nz/operations/deployments/afghanistan/nz-prt/default.htm

Wi Ormsby, BSc 2004, writes: "I am currently trying to get more people physically active and eating healthier."

Sara Tresch Page, Bachelor of Science 2004, moved to Wellington in 2004 and worked in the banking industry for a few years before joining GNS Science where she now works with the GeoNet project. She spends her time locating earthquakes and travelling around New Zealand telling people about GeoNet.

Walter Raymond, Post Graduate Diploma Second Lang Teaching 2004, was a teacher of English and study skills at the English Language Centre, University of Canterbury from 2001 to 2006, and has been English language instructor at the Higher Colleges of Technology, U.A.E. since 2006.

2005

Earl Edgar, Bachelor of Information Science 2005, writes that after graduating from Massey, he went back to his home country, Federated States of Micronesia, and taught mathematics and computer courses part time at the College of Micronesia. "After one year, I landed a great job as the systems coordinator at the FSM telecommunications Corp. Recently I moved to Chicago, USA, and I am working in the IT department as a systems administrator assistant at American Eagle. I am looking forward to getting my CCNP and Microsoft certification in the upcoming year!"

Richard Lee, Diploma of Education 2005, currently manages a branch campus of a private training establishment in Christchurch. He is also a business and management moderator for NZQA and a registered workplace assessor (retail and distribution) for the Retail ITO.

Alex Qiu, BBS 2005, writes: "The happiness after I graduated: what I learnt is what I am doing now!"

Peter Ridge, Master of Arts 2005, Bachelor of Arts 2002, writes: "Peter Ridge (1997-2004) and Jaime Ward (1998-2005) are engaged. Peter and Jaime met when they both attended a Massey focus group, formed to learn more about new students' experiences on campus. Both deny that the offer of a 'free lunch' was the draw card. Peter and Jaime both studied history, each graduating with an MA. Since graduating, Peter has been working for the Rangitikei District Council in Marton as a policy analyst, while Jaime works for the Palmerston North City Library. Preparation for a wedding is under way, and will likely be held later this year."

Birgitta Rolston West, Post Graduate Diploma Second Lang Teaching 2005. has been Head of Drama at Central Hawke's Bay College, Waipukurau since January, 2007. In July she also took over the portfolio of International Director at the school. She married David Rolston in Hawaii in July, 2007.

2006

Ira Sandhu Bhattacharyya, Post Graduate Diploma in Education 2006, writes: "I have been actively involved in training graduates who wish to become English language teachers in Sarawak, Malaysia. I was recognised as an excellent teacher for English Language at Scale DG48 by the Ministry of Education in 1999 and promoted to Scale DG52 in 2006. I have been presenting papers at international conferences, particularly on remedial education based on my work in a primary school over the past three years. I am developing modules to help slow learners from disadvantaged rural Malay or native homes acquire English language in Primary One -Three. I find the papers I did at Massey particularly helpful, especially the paper on Reading Difficulties. But I am also incorporating a lot of First Steps strategies (Australia) in my remedial lessons. I find that my remedial pupils develop best when phonics is integrated with shared reading sessions and they particularly love reading my 'Super Big Books', which are animated books or scanned stories using ICT that have their own colour printed copy. Jazz chants, songs and games also thrill these pupils, who were otherwise 'drowning' in a classroom of 51 pupils. This year I am providing on-site coaching services to rural teachers teaching Penan pupils in the deep interior of Sarawak. I hope to communicate with any teachers who have taught indigenous pupils acquire English language and learn from their experiences."

2007 Ernst & Young Entrepreneur of the Year

Ashley Berrysmith of New Zealand Fresh Cuts has won the overall Ernst & Young Entrepreneur of the Year title. Berrysmith was selected from a field of five category-winning entrepreneurs, and won the Master Entrepreneur category.

Chairman of the judging panel, David Johnson, chief executive of Trends Publishing and winner of the inaugural Ernst & Young Entrepreneur of the Year overall title in 1998, says Berrysmith's win is a result of ingenuity, hard work and foresight.

"Among the range of criteria the winner is judged by, it is critical to look at their track record and past behaviour. Ashley has 30 years of entrepreneurship under his belt; and he's still got the ability to turn an idea into success."

Under various brand incarnations dating back to the launch of his original company in 1980, Berrysmith has produced an array of fresh sprouts, salad greens, vegetable mixes, baby peeled carrots and hemp seed oil. He and his company intend to continue to supply the local market while capitalising on export successes in Singapore and Hong Kong.

Berrysmith will represent New Zealand and compete for the world title with more than 50 of the world's top entrepreneurs in Monte Carlo in May 2008.

Nicola Graham Bachelor of Science 2007, worked at Jenny Craig in Melbourne for nine months and is now nutrition writer for NZGirl.com

Diane Hood Bachelor of Education 2007, is working for the national Early Childhood Education organisation and is continuing with a postgraduate degree in children's literature. She has plans to work and travel in Canada and complete research.

Judy McCleave (née Humm) Post Graduate Diploma in Science 2006, writes that since graduating she has been working as a tutor in science, English and maths at various levels.

Dima Ivanov, Bachelor of Design 2007, writes: "I was the North Harbour Club AIMES Award winner for arts in 2006 and featured in an article on the front cover of the AFS Global Roamer magazine. After graduation I was employed by the Marine Industry Association of NZ to help organise an international congress for 100+ people."

Thama Kamikaze, Postgraduate Certificate in Science 2007, writes: "I finished my postgraduate Certificate in Science in 2005, but had my graduation in 2007. I have been working for Ridge Manufacturing Foods since October, 2005. I gained various skills as operational manager such as production, food safety, risk management program, pasteurisation etc. My Massey degree has given me the confidence to get this job."

Jane Kuek Kearton, Postgraduate Diploma in Science 2006, worked at Configure Express for nine months as a wellbeing consultant, training women and giving dietary advice and help. She has recently started her own business from home doing personal training and nutrition for women and also teaches fitness classes at home and at schools for teachers. She writes that she is looking at expanding into community gyms to help those needing changes in lifestyle. "Ultimately I would like to build a lifestyle centre for all types of exercise classes for families to encourage a better lifestyle for all. This is a long term plan."

David Marriott, Bachelor of Aviation Management 2006, also completed Graduate Diploma in Business Studies and is currently doing his Masters of Aviation thesis in rule compliance and safety management systems for adventure aviation.

Matt McLaughlin, Bachelor of Aviation 2007, writes that he started his extramural degree in 1997, and took nine years to complete the 200 points required for graduation. "Along the way Massey moved the goalposts, when they reduced the points awarded per paper several years after I started, so I had to complete one extra paper in order to graduate. Since graduating last year I completed a three-month training course at work and was upgraded from co-pilot to captain. I am now a captain on the Airbus A330, flying routes in Asia and to Australia and the Middle East from my home and base in Hong Kong. I have been an airline pilot with Cathay Pacific since moving to Hong Kong in 1995. Before that I was a pilot in Papua New Guinea from 1992 to 1995. Before that I was trained to fly in the RNZAF. I grew up in Gisborne, am married to Anna and we have a six-year-old son, Joshua."

Steve McLeod, Dip Horticulture and Nat. Dip Sports Turf Management L6 (2004), has been employed with the Resource Engineers, Rotorua District Council, as road opening administrator and pollution control officer since August, 2006. He hopes to find a position that will allow him to return to parks and reserves in a role in parks planning and asset management sometime in the future.

Sarah Mortimer, BSc 2006, worked as a fitness instructor in a gym in Hamilton after graduation, and then started her nutrition consulting business. She did that for over a year and has been travelling around South America for the past few months. She is currently looking for a new job.

Charlotte Newman, Graduate Diploma of Teaching 2007, has just completed her first year teaching at an International School in central Japan.

Deborah Mason Searle, Bachelor of Science 2007, has become the nutritionist at the Massey University Recreation Centre in Auckland. She conducts seminars there on various nutrition topics. She also consults at Whangamata on the Coromandel and has been running a 10-week educational nutrition group locally, which includes presentations, weigh-ins, workshops and supermarket tours.

Kristy Tien, Bachelor of Health Science 2006, writes that she has been working for National Chengchi University in Taiwan (one of the top five universities locally) since graduating from Massey University (Wellington). "My major is psychology which I believe has improved my communication skills. I think people who have been overseas for their degree prefer to contribute their professional and bilingual skills to the educational setting when they return home. I am really enjoying working at the university and I am now looking to create a possible academic exchange opportunity between Massey University and National Chengchi University in Taiwan in the future."

Nick Tipping, Bachelor of Music 2000, writes: "I am now head of department in the school in which I studied!"

Quynh Truong, Bachelor of Business 2007, writes: "I am completing an Honours degree in Human Nutrition, doing a project for New Zealand Food Safety Authority and working part-time as a marketer for an IT company in Wellington (marketing was also my major besides nutrition). I am still looking for a job in food, nutrition, social marketing and public health areas and hope I will get one in 2008."

Under the Otaki sun

You know the scenario: a couple ditches their high powered corporate life and buys a vineyard in the South of France or an olive grove in Italy and go through a series of picturesque tribulations.

Andreas Paxie, (BTech Operations Research 1988), and Patricia Bolger (MA Organisational Psychology, first class honours, 1992,) bought their eight-year-old 17-acre olive grove in 2007.

The grove, though, is in Otaki, not Tuscany; Andreas Paxie, hasn't quit his day job (he runs office products importer/distributor ACCO NZ); and success has not been late in arriving: oil from their first harvest, took out the top Olives New Zealand award, Best in Show for 2007.

Their Four Sisters brand is named after their four daughters, Olivia, Josephine, Eleanor and Genevieve, and comes from Tuscan variety of Frantoio Olives. It is very much a limited release – most of their fruit is sold to other olive oil producers.

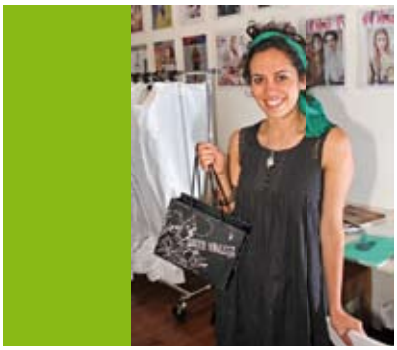
Enquiries about the purchase of Four Sisters Extra Virgin Olive Oil can be made by e-mailing Andreas at foursisters@paradise.net.nz

'Anti-memorial' marking the site of a fatal car crash on Stuart Highway, south of Coober Pedy, Australia.

An image from the series Land Marks *by Tony Whincup. The photographs record a diversity of objectifications and their relationship to the desert of central Australia. Associate Professor Whincup, Head of Massey's School of Visual and Material Culture, is best known for his photographs of the South Pacific nation of Kiribati.*

Massey University Growing New Zealand

Progressive: A future-focused approach and understanding of what will drive New Zealand forward.



Academic excellence: Applied, specialised and highly relevant programmes support New Zealand's economic, social and cultural transformation.

National reach: Campuses in Auckland, Palmerston North and Wellington and a national distance education programme offer research led teaching and research training to a wide and diverse student body.

Connected: Strong partnerships with industry and commerce contribute to economic development regionally, nationally and internationally.