FAREWELL FRED

As he steps down as President and Vice-Chancellor, Fred Hilmer leaves behind a university transformed.

WOMAN OF INFLUENCE
Maree Teesson on the “cutthroat and compassionate” world of mentoring

VOYAGE OF DISCOVERY
The citizen scientists tracking the health of our oceans

SEX, SPIES AND ROYAL EXILE
Meet China’s women warriors – the stuff of myth and legend
SUMMER 2014/15

COVER STORY
The Hilmer years

FEATURES
Leader of substance
Renaissance man
Food for thought
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Men@Work

ARTS
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Adaptation

REGULARS
Your time starts now
Upfront

YOUR TIME STARTS NOW …
DR RENEE LIM, UNSW MEDICINE

ACTOR AND UNSW-trained doctor
Renee Lim pulls out a battered, snakeskin
Filofax and thumbs its pages. “My entire
life is a movable feast – I have an iPhone
but I prefer to see everything on a page.”

As a locum emergency and palliative
care doctor, regular cast member on SBS’s
East West 101 and ABC2’s Please Like Me,
as well as a presenter on SBS’s Destination
Flavour and Food Investigators, Lim’s life
requires precise organisation.

Adding to an already packed Filofax,
the doctor has also taken on the role of
educational designer in UNSW Medicine,
where she is using her expertise to refresh
the clinical skills curriculum for first- and
second-year medical students.

“Clinical skills refers to anything that
happens between a doctor and patient in
the consultation room,” Lim explains.
“Students learn how to take a patient’s
history, perform physical examinations
and create a safe environment.”

Lim says the new curriculum is
“engaging, experiential and relevant”,
with the pilot program already gathering
positive reviews from students.

Medical scenarios are performed using
simulated patients, allowing a safe, but
challenging, opportunity for students
to test and expand their skills.

Lim says her medical career informs
her acting in a “symbiotic” relationship.
“Being an actor has given me the skills
to walk into a room, read a patient and
adjust my behaviour accordingly,” she
says. “On the flip side, I learn a lot from
my patients; they are often in very intense
personal situations when I meet them, so
I learn from their openness and honesty.”

Surprisingly, the actress never watches
her own performances.

“I didn’t train as an actor so I don’t gain
anything by analysing my performances.
If the director’s happy, I’m happy.”

Last meal: Ice cream. I’ll eat any flavour
but I would argue that Connoisseur’s
Cookie Cream Commotion is the best.

Favourite song to dance to: I’m a dancer
and used to be a dance teacher. Any song
can be danced to and I don’t believe
anyone who says they can’t dance.

Dream job: As a child, I wanted to be a
doctor on weekdays, a lawyer on weekends,
and an actor/singer/dancer in the holidays.
Now I’d replace lawyer with educator.

Inspiration: Anyone who is willing to
show their humanity and their authenticity.
One of the best examples is patients who
either fight to overcome a disease, or who
are brave enough to accept it.

What people may not know: I don’t have
goals and I’ve never had plans. I never set
out to find “something”. I go with the flow
and so far I’ve been incredibly lucky, it’s
taken me many places.

– Fran Strachan
A KEY SPACE within the new UNSW Galleries has been named in memory of the late curator and lecturer Nick Waterlow – a fitting tribute announced at the relaunch of the UNSW Art & Design campus in Paddington.

For more than 180 years, UNSW Art & Design – variously known as Sydney Technical College, the National Art School, Alexander Mackie College, the City Art Institute and the College of Fine Arts (COFA) – has provided art and design education to generations of creative practitioners.

The new name and $58 million campus overhaul marks the latest chapter in the faculty’s evolution, says Dean Ross Harley. “It’s an enormous privilege to be part of such a brilliant project. We’re a community that shows how creativity and innovation lie at the core of everything we do,” he says. “We are Australia’s oldest and newest art and design school – no one else can claim that.”

Harley says the campus relaunch was the “perfect opportunity” to celebrate the late Nick Waterlow, an individual who exemplified the human values, creative practice and spirit of inquiry to which we all aspire.

A key space within UNSW Galleries will be named the Nick Waterlow Gallery, in memory of “our inspirational friend, colleague and curator”.

Waterlow, director of the faculty’s Ivan Dougherty Gallery, was tragically killed in 2009. He had worked at UNSW since 1989. “The Nick Waterlow Gallery will inspire generations of creative practitioners for years to come. It joins the Nick Waterlow Scholarship Fund as an enduring way to acknowledge his memory and achievements,” Harley said at the official launch.

Acknowledging the vision of the former Dean, Ian Howard, in pushing for the new building, Vice-Chancellor Fred Hilmer said the opening also marked the change of name from COFA to UNSW Art & Design “to reflect our longstanding commitment to design”.

“I love education and I love art – how wonderful to bring the two together on this campus,” said Chancellor David Gonski, whose views were echoed by Prime Minister Tony Abbott in a special video tribute screened at the opening.

Acknowledging the faculty’s history the Prime Minister said the campus relaunch “builds on art and design education that dates back 180 years and has so far fostered the creative potential of over 13,000 students”.

The UNSW Galleries were also officially launched with the *Signs of Life* exhibition. Mr Gonski said the Galleries were conceived to be “a centrepiece of the University’s community engagement activities and as an important contribution to the cultural life of this country”.
BRIEFS

GOOGLE “SURPRISE” FOR ASPIRE

UNSW’s ASPIRE program, which has introduced the world of university to thousands of disadvantaged school students, received a $250,000 “surprise” from Google. ASPIRE was one of 10 finalists in the Google Impact Challenge Australia, a competition celebrating the transformative power of technology. The four winners received a $500,000 grant, but Google generously offered the other six finalists $250,000 each “to get their projects up and running”. ASPIRE director, Dr Ann Jardine, said she was “absolutely thrilled” to receive the boost. “We have been completely overwhelmed by the support we have received from UNSW and the wider community who have really got behind us in this challenge,” she said. “The money is a measure of the great work that ASPIRE does.”

NURA GILI CELEBRATES 10 YEARS

Nura Gili, UNSW’s Indigenous Programs Unit, has celebrated its 10th anniversary at an annual awards night, recognising an impressive list of firsts among its alumni. These include: Australia’s first Torres Strait Islander to receive a PhD, the first Indigenous barrister, first judge, first ambassador and first surgeon. Nura Gili now provides support to more than 400 Indigenous students and is offering a new Indigenous Studies Honours program in 2015.

U21 EXPERTS MEET AT UNSW

The challenges and opportunities posed by personalised learning – offering students tailored learning experiences, largely made possible through the greater use of educational technology – was the focus of a major international conference at UNSW in October. The two-day Universitas 21 Educational Innovation Annual Conference, convened by UNSW’s Learning and Teaching Unit, shared ideas and practices for developing higher quality learning experiences.

NOBEL PARTNERS FOR HEALTH

Transforming poor and marginalised communities is the aim of a new agreement between UNSW and Nobel Peace laureate Professor Muhammad Yunus. Under the memorandum of understanding, the School of Public Health and Community Medicine will collaborate with the Yunus Centre, established by the Nobel laureate, to improve health outcomes for poor communities in Australia, Asia and the Pacific.

• WORLD FIRST

TWO PATHWAYS FOR BUILDING A QUANTUM COMPUTER IN SILICON

Two teams working in the same laboratories have found distinct solutions to a critical challenge that has held back the realisation of super powerful quantum computers.

The researchers created two types of quantum bits, or “qubits” – the building blocks for quantum computers – that each process quantum data with an accuracy above 99%. The two findings have been published simultaneously in the journal Nature Nanotechnology.

“For quantum computing to become a reality we need to operate the bits with very low error rates,” says Scientia Professor Andrew Dzurak, Director of the Australian National Fabrication Facility at UNSW, where the devices were made.

“We’ve now come up with two parallel pathways for building a quantum computer in silicon, each of which shows this super accuracy,” adds Associate Professor Andrea Morello.

The teams, which are affiliated with the ARC Centre of Excellence for Quantum Computation & Communication Technology, were first in the world to demonstrate single-atom spin qubits in silicon, reported in Nature in 2012 and 2013.

The team led by Dzurak has discovered a way to create an “artificial atom” qubit with a device remarkably similar to the silicon transistors used in consumer electronics. Post-doctoral researcher Dr Menno Veldhorst, lead author on the paper reporting on the artificial atom qubit, says, “It is really amazing that we can make such an accurate qubit using pretty much the same devices as we have in our laptops and phones.”

Meanwhile, Morello’s team has been pushing the “natural” phosphorus atom qubit to the extremes of performance. Dr Juha Muñónen, a post-doctoral researcher and lead author on the natural atom qubit paper, notes: “The phosphorus atom contains in fact two qubits: the electron and the nucleus. With the nucleus in particular, we have achieved accuracy close to 99.99%. That means only one error for every 10,000 quantum operations.”

Dzurak explains: “Even though methods to correct errors do exist, their effectiveness is only guaranteed if the errors occur less than 1% of the time. Our experiments are among the first in solid state, and the first ever in silicon, to fulfill this requirement.”

The next step is to build pairs of highly accurate quantum bits. Large quantum computers are expected to consist of many thousands or millions of qubits and may integrate both natural and artificial atoms.

• PROUD TO LEAD

NEW DEAN FOR ENGINEERING

Photo: Maja Baska

Professor Mark Hoffman has been named as the new Dean of Engineering and will take up the position in February on the departure of Professor Graham Davies, who is moving back to the UK after seven years as Dean.

Hoffman is currently Pro-Vice-Chancellor (Research), a position he’s held since 2012. He was previously Associate Dean (Research) in the Faculty of Science and Head of the School of Materials Science and Engineering.

“I am proud to lead Australia’s largest and most respected engineering faculty at a time of great opportunity,” he said. UNSW Engineering is ranked in the world’s top 30 (QS World University Rankings 2014–15).
• ROCK STARS

INNOVATORS OF THE YEAR

A revolutionary rock-sampling technology that achieved commercial success and a solar collector that can be used to heat or cool buildings are among the big winners in the 2014 UNSW Innovation Awards.

Professors Val Pinczewski and Christoph Arns from the School of Petroleum Engineering received international attention earlier this year when the digital core analysis technology they co-developed with the ANU sold to a US company for $76 million.

The buy-out was seen as a textbook case of technology transfer, delivering financial returns and now the Innovator of the Year Award and the Innovation Impact Award for its co-creators.

Three students studying in the School of Photovoltaic and Renewable Energy Engineering (SPREE) took out the top student prize as well as the Early Stage Innovation Award.

Cheng Zheng, Qiyuan Li and Albert Woffenden – together with SPREE lecturer and supervisor Dr Robert Taylor – created a novel concentrating solar collector that is compact and designed to be installed on a building rooftop.

Now in their sixth year, the Awards, coordinated by UNSW’s technology transfer and innovation office NewSouth Innovations (NSi), recognise major research discoveries and inventions made by staff and students.

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GRAPHIC NOVEL TO HELP PROTECT LGBTI RIGHTS IN AFRICA

An educational comic book and video about same-sex love and discrimination will be distributed in 16 African countries as part of a campaign to promote and protect lesbian, gay, bisexual, transgender and intersex (LGBTI) rights.

Developed by UNSW’s Australian Human Rights Centre (AHRCentre), Sogi’s Story is a short graphic novel about same-sex couple Sogi and Kojo. It aims to dispel harmful myths and stigmas, and prevent discrimination and violence in 16 African Commonwealth countries, most of which have criminalised homosexuality by law.

Project leader and AHRCentre director, Professor Andrea Durbach, said the 12-page comic book will be sent to national human rights commissions and LGBTI non-government organisations with an accompanying video, fact sheet and website.

Initiated by the Australian Human Rights Commission (AHRC), the resource follows the recent adoption by the UN Human Rights Council of a significant resolution on human rights, sexual orientation and gender identity.

“Our hope is that Sogi’s Story will raise awareness of the issues LGBTI people face on a daily basis, and will become a symbol of solidarity not only in Africa but across all regions of the world,” AHRC president, Gillian Triggs, said at the launch.

SCIENCE WRITING AT ITS BEST

Australia’s best science writing for 2014 has been celebrated at a gala event in Sydney, hosted by UNSW Science. The Bragg UNSW Press Prize for Science Writing went to Jo Chandler for her piece, TB and me: A medical souvenir, which was first published in The Global Mail. Chandler took home $7,000 in prize money. Awarded $1,500 each were runners-up Frank Bowden (Eleven grams of trouble) and Peter Meredith (Weathering the storm).

UNSW Press’ publishing division NewSouth launched The Best Australian Science Writing anthology in 2011.

In 2012, the company went a step further and established the Bragg UNSW Press Prize for Science Writing, named after Australia’s first Nobel Laureates, William Henry Bragg and his son William Lawrence Bragg. Both initiatives have been made possible by the generous support of the Copyright Agency Cultural Fund.

ROBOTICS EXPERT IN TOP 25

Director of UNSW’s Creative Robotics Lab Mari Velonaki has been voted one of the world’s top 25 women to watch in the field of robotics. The list was created by Robohub, one of the largest online robotics communities that brings together experts in robotics, business and research. Velonaki was awarded an ARC Queen Elizabeth II Fellowship to create Diamandini, a humanoid robot that interacted with 28,000 spectators at the Victoria & Albert Museum during the 2012 London Design Festival. Based in UNSW’s National Institute of Experimental Art, the lab is the first of its kind in Australasia. It offers a cross-disciplinary research environment dedicated to understanding how humans interact with robots and responsive systems. Velonaki is pictured above with Geminoid F, a humanoid robot created in Japan.
WHEN PROFESSOR Maree Teesson stood up to accept her Australian Museum Eureka Prize for outstanding mentoring of young scientists she was having a silent struggle with herself. Should she or shouldn’t she tell the audience about the cancer diagnosis and treatment she had endured earlier in the year? The case for no won out and she didn’t mention it.

Teesson, director of the NHMRC Centre of Research Excellence in Mental Health and Substance Use, and a Senior Research Fellow at UNSW’s National Drug and Alcohol Research Centre (NDARC), wanted the focus to remain firmly on the research for which she and her team have earned a stellar, international reputation.

“Mental health and substance abuse – is not usually in the spotlight alongside things like astrophysics and chemistry, so the Eureka Prize was fabulous,” she says. “It’s really a wonderful, clever way to promote Australian science. And I could sense from the commentary afterwards that the prize had energised the field. Mental health and substance use is an area prone to a bit of nihilism, but people seem to be feeling more optimistic about the future.”

The prize, however, was also of great personal significance. It is possible to self-nominate for a Eureka Prize, but Teesson’s application was drafted by her research team. It’s a clearly elucidated, heartfelt series of statements about her remarkable generosity with time, her supportive and inspiring management style, her level-headed but innovative approach to funding structures and working arrangements, her strong leadership skills and her talent for empowering others.

“In February I was diagnosed with breast cancer and I was in hospital having a mastectomy while they were writing that application,” Teesson says. “I wasn’t quite brave enough to get up in front of 700 people and say ‘this is really extra special because it was at a time when my team had to take on a leadership role’. And because back then I wasn’t even sure if I would be here to walk up on that stage.”

Teesson has since struggled to balance queasiness about being seen as more fragile than she feels – “and having people not wanting to put pressure on me” – with her desire to be open about the experience.

“I want other people to know that cancer is not necessarily a death sentence. Oh, and for God’s sake, check any lumps in your breasts.” Then, lifting her arms as if to an imaginary onslaught, she adds: “And pressure me all you like. I’m doing fine with it. I’m really well.”

Teesson set off on the path that led to her Eureka Prize almost by chance. She was keen on science when she left high school but unsure of quite where to go with it. She happened to talk to a medical specialist at the time and asked a wise question: if you had your time over, what would you do? Psychology was his reply and Teesson promptly applied to study the subject at UNSW.
Scientia Professor Barbara Gillam, in the School of Psychology, is the person Teesson credits with teaching her how to design and undertake high-quality research. However it’s UNSW Medicine Professor Gavin Andrews, she says, who taught her how to mentor.

“He gave me a job and when I got the Eureka Prize I thought, I stand on his shoulders because he is such a good mentor. He was fantastic,” she says.

“He also taught me that you can use the psychology and the science and the research and the clinical trials to change people’s lives. And that is what got me hooked.”

While Teesson says she has been lucky in terms of individual support throughout her career, she recognised there was little formal, structural support for young researchers, including young women and those with children. She has worked diligently and deliberately to address this deficit, taking risks with her own career along the way.

She has ensured junior researchers are fully credited for their work, often placing them first on published papers. She has made flexible work arrangements available to senior staff of the Centre of Research Excellence she established in 2012 and makes sure money and equipment that enter the centre filters through to researchers from top to bottom. And she works hard to instil self-confidence in her staff, describing her role as one that requires her to be both “cutthroat and incredibly compassionate”.

Teesson says she is also aware of how fortunate she has been to have Andrew, her husband, “who is incredibly supportive” as well as parents and parents-in-law who gladly spend time with the couple’s two daughters, aged 12 and nine.

“You can use the psychology, the science and the clinical trials to change people’s lives. That’s what got me hooked.”

“I have the most amazing support team at home and you can’t underestimate the value of that when you are a female academic.”

Placing the names of junior staff high on published work and encouraging their autonomy was also a bit nerve-racking Teesson admits, because “it’s not traditional … and there was the possibility that I would not get grants or fellowships or promotions because people wouldn’t recognise me as the leader here”.

But adds Teesson, “I have built a bigger team and a stronger team and a more passionate creative team by doing it this way.”

That team has its sights on a number of big future goals, including linking its extensive social and longitudinal research with genetic research to develop interventions for heroin and alcohol dependence.

There has certainly been no shortage of accolades for Teesson, either. In October, following on from her Eureka Prize, she was welcomed into a prestigious new alumni, The Australian Financial Review Westpac 100 Most Influential Women of 2014.

“This year has been huge, hectic, but at the moment I have this perfect storm of fantastic things happening in my life,” she says.

How to be a good mentor

Maree Teesson (with her NDARC team, above) believes good mentoring requires leaders to be both cutthroat and compassionate. Here is her five-step mentoring plan:

1. Instil in people the self-belief they need to realise their potential. Sometimes this means nurturing and protecting the promise and potential of a person even when they’re not feeling confident. They can then come back to it as their confidence increases.

2. Create and implement targeted policies and programs to enhance and fund the development activities of junior staff and students. This means access to resources, money, grants and credit on papers.

3. Make sure your supervisory and mentoring responsibilities remain a priority.

4. Balance passion and compassion. Passion and drive are critical in academia. They thrive when a mentee is also shown compassion and nurturing.

5. The greatest reward of mentoring is watching the person you mentor “pay it forward” to the next generation. If you keep that in mind, generosity is easy.
HIS RESEARCH has featured in *The New York Times* and he’s written on such diverse topics as education and health system reform, taxation, Scottish independence, the viability of Qantas and whether or not Australia faces a “budget crisis” (we don’t).

Find where law and economics intersect and that is where you will find Professor Richard Holden.

The combination of the two disciplines is formidable, the Australian Research Council Future Fellow in UNSW’s Business School says. “It brings to light the influences and incentives that control our lives, and the means to improve them.”

Sydney-based Holden is the editor of the *Journal of Law and Economics* – the leading international publication in the field. The discipline, developed by Nobel Prize–winning economists Ronald Coase and Gary Becker, along with US judge Richard Posner, is well established in the US and gaining momentum here, thanks in part to Holden.

“What is eye-opening about it, is it re-casts parts of law in terms of thinking about what incentives are actually at play,” he says. Its fundamentals can be applied even to crime.

“Opening the book to thinking about what incentives are at work helps you understand better why crime is caused and also how to combat it – what tools are going to be effective in trying to prevent it,” Holden explains.

Head of UNSW’s School of Economics, Professor Denise Doiron, describes Holden as a “renaissance man”, a polymath who writes with depth of understanding in a broad spectrum of disciplines. “Richard is right at the forefront of his field,” she says. “He knows where the field is going and he knows all the top people.”

Two of Holden’s special interests are taxation and “non-price” institutions – those that don’t operate in a market context, for example firms and governments.

“Taxation-benefit systems are just that – systems. Looking at any one part in isolation is dangerous and foolish.”

“Our tax system needs to be reworked to provide the right incentives, to grow the economic pie, and to redistribute money to the less well off.”

Holden received his ARC Future Fellowship last year to explore the nature and optimal design of these “non-price” institutions.

“Firms and governments do the same thing,” he says. “They both redress failures of the market mechanism to work well. Understanding why sometimes it’s best to use markets, sometimes firms and sometimes government is deeply important.

“Take pollution. A carbon tax or emissions-trading scheme makes sense because markets don’t internalise the cost of pollution into prices, neither do firms – they will over pollute – so a tax on carbon internalises the externality.”

Growing up in Sydney, Holden harboured a strong desire to work and study in the US. The opportunity arose in 2002 with the offer of a Frank Knox scholarship to undertake a PhD in Economics at Harvard. He then went on to faculty positions at MIT and the University of Chicago, the birthplace of the law and economics movement.

Much of his research at this time was around the law and economics of US elections, and in particular gerrymandering – the complicated process for selecting electoral boundaries to create a political advantage for the incumbent.

However, UNSW lured Holden and his wife, law professor Rosalind Dixon, away from the University of Chicago in 2011. “I was incredibly impressed by the direction that UNSW is going in, the School of Economics in particular and the Business School more generally,” Holden says.

The pair has established the Herbert Smith Freehills Initiative on Law and Economics at UNSW to increase the recognition and prominence of the field in Australia.

“The aim is to get really high quality people out here to discuss what is happening at the cutting edge of law and economics research,” Holden says.
IT WAS ALMOST 20 years ago that Margaret Morris first loaded up her supermarket trolley with the cheapest processed foods money could buy – pies, chips, dim sims, cakes and biscuits – and began feeding them to her lab rats. The results were shocking. “The rats just wanted to keep eating, they doubled their food intake,” she says.

It’s exactly the same kind of food people pile up in their shopping trolleys for their own consumption – plentiful, cheap, and sold in such large portions that the world is now struggling against a steadily worsening obesity epidemic.

But while everyone knows what junk food does to our figures (or should), Professor Morris wanted to know what a steady diet of pies, chips and chocolate does to our brains.

She and her team at UNSW Medicine’s Environmental Determinants of Obesity group have since made a series of high-profile breakthroughs about how junk food affects the chemical transmitters in the brain, and how those changes in the brain’s chemistry feed back into subsequent behaviour patterns, health and wellbeing.

“Even a week on a bad diet is enough to make significant impacts in animals’ brains, so what does that mean in the human context?” Morris asks.

Her animal studies have shown eating junk food inhibits interest in healthy food and overrides the mechanisms that normally protect against overeating. Junk food stimulates reward centres in the brain and there is evidence that it can, and does, assuage anxiety and stress, including early childhood trauma, albeit at a cost.

“We can self-medicate with food, but that feeds back negatively into our metabolism,” Morris explains. Her own particular weakness, she says, is chocolate. The solution isn’t self-control – it’s not keeping it in the house at all.

Are we really what we eat? Apparently, yes. “We are fundamentally disadvantaged by a poor diet,” according to Morris, who says those most impacted are people on low incomes. They are the ones most likely to fill up on cheap, processed food and so become what she terms “metabolically disadvantaged”, with all the associated ongoing health problems.

And those problems appear to be intergenerational. While it may seem unsurprising that overweight mothers have heavier babies, Morris has also found food choice is so profound that rat fathers fed a high-fat diet to induce obesity and glucose intolerance transmit similar impaired glucose intolerance to their female offspring.

Today, Morris and her team are investigating up to 20 brain chemicals with the common thread of understanding the changes in the brain that drive or moderate stress, appetite, food choice and obesity, and their relationship to other major health issues like diabetes and hypertension. She is particularly interested in the communication between brain, liver, muscle and fat in driving metabolic disease. That still involves her getting out into the supermarkets – the front-line of what she calls our “modern-day struggle with plenty”.

But it’s a struggle we can win. At every level, interventions help. “The impacts of junk food are preventable and reversible,” she says.

One of the most important interventions is physical exercise. Morris’ studies on animals show that even moderate exercise can lead to significant health improvements.

“We know weight loss not only improves health, but it can reduce our dependency on medication – and this could make a huge difference not just to our national health but also to the health budget,” she says.

Margaret Morris is one of the senior professors featured in the upcoming issue of Research@UNSW – Women researchers changing our world, to be published in December.
As he steps down after eight and a half years as President and Vice-Chancellor, Fred Hilmer talks to Judy Brookman about some tough decisions, campus renewal and life after UNSW.
EARLY IN HIS TERM as President and Vice-Chancellor of UNSW, Professor Fred Hilmer had a deceptively simple question for his senior leadership team: “What, exactly, does success look like?” It was a question designed to drive change. As he prepares to step down from the top job eight and a half years later, the report card is in. From an upward trajectory in the rankings, to campus renewal and being the destination of choice for the brightest staff and students, Hilmer leaves behind a university transformed. The achievements are even more impressive given the challenges the University faced a mere decade ago.

Fred Hilmer was no stranger to UNSW when he took up his post in June 2006, having been Dean of the Australian Graduate School of Management (AGSM) for a decade before leaving to join John Fairfax Holdings as chief executive in 1998. But the environment on his return was very different. The University had been through a period of intense turmoil. Two successive vice-chancellors, John Niland and Rory Hume, had faced a hostile and, in Hilmer’s view, dysfunctional Council.

Mark Wainwright had agreed to become interim vice-chancellor in 2004, following Hume’s controversial departure, and David Gonski, a long-time business colleague of Hilmer’s, became chancellor in 2005. The healing process had begun, and Hilmer pays tribute to the role played in that process by Wainwright. “There is no doubt Mark stabilised the University and had very sound ideas about where it should be heading. But we still had a Council that did not recognise the distinction between high-level strategy – which is what a Board should be concerned with – and management issues,” Hilmer says.

“David and I knew it was essential to reform our governance if the University was to operate properly.”

Hilmer hit the ground running. He had used the time after stepping down from Fairfax, at the end of 2005, to do what he calls a “diagnostic” on the University.

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“I’m unashamedly a numbers man,” he says. “I wanted good metrics on our performance. I talked to a lot of people one-on-one about what needed to be fixed, where our major opportunities lay and where we needed to further invest.

“Even before I took over, Mark and I moved to pull AGSM out of the merger with Sydney University and incorporate it into the then UNSW Faculty of Commerce.”

That was a decision Tony Berg, Chair of the Advisory Council for what has become the UNSW Business School, nominates as a signal achievement. There is no doubt, he says, that the faculty is now “a powerhouse”.

Hilmer says this groundwork allowed him to present to his first Council meeting a snapshot of where the University stood and a broad outline for its future.

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“We needed to take a good, hard look at our performance. The data showed we were losing ground in recruiting top students, our research performance was drifting and our community engagement had dropped. Our fundraising appeals were barely covering cost,” he says.

“The University’s financial systems were also a problem and we had seriously lost our way on capital works. We’d been focusing more on office space than labs, and failing to invest in our traditional strengths.”

It was a wake-up call for Council, but also for management and staff. Hilmer recalls being accused of “talking down” the University. Had UNSW become complacent – no longer the cheeky “up and comer” hungry for success?

“Yes, to an extent. The problem was we simply didn’t have the metrics to measure our performance and set the right targets,” he says.

CLEANING UP

Hilmer divides his most significant early decisions into those to “clean up a mess” and those designed to set a new direction.

In the first category he puts the closure of UNSW Asia, outsourcing a number of administrative areas and improving the University’s financial systems. He says a turning point was the good fortune in finding Jonathan Blakeman to head up finance and reform financial management.

Central to setting new directions was the development of Blueprint to Beyond, a high-level strategic framework for the University. A document still being refined, it is broad enough to set an overall direction and specific enough to set concrete targets and measure performance.

Hilmer instigated a more aggressive approach to targeting the best students and retaining and increasing the number of top-performing staff. He cites the creation of the Strategic Priority Fund, to recruit high-performing researchers, as one of his most important decisions. “John Hay introduced this at the University of Queensland,”
he says. "I'm never ashamed to copy a good idea."

He was quick to introduce performance reviews and other processes to encourage a "meritocracy", and pushed for a change to the enterprise agreement that allows the University five years before granting staff tenure.

Creating an environment where he and his senior team could listen to ideas and be sure that people understood the rationale for what was being done was vital.

Hilmer instituted twice-yearly Town Hall meetings with faculties and divisions, and heads of school forums.

Another idea he was happy to pinch (this time from the US) was regular faculty dinners at his home.

“They were terrifically useful, with some wonderful ideas and no-holds-barred conversations. We started to rate them by the number of bottles of wine consumed,” he jokes.

There was also a move to strengthen relationships with business, philanthropists and peer universities overseas.

Finally, there was the decision that would lead to Hilmer’s most visible legacy – to refocus the University’s capital works program and find new ways to finance infrastructure.

TOUGH DECISIONS

One major stumbling block remained, however, with the potential to undermine all future endeavours. Approved before Hilmer’s appointment, UNSW Asia had been trumpeted as Australia’s first overseas university, with a purpose-built campus planned for a “green field” site in Singapore. Opened on a temporary campus in early 2007, its students were completing their first semester when the decision to close was announced. Staff, students and their parents were shell-shocked. There were dire predictions that UNSW’s reputation in Asia would never recover.

“It was a risk we had to take, because there was a much greater one – that this University would be dragged into a financial mire,” Hilmer says.

“There was no realistic business plan. We either closed it in first semester or we would be stuck with it for good.”

Hilmer gives credit to members of the University Council, some of whom had initially endorsed the project, for the way they backed-in the decision.

“It was the right decision, but not every vice-chancellor would have had the courage to act,” says Professor Richard Henry, who was deputy vice-chancellor (academic) at the time.

“UNSW Asia would have saddled us with such debt that we would never have been able to afford the building programs on the Kensington or Paddington campuses,” he says.

Hilmer nominates the day he stood before staff, students and parents in Singapore to announce the closure as not only his worst day as VC but of his entire working career.

“I was advised to let someone else from the management team make the announcement, but I felt it was my job. I wasn’t ashamed of the decision, but emotionally it was very tough.”

It was a defining moment in Hilmer’s leadership.
“It epitomises the best of Fred and points to a major factor in the success of his term – the strength of his relationship with David Gonski,” Richard Henry says. “It is also testament to the work both he and the chancellor had done to repair the relationship between senior management and the Council.”

A Council member at the time, Tina Clifton, agrees: “The business case [for UNSW Asia] simply fell apart. Those who were risk averse warned the damage to the University’s reputation in Asia would be fatal. Characteristically, Fred’s approach was optimistic. “Council had to have faith he and his team could take us beyond it. And they did.”

21ST CENTURY CAMPUS

As difficult as it was, UNSW Asia’s closure enabled Council to refocus attention on the University’s existing strengths. Investment in infrastructure was a priority.

Kicking off the capital works program was the sale of the University’s land at Little Bay to help fund a new cancer research centre and new facilities for the medical school. Timely bids for infrastructure funding brought in Commonwealth Government money to help pay for an energy technologies building and a major revamp of the Art & Design (formerly COFA) campus in Paddington. University funds were injected into the refurbishment of the 1950s-era Wallace Wurth medicine complex and the mechanical and manufacturing engineering building. A new home, Balnaves Place, was built for Nura Gili and its Indigenous programs.

Due to open in 2015 is the single-largest project yet – a new Materials Science and Engineering Building incorporating the Crouch Centre for Innovation. A new biosciences precinct is also in the pipeline.

Central to this renewal has been support from major donors, solicited through what one benefactor describes as a “pincher movement” by the formidable team of Gonski and Hilmer.

“None of these projects could have got across the line without donor support,” says Hilmer, pointing to the very substantial contributions made by Frank Lowy and family for the Lowy Cancer Research Centre, Sir William Tyree for the Tyree Energy Technologies Building, Chuck Feeney and Atlantic Philanthropies for the Kirby Institute (now housed at Wallace Wurth), the Balnaves Foundation for Nura Gili, Len Ainsworth for mechanical engineering and Michael Crouch for materials science.

A number of new buildings on campus are award winning, thanks to a policy of conducting architectural competitions before embarking on design or construction.

Lowy has known Hilmer and Gonski as business colleagues for many years. Reflecting on their persuasive powers, he says: “Each was very good on their own. Put them together and they were triply effective, maybe more.”

The philanthropy championed by the duo has played an increasingly important role. In 2006 the UNSW Foundation raised just under $6 million. In 2013 that figure had risen to $31 million, with an average annual growth rate of 21% over the previous five years. The donor community has also grown, with more than 4,500 individuals, foundations, alumni and community members supporting UNSW in 2013.

A significant achievement has been the much-needed expansion of student accommodation. A public–private partnership was struck with Transfield to build the 1,000-bed UNSW Village.

Fred with his wife, Claire, the patron of UNSW Early Years. Both believed child care had to be prioritised if UNSW was to be the destination of choice for staff and students.

The Lowy Cancer Research Centre.

Photo: Brett Boardman

The light rail.
Image: NSW Govt. artist’s impression

By 2013, UNSW was attracting many of the country’s highest-performing researchers. Fred and David Gonski with Scientia Professors George Williams and Michelle Simmons, at the Town and Gown.
UNSW now has the largest share of the top 500 HSC students. Fred epitomised the tagline he introduced for the University, “Never Stand Still”.

The UNSW Gandhi bust, donated by India’s Consul General in Sydney, has become a focal point for the Indian community. Deeper engagement here and overseas was a highlight of Fred’s leadership.

UNSW welcomed the likes of Bill Gates (pictured), Ratan Tata and David Suzuki as high-profile speakers.

The Tyree Energy Technologies Building.

UNSW’s achievements are all the more impressive given the uncertainty surrounding higher education. The Hilmer years coincided with major policy changes, including the introduction of the demand-driven system in 2009. The focus on international engagement has also paid off. The University now rubs shoulders with the likes of California Institute of Technology (Caltech), Imperial College London and Shanghai Jiao Tong as a member of the prestigious Global Alliance of Technological Universities (GlobalTech), and Stanford, UCLA and the University of Tokyo as part of the Association of Pacific Rim Universities.

Former Vice-Chancellor Niland, himself known as John the Builder, comments: “It is the responsibility of every vice-chancellor to leave their institution in a better condition than they found it, and on that score Fred can certainly take credit.”

Hilmer says: “None of it could have been achieved without the efforts and support of our staff – from members of the Executive through to the academics, and professional and support staff. That’s why it was so important to seek their feedback.”

He recalls with satisfaction a staff survey conducted halfway through his term, in which some 86% of respondents said they were proud to work at UNSW.

A SECTOR IN FLUX

UNSW’s achievements are all the more impressive given the uncertainty surrounding higher education. The Hilmer years coincided with major policy changes, including the introduction of the demand-driven system in 2009.
“There is no doubt this opened up opportunities for thousands more students,” Hilmer says. “Unfortunately, the huge expansion wasn’t costed, and while the government deregulated demand, it didn’t deregulate price.”

Hilmer has been a tireless advocate of deregulation, particularly as head of the Go8 – and not just fee deregulation. He led the charge against the “dead hand” of the newly created regulatory agency TEQSA, delivering a scathing attack in a speech to the National Press Club in 2013 on the way the agency was operating.

The Go8’s unanimous refusal to comply with one of TEQSA’s more “ridiculous” demands finally pushed the government to rein in the agency, Hilmer believes.

Higher education editor at The Australian Julie Hare has described Hilmer as “frank, fearless and a reliable source of good copy”. But the media’s appreciation of Hilmer’s approach has not always been shared by politicians or even, at times, his fellow vice-chancellors. On this Hilmer is unapologetic. There is a frustrating reluctance by university leaders to take on politicians, he believes.

There were successes – such as the federal Coalition’s embrace of deregulation and the NSW Government’s support for reform of university governance – but he describes trying to lobby government, particularly on the need to invest in universities, as akin to “lobbing spears at armour”.

Hilmer thinks one reason Australian universities are not treated well by government is that, unlike in the US, there is no strong relationship with alumni.

“The Go8 probably has more than a million graduates, many of them in very influential positions,” he says. “The trouble is they don’t feel a strong emotional link with their alma mater.”

THE FUTURE

One early interviewer from the Australian Financial Review wryly observed: “During his time at Fairfax … Hilmer was regarded as the most donnish of businessmen. Yet after six months at UNSW he is widely regarded as the most business-like of dons.”

Hilmer half jokes that in his retirement he may embark on a book with a title something like “The economic rationalist meets academia”. When reminded of accusations from some critics that his bottom-line approach lacked vision the response is swift: “Vision not grounded in reality is not a vision. It’s a fantasy.”

Hilmer’s record of achievement is there for all to see. But perhaps his most important legacy is that after a period of debilitating uncertainty and self-doubt, UNSW seems to have regained its “mojo”.

In the words of Arts & Social Sciences Dean James Donald: “Fred leaves behind a university that is not only well managed, but one that is extremely ambitious and brimming with self-confidence.”
VOYAGE OF DISCOVERY

A microbiologist’s sporting talent has led to a journey of a lifetime and a unique project examining the health of our oceans. Bec Crew reports.

“I’M A MUCH BETTER SAILOR than I am a scientist,” confesses microbiologist and national sailing champion Dr Federico Lauro.

It’s an admission sure to raise colleagues’ scientific eyebrows, but it is also fortuitous given Lauro’s latest research activity. Lauro and 12 scientists recently sailed his yacht across the Indian Ocean, one of the world’s least-studied marine environments.

The Indian Ocean Concept Cruise, across 6,500 nautical miles, took six months to complete. On board the 18-metre S/Y Indigo V were researchers from two universities in Sydney, the CSIRO, and others from the United States, Denmark and Canada. They travelled from Cape Town in South Africa to Mauritius, across the Chagos Archipelago to the Maldives, then to Phuket in Thailand, before finally arriving in Singapore.

Along the way they took water samples from some of the world’s most pristine marine-protected areas as well as the most heavily trafficked shipping lanes.

The aim was to study the marine microbiome, the “canary in the coalmine” of ocean health. Microbes, including bacterioplankton and photosynthesising bacteria, are some of the ocean’s smallest creatures, yet the most important. There are one million of them per millilitre of seawater. They underpin the food chain and absorb most of the atmosphere’s carbon dioxide. They also contribute around 50% of the oxygen we breathe, making them essential to our continued existence on Earth.

“It’s extraordinary we still know so little about them, and in particular how our increased carbon-releasing activities are affecting their ability to support ocean life,” says Lauro, from UNSW’s School of Biotechnology and Biomolecular Sciences.

Despite being the third-largest water mass on the planet, the Indian Ocean is largely understudied with the last major survey taking place more than 50 years ago.

The biggest obstacle, not surprisingly, is money. To operate the average oceanographic research vessel, you need about US$30,000 a day.

But what if there was a way to cut those costs considerably?

“It’s so difficult to get funding for ship time, let alone the carbon footprint involved, so I thought: ‘Why not use sailboats to do the research?’” says Lauro, who was born and raised in Venice, Italy and has been sailing almost his whole life.

The Indigo V team developed automated instrumentation for the Indian Ocean Concept Cruise that can be installed on most sailboats. It takes measurements such as water temperature, salinity and pH levels. Most importantly, it also automatically takes biological samples.

Lauro and colleagues are in the process of equipping other sailboats and Lauro hopes to eventually have a network of 500 vessels transmitting data from the Indian Ocean to his lab every day. By harnessing the existing world cruising routes, the researchers will be able to reliably keep track of changes on a microbial level. “The boats are already out there, so suddenly the amount of data you can collect and collate is huge,” he says.

What the crew found trialling the equipment on their half-year voyage was astounding.

The information they collected mapped the extremes of humanity’s impact on the natural environment. “For example,” says Lauro, “the amount of trace metals and pollution we found deposited by ships in the busy waterway off Malaysia was simply off the charts.”

At the other end of the spectrum were waters within the Salomon Atoll in the BIOT/Chagos Archipelago, which...
is essentially a deserted, marine-protected area, so heavily guarded only a few yachts are granted cruising permits each year to enter its coral reefs.

*Indigo V* was the first research vessel to be granted microbiological sampling permits for the archipelago, which revealed its marine microbial communities were unique to the atoll and very different from those in the surrounding waters. The samples collected there will provide a baseline for what microbes look like without much human interference. However, despite its isolation, the impact of civilisation was still evident.

“Even in these remote places the beaches are covered in plastic bottles washed up from the ocean. It’s just heartbreaking,” Lauro says. “You drop anchor, and you’re really in the middle of nowhere, and you say ‘wow’. But then you get on the beach and it’s covered in plastic water bottles, toothbrushes and all sorts of rubbish. It makes you see how truly connected we all are with the oceans and how important it is to do conservation, even at the microscopic level.”

While the team’s mission was to check up on the Indian Ocean’s tiniest residents, it also ran into some of its largest, including a pod of Bryde’s whales that were about as big as the yacht. At one point the boat was shadowed by an enormous great white shark, while at other times dolphins played across its bow.

Then there were the storms.

“In the Southern Ocean we ran into a big storm with 60 foot [18 metre] seas, which was quite challenging, and it went on for about two full days,” Lauro remembers. Then approaching the entrance to the Strait of Malacca, a tropical low-pressure system began to form over Thailand. It eventually became Cyclone Phailin, the second-strongest tropical cyclone yet to make landfall in India.

Also onboard the *Indigo V* was Lauro’s wife, Rachelle Jensen Lauro. “Actually, she was the biggest asset we had,” Lauro says. “She’s a fantastic first mate and takes care of all the organising, permitting, provisioning and paperwork. She also handles the media and website, films all the videos, takes all the photos and looks for outreach opportunities. We have tens of hours of footage and about 9,000 photos.”

Now safely on land, Lauro and the scientists are busy sifting through the data. Given their equipment collected four samples of ocean water every day they’ve got a lot of work ahead of them. While they already have a pretty good idea of the microbe species they will find, they are keen to see how each is responding to environmental changes.

“Everything that affects the marine microbiome affects us,” Lauro explains. “That’s because the changes will carry out through the food chain and impact things like fisheries, the ability of the ocean to absorb carbon and weather patterns.”

The six-month expedition cost about US$60,000 – an amount that would have given them just two days aboard a regular research vessel. Lauro says so far he’s had no trouble finding sailors eager to be involved in the ongoing project.

“Sailors love the sea – or else they wouldn’t be out there sailing – and so when you explain to them what you’re doing, they’re super-happy to help.”
COTTON- AND COAL-RICH northern NSW may seem a world away from the evolution of our early ancestors in East Africa, but Dr Mark Cuthbert is convinced the two have plenty in common; and that understanding the former might help unlock the secrets of the latter.

For the past two years, Cuthbert – a research fellow at the University of Birmingham – has been working with UNSW’s Connected Waters Initiative Research Centre to study how groundwater in northern NSW is replenished, and what effect climate change has on that process.

Groundwater is water stored under the earth’s surface. In the Namoi River basin in northern NSW, researchers think rain hitting the Great Dividing Range flows off the mountains via intermittent streams, eventually seeping into the ground to replenish groundwater supplies.

“Although we’ve been looking only at this NSW catchment, what we’re trying to find out is applicable to many areas of the world where there’s water scarcity, or has been in the past, and one of those areas is East Africa,” Cuthbert says.

“Since at least two million years ago we can say there’s an association between our ancestors and groundwater. To date, that story isn’t widely known.”

Cuthbert is collaborating with Rutgers University Professor Gail Ashley to model the availability of water resources in the Olduvai sedimentary basin in northern Tanzania, which formed about 2.2 million years ago.

Olduvai’s streams are thought to have been seasonal and the lakes salty and not potable during the driest periods, so early humans may have turned to the only other freshwater available – springs fed by groundwater. These springs could have remained active in times of extended drought – up to 1,000 years without any replenishment from rainfall – sustaining early human life and playing a decisive role in our ancestors’ survival and expansion out of Africa.

Ashley’s earlier work points to evidence of freshwater springs near fossil-rich sites in the Olduvai. Among other things, this could provide an important clue about where to find additional early human fossil-rich sites in East Africa, potentially bolstering our understanding of evolution.

Cuthbert – who modelled the groundwater flows in the Olduvai from his desk at UNSW’s Water Research Laboratory – hopes to carry out field investigations in Tanzania with Ashley next year. He plans to use instruments to measure the hydrology of sites that are presently experiencing similar conditions to the Olduvai basin some two million years ago. This could help reconstruct what happened then.

Cuthbert also hopes to continue his work in northern NSW to show just how much the groundwater replenishment processes there mirror those in East Africa.

Cuthbert will soon return to Birmingham to write up his findings from northern NSW, part of the requirements under the European Community–funded Marie Curie Research Fellowship that brought him here. He’s already writing a proposal to return to Australia.

“My hope is that we can continue using the work from the Australian Government–funded field sites in Australia, which are world leading in terms of developing process understanding, to develop a better understanding of what’s going on in East Africa,” Cuthbert says.

“I’d like that work to occur in tandem so we can continue to exchange learnings from each site.”

He believes the research with Ashley will “have a profound effect” on our understanding of human evolution and dispersal in and out of East Africa.

At the same time he also sees far broader potential. “The research we’re doing about groundwater and human resilience works on every time scale from past to present to future,” Cuthbert says. “The more we understand the links between climate change in the past and groundwater resources, the more we can get a handle on how these things may evolve and how we can adapt our groundwater use in a changing climate.”
Dr Sam Harvey wants us all – but men in particular – to rethink attitudes towards mental health in the workplace. Linda McSweeny reports.

“IT’S A BIG PROBLEM for individuals, organisations and governments, but it’s been largely neglected by mental health research,” says UNSW consultant psychiatrist Sam Harvey, of the issue of workplace mental health.

Mental ill-health is now the leading cause of long-term absence from work, with around one in three people who leave employment for health reasons citing it as the cause. The cost to the economy is estimated at $12 billion each year.

“Workers find it hard to ask for help with emotional issues because of the stigma of mental health problems and the impact it might have on their careers,” says Dr Harvey, who is head of the Workplace Mental Health Research Program at UNSW, based at the Black Dog Institute. “Men, particularly those working in traditionally male-dominated industries, often find it especially hard to ask for help.”

However, that could be about to change. Harvey and his colleagues at UNSW and the Black Dog Institute have received $2.8 million over three years from Beyond Blue and the Movember Foundation for a world-first project to encourage men to access the help they need.

The Men@Work project uses new technology, such as interactive apps on smartphones, to literally put help in the palm of men’s hands. The technology enables men to assess their symptoms and risk factors and develop personalised mental health plans.

This technology, together with integrated manager training, will be rolled out and evaluated in around 60,000 men who work in male-dominated sectors, such as emergency services, agriculture, construction and manufacturing.

“Men have ignored their mental health for a long time,” Harvey says, “but there is now a recognition there is a problem and we need solutions.

“We need an evidence base. There are a lot of workplaces that want to do something to tackle the problem of workplace mental health but many of the programs that do exist are driven not by evidence but by commercial interests.

“We are trying to fill that gap.”

The South Australian–born Harvey, who qualified as a doctor in Adelaide, spent 12 years in the UK working as a general practitioner before training in psychiatry at the Maudsley Hospital and Institute of Psychiatry at King’s College London.

“One of my clinical jobs, while finishing my PhD, was running a psychiatry clinic for London Ambulance. I saw people who were at the front lines in the [2005] London bombings and who had real difficulty getting back to work,” Harvey says.

It was while running this clinic he realised the need for more services focused on workplace mental health. He returned to Australia in 2012 to the first dedicated clinical research post into workplace mental health in an Australian university.

“Men@Work is one of four projects utilising UNSW’s mental health expertise to receive funding from the Movember men’s health initiative. UNSW Professor Helen Christensen, chief scientist of the Black Dog Institute, will provide mental health expertise and support for a $1.9 million, sports-based health intervention led by the University of Wollongong, and the National Drug and Alcohol Research Centre’s Professor Anthony Shakeshaft will lead a multi-university collaboration aimed at improving the mental health of Indigenous young men and boys.

One of the biggest grants – $2.6 million – went to the Like Father Like Son project, led by Professor Mark Dadds from the School of Psychology. The project encourages men to take a more active role in managing aggressive behaviour in their sons.

“Disorders of violence, aggression and antisocial behaviour occur most commonly in males and often begin early in life,” Dadds explains. “If left untreated, they signal a high-risk factor for mental disorders in adulthood.

“But if conduct problems are caught early they can be treated relatively inexpensively … and outcomes are vastly improved when fathers participate.”
A collaboration with refugees is harnessing the healing power of art and “undrawing” borders, writes Fran Strachan.

“When I draw I feel like my heart is clean,” says Murtaza Ali Jafari, a 24-year-old Hazara refugee from Afghanistan, who spent two years in Villawood Detention Centre.

It was a time he describes as “mental torture … a type of slow poisoning”, but his impact is being eased through an innovative art program.

Jafari discovered the healing power of art through workshops run by the Refugee Art Project and says learning to draw gave him hope. “It stopped me from having negative thoughts and my future seemed a little brighter.”

Now in community detention, Jafari has contributed to a spectacular, collaborative drawing, In the Shade of the Waq Waq Tree created with 15 other artists and refugees. The drawing – a representation of Waq Waq, the 13th century Islamic equivalent of utopia – was exhibited on the front façade of the famous Secession museum in Vienna last month and also at the UNSW Galleries.

In the Shade of the Waq Waq Tree was developed by Undrawing the Line, an artistic collective initiated by Refugee Art Project founder Safdar Ahmed and UNSW Art & Design academic and artist Zanny Begg. The collective brings together refugee and non-refugee artists to literally “undraw” borders between countries and people.

“Our aim is to include those who are forcibly restricted from communicating with society,” says Begg, who participates in drawing workshops in Villawood and curated Salon Fluchthilfe, an exhibition exploring ideas of utopia at the Secession.

“Fluchthilfe is a German word used positively to describe those who help others cross borders to escape persecution,” she explains. “In English it can only be translated into terms with negative connotations such as ‘people smugglers’ or ‘human traffickers’.”

In the Shade of the Waq Waq Tree combines numerous individual sketches that were curated and scanned into one image by the leading artists of Undrawing the Line, Begg, Ahmed, Jafari, and fellow refugee Mona Moradveisi.

The intricately detailed drawings, which also include self-portraits of the artists, illustrate the poignant imaginings of a group of people whose lives are far from ideal.

“Utopia is a difficult notion to apply to incarceration because detention is clearly a dystopian experience,” Begg says. “But this project explores the possibility of hope – a powerful political force that allows us to imagine the world differently.”

Begg says the use of pen and ink was partly dictated by Villawood’s visitor rules. “We weren’t allowed to take computers or phones into the centre,” she explains.

A common theme in the drawing is flight: birds, imaginary flying creatures and flying people are all rendered in anaglyphic 3D.

“They represent freedom,” says Begg. “The idea is that in the future we will all have the ability to travel, living in a place where this closed mentality of ‘the border’ doesn’t exist.”

The point is to challenge people’s conceptions about nationalism and the nation state, says Ahmed.

“Australia isn’t the only country that has the desire to shut people out or to use asylum seekers as political scapegoats,” he says. “Sadly, the themes addressed in the drawing resonated just as strongly with the audience in Vienna.”

For Jafari some peace was found through his part in Undrawing the Line. But any true freedom is still far from reality.

“No one wants to leave their home,” he wrote in an autobiographical magazine produced by the Refugee Art Project. “I came to Australia looking for protection but politicians have kicked me like a soccer ball. For the last four years I’ve been waiting for them to finish their game.”
China’s women warriors are the stuff of myth and legend, historian Louise Edwards tells Amy Coopes.

FROM CROSS-DRESSING spies and fallen princesses to the maternal guerilla fighter, women warriors have occupied a central space in Chinese propaganda unparalleled by other nations.

It is a serious enterprise with a long history, says Professor Louise Edwards, whose book on the mythology of China’s women warriors will be published next year. Entire bureaux are devoted to distilling the stories of model heroines and adjusting their narrative down the generations to suit shifting political tectonics.

“Women make war sexy,” Edwards explains. “They make it more appealing to a public who pay taxes to fund the war, or who are being asked to offer up their sons and daughters for service.

Bring the women and the children in and you have total militarisation of society. Militarisation creates the sense that war is inevitable, that people who go to war are potential heroes, that there’s a logic to war rather than venality, and women bring that extra dimension to it.”

Edwards, who lectures on Asian Studies and Chinese History in the School of Humanities and Languages, has chronicled China’s major female military figures from legendary heroine Hua Mulan, the “grandmother of women warriors”, to Liu Hulan, a child guerilla who was decapitated by Nationalists after being dobbed in by “spy traitors”.

Assuming male identity is a recurring theme: Hua Mulan dresses as a man to take her father’s place as an army conscript, while cross-dressing Princess Aisin Gioro Xianyu leads an army to defend her Manchu nation and masquerades as a pay-by-the-hour “taxi dancer” in Shanghai while spying for Japan.

The stories rarely challenge the primacy of the patriarchy, explains Edwards: Hua Mulan’s actions are seen as filial, while Xianyu was labelled a hanjian, or traitor, and executed.

In the 1940s, celebrated author Ding Ling told the fictional story of Zhenzhen, a “comfort woman” in Japanese camps spying for the Communists. The story was acclaimed during wartime, but soon after Mao Zedong declared the People’s Republic in 1949 both the author and her character were investigated for “sexual and political crimes”.

This political pursuit of a woman who didn’t even exist epitomises the power of women as propaganda tools, says Edwards, who believes that by understanding China’s past we are given insight into the present and what might lie ahead.

“We live in this constructed world of stories and half-truths, particularly when governments are bent on the militarisation of society,” she says.

A range of female mythologies are used to achieve different ends: the vulnerable woman who must be defended is a powerful pretext for going to war; the “exceptional” female warrior lends urgency to a conflict; and the mother who abandons her family to join the cause demonstrates supreme patriotic fervour to spur mass mobilisation.

In many ways the “exceptional” woman warrior is the most insidious, Edwards says. “If you tell stories about women warriors as exceptional it reinforces patriarchy and militarisation simultaneously.”

Of all the female subjects in Edwards’ book, only three-quarters are historical figures.

The “facts” of their lives are opaque at best. The child heroine Liu Hulan, held up to Chinese schoolchildren as a venerable example of sacrifice has aged over time as social and family mores have shifted. The 14-year-old guerilla in 1978 is now portrayed as a young woman of 17, largely due to the “unearthing” of fresh legends about her boyfriends.

Zhao Yiman, enemy of the “hanjian” Princess Xianyu, has been similarly recast in recent decades from a willing revolutionary heroine to a heartbroken mother who abandoned her baby son out of love for her country.

In a new conservative family values–era China, the message to women is clear, says Edwards. “Staying at home and being a good wife and mother is patriotic too.”
ENCOUNTERING THE PACIFIC IN THE AGE OF ENLIGHTENMENT: JOHN GASCOIGNE, UNSW ARTS & SOCIAL SCIENCES

UNSW Scientia Professor John Gascoigne won the NSW Premier’s History Award for this innovative, richly illustrated work about the last great chapter in the convergence of humankind from around the globe.

Driven by Enlightenment ideals, Europeans sought to extend control to all quarters of the Earth through the spread of beliefs, the promotion of trade and the acquisition of new knowledge. This book surveys the consequent encounters between European expansionism and the peoples of the Pacific.

In a lively and lucid style, Gascoigne weaves together the stories of British, French, Spanish, Dutch and Russian voyages to destinations throughout the Pacific region, bringing to life the idealism, adventures and frustrations of a colourful cast of historical figures.

Gascoigne worked with Pacific communities while teaching at Rabaul and Port Moresby in Papua New Guinea prior to joining UNSW’s School of Humanities & Languages and he draws upon a range of fields to explore the complexities of the relationships between European and Pacific peoples. His book provides new perspectives on the significance of European contact with the Pacific in the Enlightenment.

A member of the judging panel for the NSW Premier’s History Awards has commented that Gascoigne’s analysis “demonstrates that the cultural interactions between Europeans and Pacific peoples were complex and always changing. The Pacific peoples were not simply the passive recipients of European culture but were agents of their own destiny.” Cambridge University Press.

BOOKS

THE BEST AUSTRALIAN SCIENCE WRITING 2014: ASHLEY HAY (EDITOR)

This acclaimed annual anthology, now in its fourth year, showcases all of the shortlisted entries for the Bragg UNSW Press Prize for Science Writing. In this year’s edition, new voices join prominent authors such as Tim Flannery, Jo Chandler and Frank Bowden to explore a diverse and wondrous range of topics. Are jellyfish really taking over the world? Is it true that tuberculosis has become deadlier over time? The Best Australian Science Writing is an opportunity to step inside the nation’s laboratories and its finest scientific and literary minds, to be informed and to be entertained. NewSouth

CURATING SYDNEY: IMAGINING THE CITY’S FUTURE: JILL BENNETT, UNSW ART & DESIGN, AND SASKIA BEUDEL

This intensively illustrated book brings together artists, architects, writers, designers and curators to answer questions usually reserved for planners and administrators. They re-imagine Sydney, envisaging a future in which public art plays a vital role in the life of the city, from quirky installations to architectural innovations and works that focus on environmental health and sustainability. Curating Sydney offers a new view on the future of the city – one that draws on the inspiration of our best creators in art and design. UNSW Press

TRADING PLACES: TIM HARCOURT, UNSW BUSINESS SCHOOL

Is Japan running out of husbands? Is China running out of wives? Did Genghis Khan really invent free trade? And why can’t you see the price of a Big Mac at McDonald’s in Argentina? Tim Harcourt (aka the Airport Economist) is the J.W. Neville Fellow in Economics at the UNSW Business School and acclaimed for his ability to bring economics to life. In Trading Places, he takes readers around the globe, talking to businesses, governments, union officials, NGOs and others to understand what makes each economy tick. He reveals where the opportunities are, identifies the risks, and provides insider tips on doing business in each destination. NewSouth

HOW PEACE OPERATIONS WORK: JENI WHALAN, UNSW ARTS & SOCIAL SCIENCES

This book examines a vital field of endeavour: peace operations and how the better ones work. Dr Jeni Whalan, UNSW lecturer in International Security and Development, investigates such operations through a local lens, examining their interactions with actors in host societies rather than their genesis in the politics and institutions of the international realm. Her book argues that peace operations achieve more of their objectives at lower cost when they receive high-quality local cooperation and, using real-world examples, such as the United Nations Transitional Authority in Cambodia, proposes a framework for how such cooperation can be achieved. Oxford University Press
“It is very satisfying and liberating to create beautiful and striking images,” says Professor Paul Munroe, Head of the School of Materials Science and Engineering, about his part in Closer, a photographic exhibition by Sydney artist Stephanie Valentin that explores the human relationship to the natural world. Munroe helped Valentin create the images of found dead insects in the exhibition’s sub-series Adaptation by using UNSW’s Electron Microscope Facility. The insects appear to be normal until you spot the microscopic sculptural interventions on their bodies, created with ion beam technology.

Adaptation 1, 2014 by Stephanie Valentin, from Closer Pigment print, 47.5 x 42cm, editions of 5 + 2 AP
UNSW has had a dramatic rise in its research reputation, and the amount of research that's actually done here. A lot of that is attributed to Fred's focus on excellence.

Deputy Vice-Chancellor (Research) Les Field

Fred was the perfect person at the right time to put UNSW on the most incredible upward trajectory. He has worked tirelessly to engage our alumni, friends and significant donors. On Fred's watch, we certainly never stood still!

Vice-President Advancement Jennie Lang

The Lowy Cancer Research Centre is a very important institution and whatever I could do, I thought would be good and worthwhile.

Businessman and philanthropist Frank Lowy, on his family's $10 million donation supporting the Centre

A lot of students have mentors when they're at university, but I was really lucky because I had the Dean of the Law School and the Vice-Chancellor. Fred's such an intelligent person and down to earth – a rare combination.

Graduate Kathan Sethi, on being mentored by Fred Hilmer

I've always believed that business has a responsibility to the community – it's part of after-sales service if you wish.

Michael Crouch, on his donation to the Innovation Centre

It's not Mr Vice-Chancellor, it's not Professor Hilmer. To just about everybody it is Fred.

Deputy Vice-Chancellor (Academic) Iain Martin

One of the great things in recent years at the Law School has been the continuing commitment to attracting students from right across the social spectrum.

Dean of Law David Dixon, on UNSW's commitment to social equity

Over eight years we've invested $1.5 billion in campus infrastructure. At one point we achieved the pinnacle of university status – the five-crane campus.

Jason Coombs, the Vice-Chancellor's Director of Strategy

Fred has the most amazing energy and enthusiasm. My mother and I secretly nicknamed him Tigger (sorry Fred). He would bounce into my office, "I've got an idea!"

Victoria Finlay, the Vice-Chancellor's former Executive Officer

A good leader is very lucky if he's got a great mate. I know from personal experience that to be true. And I'd like to say to Claire [Hilmer], thank you, well done.

Former Vice-Chancellor Rupert Myers, on Claire Hilmer's contribution to UNSW