



ISLAND TIME CAPSULE

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INSIDE

THE 'WAR' ON OBESITY

An emerging field of social science scholarship is beginning to explore how obesity messages are socially constructed. They are also looking at the impact 'anti-obesity' interventions have on people's views of the body, health and weight, as well as on the physical, mental and emotional wellbeing of children, mothers and other groups. Dr Darren Powell from the Faculty of Education and Social Work and PhD candidate in Sociology George Parker question the effectiveness of the current 'war on obesity'.

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DIGGING INTO THE PAST

Stunning Great Mercury Island, eight kms off the eastern Coromandel coast, is an open air classroom for University archaeology students who have uncovered important clues into the lives of early Māori.

In July, a crew from the University's Media Productions unit accompanied head of archaeology, Professor Simon Holdaway, and a group of post-grad students on a winter dig with amazing results.

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EMMA AND THE GOVERNOR

The undisputed king of Old Government House, Burmese cat Governor Grey is so famous he even has his own Facebook page. His 'person' Emma Newborn is the historic home's custodian, a live-in position that has one of the best views in the city. Also a performer, Emma is about to head off around the woolsheds of the North Island with her new show, *Sons of a Bitch* – the story of two dogs who find themselves in the city for the day.

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POI RESEARCH PITCH A WINNER

A short but lively presentation outlining research about how and why poi training is vital to healthy aging won Dance Studies Programme postgraduate student Kate Riegle van West the doctoral category at the annual 3-Minute Thesis (3MT) Competition. Students have just minutes to explain their thesis. Kate's talk also received the people's choice award and she will now travel to Australia to take part in the Asia/Pacific 3MT competition. To find out more about Kate's research, visit www.spinpoi.com



GIUSEPPE CASTIGLIONE ON SHOW

A group of keen Asian Studies and Art History undergraduates have created an exhibition featuring quality reproductions of the work of Giuseppe Castiglione (1688-1766), one of imperial China's most eminent and prolific painters. These paintings long resided in the imperial palace in Beijing and were moved to Taiwan in the mid-20th century, where they are now housed in the Taiwan National Palace Museum. The exhibition will be at the George Fraser Gallery in Albert Park, off Princes Street, opening on Wednesday 28 September.



DEBATING AUCKLAND'S FUTURE

There was applause, and at times heckling, from the audience in the Business School auditorium as Auckland mayoral candidates outlined their plans for the Supercity. The recent event, organised by the School of Architecture and Planning and supported by the Auckland Society, featured mayoral hopefuls Phil Goff, Vic Crone, John Palino, Mark Thomas, David Hay and Penny Bright. The youngest candidate, 22-year-old Chloe Swarbrick, a recent law and arts graduate, was also given an opportunity to address the crowd.



ALL THAT GLITTERS

The new \$5 note has special significance to the University. Pro-Vice Chancellor Jim Peters has been presented with a framed, uncirculated \$5 series seven *Brighter Money* banknote featuring a tukutuku pattern, kaokao, from the Tane-Nui-A-Rangi meeting house on the University marae. The framed note has a special serial number, AA15001883 – reflecting the year the Auckland University College opened.



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COVER PHOTO: Professor Simon Holdaway, head of archaeology in the Faculty of Arts, on Great Mercury Island during a winter field trip.

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TOP MARKS FOR INNOVATION

The University's focus on innovation and entrepreneurship has been recognised in a new international ranking.

Auckland was placed 27th in the inaugural Reuters Top 75: Asia's most Innovative Universities, putting it ahead of leading Australian universities as well as all other New Zealand universities.

To compile its list, Reuters evaluated tertiary institutions on ten different metrics which included the number of basic and global patents filed and the percentage of all articles written in collaboration with industry.

Through its research commercialisation company UniServices, the University currently has more than 1200 active projects with over 300 companies. It also has a strong student entrepreneurship programme led out of the Business School.

This news comes after Science and Innovation Minister Steven Joyce's July announcement of a \$35 million contestable fund that will see investment in attracting 15 to 20 entrepreneurial researchers to universities across the country over the next four years.

The announcement followed a proposal submitted by the University to Government in late 2015.

Vice-Chancellor Professor Stuart McCutcheon says the fund will allow Auckland to build on the entrepreneurial activities already underway here.

"Universities around the world that make a very significant contribution to economic development in their own country (e.g. Stanford, MIT, Cambridge) do so by attracting entrepreneurial academics who create radical innovation, and by enhancing the entrepreneurial and innovative skills of graduates to better support a growing high-tech sector," he says.

"Modern economies require modern industries and this initiative will help New Zealand develop a high-tech export sector, as well as enhancing our current, largely primary industries".

Current leading edge projects include advanced laser technology that can sex bull semen (being commercialised through spin-out company Engender) and a diagnostic tool which accurately analyses the components of an individual cow's milk while it's still in the shed (Orbis); both aim to improve health and productivity in the agricultural industry.

These initiatives were among several showcased to a delegation of top Chinese government officials at the University's new Science precinct last month.

CHANGING OUR FACE TO THE WORLD

The new University homepage had its launch in May. Since then, the team from the Web Presence Improvement Programme has made further strides in enhancing the web, starting with content for future students.

The next phase will focus on for the main University site, including programmes and courses, news and events, and on web analytics. It will also begin migrating content for the faculties and Large Scale Research Institutes into the new design.

One of the aims is to make the web accessible to all, including those with disabilities, meeting international standards to support users with visual impairments. Another is to make sure our sites are easily viewed on mobile devices.

The University has selected SapientNitro as its digital partner because of its skills in user experience and creative design. They work together using "agile" practices - which means the process is flexible and allows feedback to be gathered and changes made if needed.

In July, an independent panel undertook a peer review on the approach to improving the web. This included a presentation to members of the Web Governance Board and a panel of independent experts, who confirmed that the University is taking the best possible approach. The team say this is also an acknowledgement of the support and involvement of the University community, which they see as vital now and in the future.

For more information, contact webprogramme@auckland.ac.nz or visit www.auckland.ac.nz/webprogramme



UNIVERSITY SCIENTISTS SCOOP AWARDS

Two prestigious science prizes have gone to University of Auckland researchers.

The 2016 Hamilton Memorial Prize has been awarded to Dr Miro Erkintalo for his outstanding contributions to nonlinear optics and laser physics, particularly for the unification of time- and frequency-domain models of optical frequency comb generation.

The \$1500 prize is awarded annually for the encouragement of early-career researchers currently based in New Zealand for scientific or technological research in New Zealand.

And Dr Jason Busby has won the 2016 Hatherton Award, given for the best scientific paper by a student registered for the degree of PhD at any New Zealand university in Physical Sciences, Earth Sciences or Mathematical and Information Sciences.

Jason's paper entitled *The BC component of ABC toxins is an RHS-repeat-containing protein encapsulation device*, published in 2013 in the leading science journal *Nature*, brought spectacular new insights into a novel family of proteins that encapsulate toxins or other protein cargo.

\$32,000 FOR SMART SOLUTIONS

Livestreaming mussel beds in the Hauraki Gulf to individual sponsors and converting broken vineyard posts to a biofuel are two of the winning ideas that Auckland students have generated in an innovation challenge with a total \$32,000 prize pool.

The Solve It challenge, run by the Centre for Innovation and Entrepreneurship at the Business School, sought innovative solutions to environmental and social problems posed by four sponsors.

Foundation North asked for ways to improve the health of the Hauraki Gulf – specifically, solutions for high sediment and nutrient levels, overfishing and plant and animal welfare. Yealands Family Wines sought ideas for

sustainably disposing of the three percent of posts that break in their vineyards every year. Fonterra invited sustainable packaging ideas and Teach First New Zealand invited ideas for building their brand awareness to eligible students.

Twenty teams of University students entered the challenge, five for each problem. Sponsors picked winners and second-place-getters based on a final pitch, with a first prize of \$5000 per team and second prize of \$3000 per team.

Centre for Innovation and Entrepreneurship director Wendy Kerr says the challenge reflects the fact that all organisations across all fields need innovative problem-solving.

SPRING GRADUATES UP

Spring graduation figures were well up this year with close to 900 more students than last year's record number. A total of 3160 graduates received their qualifications either in person or in absentia at four ceremonies at the Aotea Centre on Tuesday 27 September. All four ceremonies were webcast live, enabling well-wishers to watch from around the world. It was the University's third graduation event for the year, making a total of 15 ceremonies held to recognise the academic achievements of close to 10,000 graduates. The oldest person in the September event was 72 and the youngest only 19 and there were 356 Māori and Pasifika students.

There were 159 doctoral students, with a quarter of those graduating from the Faculty of Science, followed by Engineering (28) and Medical and Health Sciences (24).

MIDDLE EAST EXPERT VISITS

Director of The Washington Institute for Near East Policy, Simon Henderson, conducted a round table for staff and graduate students of Politics and International Relations earlier this month. His theme was tensions between Saudi Arabia and Iran, which he found to be deepening rapidly and dangerously. His prognosis was that the Saudi-Iran rivalry has far greater potential for widespread violence in the Middle East than the Israeli-Palestinian conflict. He believes this rivalry has the potential to interrupt Gulf oil supplies to world markets, with negative consequences for the world economy, while nuclear weapons proliferation is another possibility. He was hosted at the University by Associate Professor Steve Hoadley.

SERVICE STREAMLINED

The University's Staff Service Centre (SSC) records all the phone calls it receives. This means it has the chance to gather lots of information about things like whether the call is resolved and how long the caller has to wait. Just recently, with the help of its Business Intelligence and Reporting (BIR) team, the SSC was helped to make a real advance on how it reports and acts on the information received. This happened through the use of the "agile" method and will ensure that callers get a more streamlined service. For more information, look at the Staff Intranet News section for the story, *Collaboration enables real-time improvement*.

NEWMARKET GETS GREEN TICK

Two buildings at the Newmarket campus have won a top engineering award.

The Newmarket Campus Innovation Centre has received an IPENZ merit award in the large project category for Environment and Sustainability for the work done by consulting engineers BECA and BTL.

It was completed under the direction of the Property Services team, led by senior project manager Lee Johnson.

The building has a range of sustainable features; natural springs and bores on the former Lion Breweries site are used for heat exchange for cooling water systems, cooling tower makeup and irrigation instead of potable mains water supplies.

City water conservation by the bore water systems is about 10,000 to 15,000 cubic metres a year, equating to an annual cost-saving of about \$50,000 to \$75,000.

Innovative and environmentally sustainable building and systems design is also incorporated in building 906, a new purpose-built facility that provides a structural test hall, offering one of the largest seismic testing capabilities in Australasia.

The building is partly clad in a timber product called Accoya, which is New Zealand grown Radiata pine that is chemically modified to give the same lifespan as hardwood.

Predictive and adaptive ventilation systems are used as much as possible and other unique features include new technology high-efficiency fan coil units and three-louvered thermal chimneys at the core of the new building. Automated windows and ceiling fans are controlled by Building Management System (BMS) using data from a weather station and sensors.

UNCLOAKING THE PAST

Archaeology students from the University of Auckland have been lucky enough to have Great Mercury Island (Ahuahu) as their outdoor classroom for the past five years.

In July, a team from Media Productions at the University documented one of their winter field trips; the result – the impressive video *Archaeology is Amazing*. Julianne Evans reports.

A burning sun rises out of a flat calm sea and suddenly we're flying at giddy speed above pristine water, a perfect crescent of white sand and green land stretching below.

This paradise is Great Mercury Island. Privately owned by New Zealand businessmen Michael Fay and David Richwhite since the late 1970s, around 700 years ago it was a popular mooring spot along a busy sailing route for the early people of Aotearoa.

Māori left behind a rich legacy of clues about their way of life buried in the soil here – about 20,000 objects which create a unique time capsule for future generations.

As a result of a collaboration between the University, Auckland Museum, tangata whenua and the current owners, the island offers an ideal location for groups of archaeology students keen to uncover some of the country's earliest human history.

In consultation with Ngāti Hei, and under the supervision of Professor Simon Holdaway, a group heads out from Whitianga in the Coromandel for two weeks every February, living together in the shearers' quarters (part of the island is run as a commercial farm) and pitching in with the cooking, cleaning and site set up.

"Students have to learn to look after each other, it's all part of running field work," says Simon.

Every morning they get up about 6am and trek out to the excavation, equipped not only with basic gear like trowels and plastic bags (for 'bagging and tagging'), but also high tech equipment like surveying equipment using lasers, which are used to help create a computer model of the site, documenting what's discovered and where on a 3D map.

"It's all about context and inter-relationships, building a picture of how people lived, where things are, where they came from," he says.

And unlike our modern concept of ourselves as coming from a fixed geographical place, he says early people moved around a lot and sea travel was the norm.

"Exploring their new land, they used the sea as a pathway, not a barrier. It was also a rich source of food, so they would have eaten well.



Professor Simon Holdaway (left) with Folko Boermans on location (right) on Great Mercury Island in July this year.



"There was a lot of movement by waka around the Coromandel and the Hauraki Gulf."

The excavation site is at the northern end of the island, back off the beach in a protected area with a well-preserved archaeological record.

Over the years, it has produced a diverse collection of bone and rock fragments, moa bones among them. Although it's unlikely that moa actually lived on the island as it would have been too small to support their food requirements. They would probably have ended up there as meat or as bones for tools.

Evidence of how far around the country the island's early inhabitants had travelled lies in the variety of worked stone, particularly obsidian – which is a type of volcanic glass that, when flaked, produced sharp edges.

"We've found obsidian from all over the central North Island here, including red obsidian from a site in Taupo which tells us that those early people knew about – and had been to – those sites," says Simon.

The University work has even unearthed ancient flora and fauna, dating back thousands of years.

"The range of material is exciting. In swamps, we've found the signature of species, non-native flora and fauna, remains of plants and insects."

He believes the site is one of the earliest of its kind, and as such, offers archaeology students an authentic field-work experience, as well as the

chance to add to what we already know about early human life here.

While the winter dig to Great Mercury was a relatively small affair for archaeology (compared to the larger summer trip), it was a big operation for Media Productions.

Produced, directed and edited by unit head Folko Boermans, the video *Archaeology is Amazing* has set the bar for future projects and been one of the most watched and talked about films he's worked on since taking up a job here three years ago.

"Basically it shows the benefits of investing time and energy into a project and proves the sort of high quality our team (of 11) can produce with its level of expertise; we've all worked on substantial things outside of the university environment."

Originally from the Netherlands, he says coming from a career in documentary film making – most recently with the BBC in Scotland – has prepared him for working on large scale projects, many of which had budgets to match.

"One of the last things I did before leaving Scotland was a couple of docs on the battle of Bannockburn – a significant Scottish victory in the war for independence in 1314; it involved dramatic re-enactments with about 120 people, all dressed as warriors, who were then multiplied by computer animation... it was mini Peter Jackson stuff!"

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MY STORY

STAFF QUESTIONS AND ANSWERS



EMMA NEWBORN

Emma is the Custodian at Old Government House. Also a performer, she is heading off around the woolsheds of the North Island in October with her original comedy show, *Sons of a Bitch*, written with co-star Amelia Dunbar.

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

I grew up and went to school in West Auckland, around Avondale and Blockhouse Bay, so I spent a lot of time at Piha and on the West Coast, where I had friends and which I loved. My dad was an actor (Edward Newborn), my grandmother was an actress in England and my great-grandmother was a British opera singer, so I guess I'm a fourth generation performer and that's what I loved doing as a child, and still do now.

WHO WAS YOUR BEST TEACHER?

Miss Kerr at New Windsor Primary. She was this beautiful hippie with long hair and a guitar. She used to run the choir. We thought she was a goddess.

TELL US ABOUT YOUR FIRST JOB

It was just down the road in Fort Street, working on the reception desk for a paper called the *Rural News*, which was funny, because I knew nothing at all about farming; although now of course, through my actor friend Amelia Dunbar who was brought up on a farm, I know a lot more and our most recent play, *Sons of a Bitch* (following on from the successful *The Bitches Box*) is the story of two country dogs who find themselves in the city for a day.

HAVE YOU TRAVELLED?

Yes I left Auckland aged 19 intending to go to Scotland for three weeks and stayed for two years. It was fantastic, I fell in love with it. I ended up living in Edinburgh telling Scottish folk stories to tourists. But in the end, I missed the sun and the fruit and vegetables, so I came back to NZ, but wasn't ready to stay so I went to Melbourne. I attended the Victorian College of the Arts part time for a year and through my time there met lots of theatre makers and ended up staying for four years doing DIY-style theatre. Then at 24, I moved to the UK and worked in London. I had a part time job in the National Theatre box office. I gorged on theatre, and saw so many great actors, it was totally inspiring. Then I made three short films about this little Hobbit (played by me) stuck in London and won a competition. And the prize was a flight home to New Zealand!

WHAT DOES YOUR PRESENT JOB INVOLVE?

I live at Old Government House and look after it, alongside the secretary, Tim Biggs. It's home to the Staff Common Room Club. There are four other apartments, rented out to visiting academics so I take care of those, open it up on weekends if necessary, let the cleaner in, respond to any alarms or issues that happen after hours and run the bar, which is open every week day evening until 7pm and until 9pm on Fridays. I'm also the 'caregiver' of the famous Governor Grey, the Burmese cat who I found living rough (skin and bone) under my van in the grounds a few years ago. He is now rather famous (he has his own Facebook page) and regularly brings me little presents of rodents. Although he has the run of the place, he goes in and out through a 'cat window' on the top floor and spends a lot of his time relaxing in front of my heater.

GIVEN ITS LONG HISTORY, DOES OLD GOVERNMENT HOUSE HAVE A SPECIAL ATMOSPHERE?

People do ask me about ghosts. I haven't seen any, but I do walk down the corridors at night singing, just to let them know I'm coming. It's been the

'home away from home' of royalty on their official visits, including Queen Elizabeth in 1953, and there are plans to reflect that in a revamp of the décor, which will include a complete renovation of the top floor rooms. Apparently one of the original residents, Governor Grey, (the man, not the cat) didn't like it very much, which is why he built Mansion House on Kawau Island and spent most of his time there. He planted that huge flame tree you can see out of my window.

WHAT DO YOU LOVE MOST ABOUT YOUR JOB?

I see Old Government House as an oasis for staff, where they can relax. It brings together a community of people from different faculties and offers a really nice atmosphere. And we have our regulars, people who've been coming there since it opened as a staff club in 1969. It's a place they can feel at home. Being a live-in custodian is also a fantastic job for a creative person in that it gives you a roof over your head and some freedom. I've been here for five years and have no plans to leave. The last custodian, Russell Mallison, was here for about 25 years. I have a lovely place to live in the middle of the city with one of the best views in Auckland. Why would I leave?

WHAT ARE YOU MOST PROUD OF?

I'm actually really proud of the bar. It has an amazing staff of students, it has some seriously smart and interesting customers and it stocks a great range of whiskies and local craft beers; we're actually about to get two new taps to accommodate more craft beer.

WHAT DO YOU ENJOY DOING WHEN YOU'RE NOT WORKING?

My life isn't really divided like that. Where I live is where I work and performing is also working but something I love doing. I do occasionally go to those 'dancing in the dark' events where lots of people dance around on their own in a darkened room. And yoga. I love yoga.



Top left: Emma Newborn and Governor Grey.
Below: Amelia Dunbar and Emma Newborn in *The Bitches Box*.

DID YOU KNOW

... that this year marks the 21st birthday of the New Zealand Asia Institute at the University? Emeritus Professor Nicholas Tarling looks back at its achievements.

Over the past two decades, the New Zealand Asia Institute has tried to take account of the major changes in Asia, and also New Zealand's relationship with some of its countries, particularly the People's Republic of China.

The Institute emerged from the chrysalis of the Centre of Asian Studies, set up in 1984 on an unfunded basis to bring together all the University staff involved in the study of Asia, whatever their discipline, and to contribute their expertise to the public, more especially secondary school teachers.

It recognised that the relationship with Asia was beginning to change.

In 1995, at the insistence of the first paid Dean of the Faculty of Arts, it became the New Zealand Asia Institute, with the initial appointment of Dr Christopher Tremewan as half-time director. Soon after, the International Office absorbed some of its functions, and Dr Tremewan became the first Pro-Vice Chancellor (International).

The Institute had extended the internal and external mission of the Centre. It offered half or whole-day seminars, business breakfasts and public lectures given by staff or by some of its many visitors.

After a review, it was given the added task of research, and Dr James Kember [now Ambassador in Paris] was appointed director. Given limited funding from the University, the Institute drew on the Korea Foundation endowment it had received and also successfully sought research funding from other outside



bodies, notably the Japan Foundation and the Chiang Chin-Kuo Foundation.

These foundations normally wanted the research conferences they supported held in the region but that was no drawback, since it helped to make the Institute and the University more widely known. Other conferences were held in Auckland, notably one marking the 40th anniversary of ASEAN, supported by MFAT. Several publications have followed, some by NZAI itself, some by other publishers.

The structure and funding systems the University adopted made a non-teaching institute something of a waif at times, though it continued all its activities. A new home was found in 2009 in the Business School and after leading a rather peripatetic life, NZAI is now lodged in the Owen Glenn building.

Many of its previous activities had indeed what might be called a 'business' bent. One of

the first research projects covered international student mobility and its impact in New Zealand and another, following the 1997-8 economic crisis, the role of 'corruption'. Conferences dealt with the ethnic aspect of business, the economic prospects of the Mekong region, and popular culture. In some sense therefore, the Institute found the Business School both an appropriate as well as a welcoming place to be; particularly as the Director, Hugh Whittaker, and the Dean, Greg Whittred, realised that too narrow a commercial focus was not in New Zealand's long-term interests.

The more you knew about Asian societies the better the chances of successful innovation and entrepreneurship.

Professor Natasha Hamilton-Hart is now the director of the Institute and recently welcomed the many students who attended the latest of the 'Asia Savvy' conferences it promotes.

WHAT'S ON CAMPUS

DANCE STUDIES SERIES

Undergraduates: 25-29 October
Second-year show, 25 October, 6pm, 8pm.
Third-year show, 26 October, 7pm.
Action (showcase) 28-29 October, 7pm.
Postgraduates: 4-6 November, 7pm
Venue: Mangere Arts Centre, Corner Orly Ave and Bader Drive, Mangere Town Centre.

The Dance Studies programme proudly presents the choreographic works and performances of undergraduate and postgraduate Dance Studies students. This is a free event.

OPEN DATA AND FIGSHARE

Tuesday, 25 October, 10-11am
Venue: Room 024, Building 503, Grafton Campus
1-2pm Room 420, Kate Edger Information Commons, City Campus
Part of Open Access Week activities, this presentation for researchers will be hosted by Libraries and Learning Services and presented by Al Hyndman and Megan Hardeman from Figshare.
They will discuss the benefits of publishing data and barriers to data sharing while demonstrating the University's Data Publishing and Discovery Service – Figshare, currently being piloted across the University.

YOUR PUBLICATION RIGHTS

Wednesday 26 October, 2-3pm
Venue: Room 439, Building 401 Engineering, City Campus
Your publication: Your rights? A panel discussion on publishing licences and contracts is part of Open Access Week activities. The panel includes Professor Peter Davis, Director Compass Research Centre; Professor Mark Gahegan; Director Centre for eResearch, Melanie Johnson, Copyright Officer; Dr Fabiana Kubke, Senior Lecturer FMHS and Chair of Creative Commons Aotearoa New Zealand Advisory Panel. It will look at the importance of retaining the right to reuse and share your work and publications.

BIOMIMETIC CATERPILLAR CRAWLS FREE

Trevor the caterpillar is the world's first electronics-free biomimetic caterpillar, powered by artificial muscles.

He is driven by a single DC voltage which is transformed into necessary driving voltages by artificial central pattern generators integrated into its body, like the neural ganglia that are integrated with our muscles. Technically, researchers have produced an artificial muscle – artificial neuron network, a so-called dielectric elastomer oscillator. The oscillator uses piezo-resistive dielectric elastomer switches (DESS) which were invented in the Auckland Bioengineering Institute's Biomimetics Lab.

The DESSs comprise reflexive switching upon mechanical strain and are stimulated by the movement of adjacent artificial muscles in a direct feedback mechanism.

The collaboration of artificial muscles and reflexive artificial neurons can spontaneously generate all necessary voltages to stimulate Trevor's muscles and make him move.

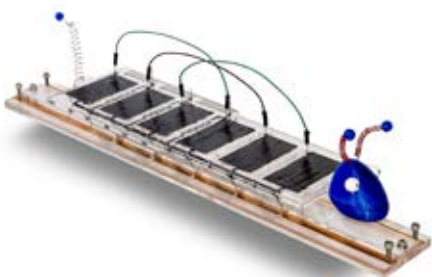
The first Trevor, which used artificial muscles in the same way, was built several years ago by former Biomimetics Lab researchers Sam Schlatter and Ben O'Brien with the help of other researchers at the Lab.

This early version was controlled by an external signal processing unit; wires hung down from the electronics to the robot, like strings on a marionette.

Like Pinocchio, the new Trevor has been released from his strings by integrating the dielectric elastomer switches directly into its body.

This was implemented last year by Dr Markus Henke from the Biomimetics Lab with the support of lab director, Professor Iain Anderson. The now unleashed Trevor Mk II has autonomous movement without electronics.

A paper on Trevor the Caterpillar is in the pipeline with the *Soft Robotics* journal.



UNCLOAKING THE PAST

Continued from page 5

Approached by University marketing to contribute to their *Achieve the Amazing* campaign, his team produced short films on lasers with Associate Professor Cather Simpson from Physics, and luminosity with Siouxie Wiles from the Faculty of Medical and Health Sciences.

As an engaging and highly ranked subject (20th in the world in the latest QS rankings) with a picturesque field work location, archaeology was next on the hit list.

The crew of four spent two days on Great Mercury in July, sharing the shearers' quarters with the archaeologists.

"They made a nice team, I was very impressed with how dedicated and hard-working they were, up at 6am and on the computers analysing data – then out in the field, digging, bagging, tagging and entering the info into a data base," says Folko.

Considering it was the middle of winter, he says the shoot was blessed with beautiful weather, a necessity for a script that involved sunrise, sunset and overhead drone shots and two days of outdoor filming in a remote spot.

"They were long days, we were up before first light and filming through to sunset to get that time lapse; it was already fully scripted so I knew what I needed to get."

The drone works with two people; a technician to fly it and a second person looking at the ground monitor to check the shots it's getting.

It can't go higher than 120 metres and with cliffs all round there was always the risk of losing \$6000 worth of equipment in an unscheduled crash, says Folko.

"Although it's cheaper than a helicopter taking shots at \$2,000 per hour, and it adds an interesting perspective."

The other bit of whizz bang technology on display was added in post-production in the form of a tracking programme: special software that works in 3D space and made it possible to add the nifty tag graphics, little flags which pop up dating and naming objects on screen.

The film spent two weeks in post-production (rather than the usual two or three days) for a four-minute story, which constitutes a long video these days.

"Audiences are a lot more shallow, their attention spans have collapsed," says Folko. "We have information overload; we've gone from an average span of 12 seconds down to eight – even a goldfish has a longer one."

He says it used to be that you had to get someone's attention in the first 30 seconds of a video, but Google analytics suggests that's now dropped to just 10, after which if you haven't got them, they won't watch through to the end.

"That's changed how we work; the video has to work visually straight away and stand out; you're only one thumb-swipe away from obscurity."

And hopefully he says, *Archaeology is Amazing* inspires people to do post-graduate work at Auckland, and leads to more exciting projects for Media Productions.

"At least here at the University you feel you're doing something worthwhile; promoting study and research, furthering lives – you're not making ads for KFC."

You can watch *Archaeology is Amazing* on the University's YouTube channel at www.youtube.com/user/UNIofAUCKLAND

BINARY EXPLORATIONS

J J Eldridge is a senior lecturer in Physics in the Faculty of Science.

Recently I've been working on two kinds of binaries: I've been studying exploding binary stars while also exploding the myth of a gender binary.

While these might seem unrelated, they have been strongly linked for me over the past year.

In February this year I was visiting Monash University for two different astrophysics meetings.

Part way through the first week a rumour circulated on Facebook that the LIGO (Laser Interferometer Gravitational-Wave Observatory) collaboration had detected the merger of two black holes with masses of 36 and 29 times that of the Sun.

Most astronomers had heard rumours LIGO had detected something for months but the details were so specific I realised I could check my binary star computer models to see if such a system was predicted in them.

It was during this meeting I had planned to present as my female-self, rather than my usual male-self, sometime during the week. I am genderfluid and have slowly been becoming more open about being transgender over my time at Auckland.

However presenting at a scientific meeting was going to be a big new step. On the day I was lecturing at the second meeting, on the evolution of binary stars, I lectured as my female-self for the first time.

It went off without a hitch and hopefully spread a little awareness that gender isn't just a binary of female or male.

Looking at whether binary black holes existed in my models, and working with my long-term collaborator Associate Professor Elizabeth Stanway, we were able to show that the rate of merger for the black holes in our calculations would match the rate observed so far.

While getting an initial answer was "quick and easy" it took a considerable amount of extra effort to make our results robust. We also had to show we reproduced the known masses of black holes orbiting stars as well as those black holes floating through our Galaxy.

The key result of our work was that to get the rate of such merging black holes correct, most massive stars in the Universe had to be born and live most of their lives in a binary, not a single star like our Sun.

Comparing this to becoming more at home with a non-binary gender was interesting. Since my first lecture I've also been presenting as my female-self more often, at the University of Auckland and also in other invited talks talking about trans and non-binary genders.

It has been a hectic and difficult six months, scientifically working to show that most massive stars are in binary systems while simultaneously trying to show that not everyone fits into binary gender options.

The next thing I have to do is run a conference for 150 astronomers visiting Auckland, continuing the theme that massive stars are all binaries but gender isn't binary. Just by talking about science and by being me.

UNINews highlights how some of our academics and their research hit the media headlines in the past month.

PROTECTING CONSUMERS

Associate Professor Alexandra Sims (head of Commercial Law) blitzed the media in the second week of September with two stories that were covered extensively. In one, she called for a law change to protect consumers, following her research finding that unfair terms were rife in "terms and conditions" contracts for a broad range of everyday services. In the other, she warned New Zealand's most famously tattooed sports stars, such as Sonny Bill Williams, could face legal battles if changes aren't made to copyright laws, as a growing number of tattoo artists overseas are attempting to sue when their work on celebrated clients appears in advertisements or in video games without their consent.

HEART STOPPING

Professor of Heart Health Rob Doughty's story about his heart attack last year was featured in the *NZ Listener* in a feature article on Heart Health. Also featured in the story was Professor Rod Jackson's decades of work on PREDICT, which uses his world-leading algorithm to help predict who needs preventative treatment for heart disease for GPs and their patients.

UNHEALTHY FOOD ADS

Professor Cliona Ni Mhurchu also had widespread national media coverage of her research into the need for New Zealand to tighten rules and halt the advertising of unhealthy foods to children in a bid to tackle obesity. Her study revealed that New Zealand should adopt the world standard WHO rating system and put pressure on the National Advertising Authority to take note of this in its soon to be published new standards.

KIM DOTCOM APPEAL

Professional Teaching Fellow Dr Bill Hodge widely discussed the six-week appeal hearing against extradition to the US by internet mogul Kim Dotcom, which has been taking place at the High Court in Auckland. Internet law expert Dr David Harvey also commented in a Radio NZ interview on the live-streaming of the Dotcom extradition case and how it was innovative, despite possible technical difficulties.



Visualization by the Simulating Extreme Spacetime (SXS) Collaboration (www.black-holes.org).

FROM THE ART COLLECTION



James Boswell, (1906-1971), *The Sphinx*, 1939, 246/500, lithograph on paper, 327 x 483mm. Gifted by Ruth Boswell in 1976.

James Boswell's obituary in *The Times London*, notes that despite being born in Westport, New Zealand, and spending a year at the obscure Elam School of Fine Arts at Auckland University College, he "became a leading spirit in the revived art of social satire in [Britain] and helped to establish a new approach to social commentary that continues to this day with unabated vigour".

Princeton art historian Donald D. Egbert declared that Boswell had "more influence on

socially radical, young graphic artists in England than any other British artist of his generation".

The Director of Elam, Archibald Fisher, had suggested Boswell continue his studies at the Royal College of Art in London (Fisher was an Associate of the Royal College). *The New Zealand Herald* reported on Boswell's first prize for watercolour at the RCA in 1927, saying his style was "progressive, a little daring and extremely original".

He exhibited his first lithographs at the Senefelder Club in 1929, the year he left the Royal

College and of the Wall Street Crash. Boswell joined the Communist Party, illustrating the party newspaper *The Daily Worker*, and became a founding member of Artists International. He also contributed illustrations to the radical cultural periodical *Left Review*, with the German artist George Grosz his chief inspiration, and was invited to exhibit in Moscow as a result.

There Boswell's work delighted for its ability to "throw a searchlight on the political rottenness of capitalism" and "tear the mask from the bourgeoisie to show them as the beasts of prey that they are". Back in London, his work was included in the hugely successful exhibition *Artists Against Fascism and War* which attracted 7000 visitors, more than for any other English exhibition of that size. In 1939, his lithographs on British democracy were proudly on show in the British pavilion in the New York World's Fair.

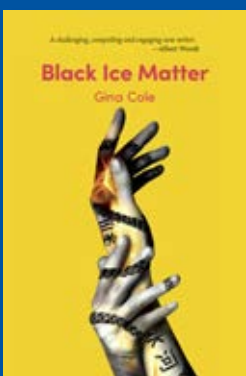
In 1939, prior to the outbreak of war, he visited the Paris brothel Le Sphinx, executing ten drawings which were the basis for the lithographic prints he made on his return to London. After his death his widow Ruth Boswell gifted two prints to the University art collection in memory of James Boswell's year at Elam.

Her typed note on the back of this print says that when he visited Le Sphinx, "its reputation was at its height. It attracted a wide public – artists, writers and businessmen. For students, a visit to this brothel acted as a kind of initiation rite. People

WHAT'S COMING OUT

BLACK ICE MATTER

This debut short story collection, published by Huia Press, has emerged from the writing project that Gina Cole completed for her Master of Creative Writing degree from the University of Auckland in 2013. The collection comprises 13 short stories centring on themes of heat and cold — literal, metaphorical and psychological.



Gina, who has been described by Albert Wendt as "a challenging, compelling and engaging new author" writes of military dictatorship in Fiji, lesbian lovers and a child sweatshop worker who dreams of another life. Not

only a writer but also a barrister specialising in family law, Gina is of Fijian, Scottish and Welsh ancestry. She says her favourite part of writing *Black Ice Matter* was taking a research field trip to Fox Glacier.

TAIL OF THE TANIWHA

The first collection of short stories from Arts graduate and general force-of-nature Courtney Sina Meredith advances, with an underlying Pacific politque, an ongoing discussion of the contemporary urban experience and what it means



to be culturally sensitive, in contrast to the general understandings of mainstream society. Snippets of witty conversations between ex-lovers and young artists make way for discussions of serious family secrets; dreams of red lilies and tapu stars co-exist with images of bottle-shop wine at supermarket prices.

TUPUNA AWA

"We have always owned the water . . . we have never ceded our mana over the river to anyone," King Tuheitia asserted in 2012. Prime Minister John Key disagreed: "King Tuheitia's claim that Māori have always owned New Zealand's water is just plain wrong." So who does own the water in New Zealand – if anyone – and why does it matter?

In *Tupuna Awa: People and Politics of the Waikato River* Dr Marama Muru-Lanning offers some answers to that fraught question, introducing us to the way Māori of the region,

often dropped in for only a drink and a chat. A girl might sit down on a neighbouring stool, asking permission first, but she soon moved away if told "J'attends ma reguliere". Indeed, so discreet were they that it was not unusual for men to bring their wives. The standard procedure then was for a girl to ask: "May I speak to your husband?"

Permission granted, the couple went upstairs to the bedroom on the next floor, in a lift that was considered a great luxury. The décor was respectable, like that of a good provincial hotel, the atmosphere one of genteel respectability. One client describes Le Sphinx as being more like a Lyons tea house than a brothel, with the girls good-natured, wholesome and exceedingly pretty. One visitor from 1936 remembers purses being suspended over private parts, which seemed wonderfully appropriate, another mentions light cloaks over bare breasts. The dwarf in the drawings was a permanent inmate who would fetch and carry for the girls, and amuse them when business was slack. They, in turn, treated him as a pet."

Le Sphinx was closed in 1946. More recently, its house in the Boulevard Edgar Quinet fell to the bulldozer. A huge, modern apartment block now dominates the skyline of Montparnasse. The Paris of these drawings no longer exists.

Linda Tyler

the Crown and Mighty River Power have talked about water, ownership, stakeholders, guardianship and the river. By examining debates over water, Marama provides a powerful lens into modern iwi politics and contests for power between Māori and the State. This is Marama's first book, published in September 2016 by Auckland University Press.



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MISCELLANEOUS

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FAT IS A FAIRNESS ISSUE

Do 'anti-obesity' strategies do more harm than good?

At the end of 2015, the New Zealand government announced its Childhood Obesity Plan, a set of 22 initiatives that target three groups: those who are already obese; those at risk of becoming obese; and, 'all New Zealanders'. Of the 22 initiatives, eight focus on educational settings and seven on families, with an emphasis on interventions with pregnant women.

These 'anti-obesity' policies and practices tend to be dominated by fields of scientific knowledge, at the expense of critical social science perspectives. While scientific knowledge about obesity can be valuable, it is not the only or necessarily the 'best' form of knowledge about fatness.

An emerging field of social science scholarship is beginning to explore how obesity messages are socially constructed, the impact that 'anti-obesity' interventions have on people's views of the body, health and weight, as well as the related impact on the physical, mental and emotional wellbeing of children, mothers and other groups.

For instance, researchers have examined what it is like for women to be on the receiving end of 'obesity prevention' strategies, such as diet and weight gain advice during pregnancy.

Findings show that these tactics can be difficult to operationalise in the context of busy lives, but more importantly, that they fail to take into consideration the social stigmatisation of fatness.

This stigma, manifested in fat shaming and bullying within and outside of the health system, has been shown to be highly detrimental to people's health and wellbeing, leading to self-loathing, excessive or sub-optimal eating and exercise behaviours, social isolation, avoidance of (or the desire to avoid) health care, anxiety, and depression.

Research has also demonstrated that fat shaming and bullying practices are prevalent in maternity care, a dynamic that 'obesity prevention' strategies risk legitimising and escalating.

In other words, if 'obesity' is accepted as a serious reproductive health problem requiring intervention, then dislike and intolerance towards 'non-compliant' women can be viewed as officially sanctioned, or more problematically, as a social or moral good.



Further, many women embark on pregnancy already carrying embodied histories of fat stigmatisation and related body dissatisfaction.

'Obesity prevention' strategies that emphasise fatness as a health problem, and leverage off women's maternal responsibilities to their babies to control their weight, can induce anxiety and be disabling for pregnant women.

The net effect is a perfect storm of factors for undermining women's self-confidence and health-seeking behaviours at a time when they should be supported most, a significant distortion from the health promoting intentions of 'obesity prevention' strategies.

In the case of young people in schools, a range of 'anti-obesity' policies and practices are employed, including fitness activities, surveillance of lunchboxes, banning 'junk' food, measuring body mass index, writing food and exercise diaries, and a plethora of educational programmes and resources that aim to 'teach' children to make the 'right' healthy lifestyle choices.

Although on the surface these different strategies appear to be relatively benign, collectively they may be dangerous for young people.

A growing body of research sheds light on the ways these different types of school-based 'anti-obesity' strategies help to create and maintain a narrow understanding of health – one that emphasises individualism, self-surveillance, responsible consumerism and thinness.

A number of children perceive health as simply the result of eating, exercising and being thin, an understanding that ignores powerful social determinants of health and silences other cultural perspectives of wellbeing. Young people

are also increasingly exhibiting body image dissatisfaction, an unhealthy obsession with being healthy, and fat-phobic attitudes (both towards themselves and others).

Schools are becoming sites where anti-fat attitudes and practices are encouraged and rewarded, rather than critiqued and contested.

The unhealthy consequence is that fat children are excessively monitored, ostracised, teased, stigmatised, bullied and even blamed for being fat.

Social science research helps us understand how health promotion and disease prevention strategies intersect with, and are transformed by, social dynamics.

By perpetuating fat stigma, the global 'war on obesity' can and does have harmful consequences for many individuals and populations.

The challenge for government strategies aiming to improve population health is to incorporate socio-critical perspectives to ensure intended, equitable and ethical outcomes.

Dr Darren Powell (top right) is a lecturer in Health Education at the Faculty of Education and Social Work. His research interests focus on children's understanding of health, fitness and fatness, and the role of corporations in 'fighting obesity'.

George Parker (top left) is a PhD candidate in Sociology in the School of Social Sciences. Her doctorate examines women's experiences of weight and diet-focused advice and interventions in reproductive health care, especially in the context of growing scientific interest in epigenetics and maternal obesity.