UNSW
THE UNIVERSITY OF NEW SOUTH WALES

AUTUMN 2011

uniken

"The web is their classroom, Facebook is their community ... if universities won't adapt students will do it without them."

IS THE UNIVERSITY AS WE KNOW IT AN ENDANGERED SPECIES?

uniken
AUTUMN 2011
ISSUE 60

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"OBJECTIVELY SPEAKING..."

How this object inspires me.

Photo: Patrick Cummins

Magic in the mundane

A tea strainer gave Judith O'Callaghan a new perspective on the value of everyday design.

Bought on a whim in 1980, the steel tea strainer created by Danish architect and designer Arne Jacobsen, provides regular service and inspiration for the lecturer in interior architecture in the Faculty of Built Environment.

"You can't get more mundane than a tea strainer, but when you turn it over it looks like a little Sputnik. Jacobsen invested this everyday object with distinction and aesthetic value and it totally captivated me. My idea of design before was formed by looking at the large scale – architecture and building – but this tea strainer started me thinking about how important these small, intimate objects could be in terms of creating wonder and delight within our life.

"I find it much more interesting and exciting to think about how design works in everyday life," says Dr O'Callaghan.

Dr O'Callaghan's interest in our most familiar environments informed her work in pre-UNSW days, when she was curator of contemporary decorative arts and design at Sydney's Powerhouse Museum.

It's also the motivation behind her upcoming book, *Designer Suburbs*, which explores the architect-designed project homes built in Sydney and Melbourne throughout the 1960s and 1970s, and the elective course in historic interiors she created in collaboration with the NSW Historic Houses Trust.

By Peter Trute.

To nominate for "Objectively speaking ..." please email uniken@unsw.edu.au.

From the editor

Welcome to the first issue of *Uniken* for 2011. This year we're making some changes to our flagship publication. There will now be four issues per year, rather than five, and we will be putting more focus on features and comment, while continuing to cover the latest news in research and teaching. We aim to stimulate debate across campus and beyond.

One topic sure to provoke interest is our cover story which asks – is the university as we know it an endangered species? How effectively universities adapt as technology continues to evolve will determine their future, but there are broader questions. Where will knowledge reside in the future and what will it mean to be educated?

To promote discussion and debate, we will be posting stories on our Twitter account @UNSWnews and in coming months, on a new *Uniken* website now under construction.

We also aim to bring you the colour of campus life. Some of our researchers also happen to be a dab hand at photography. One of them, Tom Rayner, researches rivers and wetlands. Take a look at his striking photos of Rainbow Bee-eaters in Queensland (page 23). We welcome your contributions – photographic and otherwise. Please email uniken@unsw.edu.au.

Susi Hamilton, Editor.

IN BRIEF ...

THE UNSW ADVANTAGE

A new initiative – UNSW Advantage – will give graduates a competitive edge in the job market.

Students can choose from more than 500 co-curricular activities to gain additional attributes to improve their employability, such as communication skills, problem-solving and teamwork, said Pro-Vice-Chancellor (Students), Professor Joan Cooper.

UNSW was the first university to introduce a supplementary transcript and the Advantage program is the next step. All activities completed – from voluntary work, internships and peer mentoring – appear on a student's Australian Higher Education Graduation Statement.

Currently, program choices are university-based, but there are plans to expand the program to include external organisations. A full list of activities available to students can be found at www.advantage.unsw.edu.au

MEDICAL MILESTONE

Construction has begun on the UNSW-linked Ingham Health Research Institute at the redeveloped Liverpool Hospital in Sydney's south-west. The independent institute – funded by $47.9 million from the Federal Government – will work closely with UNSW Medicine, the University of Western Sydney and NSW Health.

Also given planning approval – a major redevelopment of UNSW Medicine's Wallace Wurth building on the corner of High and Botany streets.

A single-storey building at the site will be demolished to make way for a new seven-storey wing and major additions to the existing edifice. The new facilities will accommodate 678 staff and more than 1,300 students.

$16M FOR HEALTH PRECINCT

The Randwick medical precinct, including UNSW, has been supported by a $16 million funding injection from the NSW Government.

NSW Premier Kristina Keneally pledged $10 million to help establish the UNSW-led Australian Advanced Treatment Centre – part of a clinical research and treatment facility, similar to the Mayo Clinic in the US. The Centre, the first of its kind in this country, will provide cutting-edge treatments to the community.

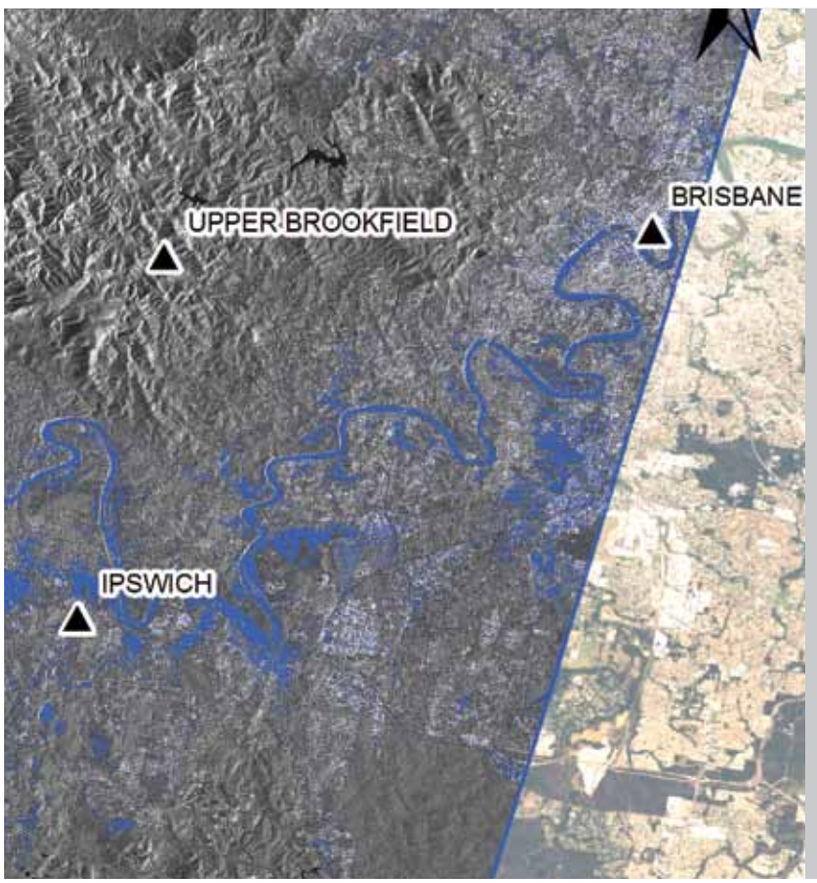
A further $6 million was earmarked to help deliver a neuroscience research facility housing the UNSW-affiliated Neuroscience Research Australia on the Prince of Wales Hospital campus.

BRINGING THE WORLD TO UNSW

UNSW will host the premier event on the Universitas 21 calendar this year.

The Annual Presidents' Meeting and Global Ideas Roundtable will be held at UNSW in the week beginning 16 May. The Roundtable will see the U21 Presidents sharing "big ideas" that have had a positive impact at their universities. Among those expected to attend is David Wheeler, Managing Editor of the Chronicle of Higher Education, who will be facilitating a session for U21 media, marketing and alumni directors on social media strategies. The week will also include workshops for early career researchers and senior university administrators.

UNSW is a foundation member of U21, a network of 23 work-leading, research-intensive universities in 15 countries. The annual get-together aims to draw on the network's collective knowledge to enhance performance and maximise the use of resources.



UNSW aids flood response

Satellite radar specialists from UNSW's School of Surveying and Spatial Information Systems had a vital role in supporting emergency services' response to floods across eastern Australia during the summer.

Associate Professor Linlin Ge led a team of 10 geospatial researchers in providing high-definition satellite radar images of the floods that hit Queensland, Victoria and NSW to the emergency services.

The team's work on floods around Narromine, Forbes and Wagga Wagga in December was the first time the InSAR (Interferometric Synthetic Aperture Radar) imagery, taken from Italian and German satellites, was used by authorities in flood monitoring. The team worked constantly for two months providing twice-daily image updates for the NSW, Queensland and then Victorian floods.

Associate Professor Ge said the satellite radar provided vital information on the location of floodwaters when heavy weather or cloud cover prevented airborne monitoring or images from weather satellites.

"Satellite radar imaging is faster than airborne photography and surveying, with images available within six hours of their being taken. A satellite can image a 40 km by 40 km area within 10 seconds," Associate Professor Ge said.

FLOWERING RELATIONSHIP

An art project that began in the polluted waterways of Manila has now flourished in Sydney's Royal Botanic Garden.

The exhibition of around 700 flowers woven from recycled garbage by Filipino women artisans, has been installed around the pond in the centre of the gardens, next to the restaurant and café.

Initially displayed outside the Ayala Museum and then a major shopping mall in Manila, the work was conceived and designed by Associate Professor Rick Bennett with staff and students from UNSW's College of Fine Arts (COFA). It will be on display in Sydney until 1 May.

"It's exciting for the women who make the artworks to get such international recognition," says Bennett. "While the money is important to them, of course, it's not the most crucial thing – the recognition is. They are no longer just faceless people who work day in, day out, for very long hours."

Beauty from rubbish … art from the Philippines.

Bennett was inspired by the women's painstaking work, while he was working with De La Salle College of Saint Benilde (University) in Manila. After collecting, cleaning and weaving the waste material, the women then sew it into bags and purses.

In this case, the women were commissioned and paid to make something new – large, white flowers with bursts of colour at the centre.

Bennett says the concept of the flower is to remind people that Manila's waterways were once very beautiful, even though many are now choked with pollution and rubbish.

"The name Manila actually derives from 'may-nila', a translation meaning 'there are (nilad) flowers'," says Bennett. "The city was named after the beautiful white flowering mangroves that originally adorned the city's waterways."

The resulting artwork, *Dasmanila*, also incorporates the name of the village where the artisans come from, Dasmariñas.

In addition to providing added colour and interest through the art installation in Sydney, and raising awareness of urban pollution, the women's products will be sold in the Garden's gift shop, helping the Filipino women's working lives to become more sustainable.

"We have already been able to give them an order for several hundred bags," says Bennett. "If we can make that a regular order, then the project becomes really worthwhile."

For more on this and other overseas projects go to http://omnium.net.au/oop/.

For the full interview with Associate Professor Rick Bennett, go to the audio podcasts section of UNSWTV at www.tv.unsw.edu.au

By Susi Hamilton.

Solar dryer heats up job prospects

South Pacific island nations such as Vanuatu are blessed with an abundance of fruit and nuts that have the potential to provide income for families in remote areas.

An inability to dry and preserve harvested crops, however, means it is difficult to stockpile produce and transport it to market without spoiling.

UNSW photovoltaic and renewable energy engineering student Telia Curtis has developed a simple, cheap, solar-powered crop dryer that has the potential to revolutionise crop handling throughout the South Pacific and provide a new income source for thousands of people.

Telia, 29, developed the solar dryer as part of her Masters thesis. Starting with a German design, she adapted it to meet the specific needs of the island nations.

She then designed prototypes in Vanuatu for Charles Longwah, owner of the Vanuatu Kava Store.

"I wanted to create a design that could be built out of easily accessible materials," Telia says of her bamboo, wood, corrugated-iron and polythene-film construction.

A sweet alternative … fruit in the crop drier.

The dryer uses black, corrugated iron as a solar thermal absorber and solar-powered fans for forced convection. The two elements work together to force heated air past the products laid out on mesh trays in the dryer and extract moisture.

"Charles Longwah is running electric dryers at the moment and his energy bills are enormous," says Telia. "This is a very simple design that can work with a lot of different materials and utilises radiation from the sun."

The units can easily be used by people living in the more remote islands, where poor transport infrastructure blocks trade in many fresh local products.

Telia demonstrated her prototype dryers at an open day in Port Vila and local groups in Vanuatu are already seeking government and aid funding to build and distribute the units.

Jacob Kapere, of the Vanuatu Cultural Centre, says the dryers could allow people to make a living on their home islands instead of having to move to Port Vila for employment.

Contacts for Telia's project were developed by Dr Richard Corkish, head of the School of Photovoltaic and Renewable Energy Engineering, who has been running student projects in Vanuatu since 2008, and the project is co-supervised by Dr Robert Fuller, an expert on solar thermal energy and applications at Deakin University.

By Peter Trute.

batting FOR UNSW

Our first Muslim Test cricketer is making another international debut, as UNSW's first Global Ambassador, writes Louise Williams.

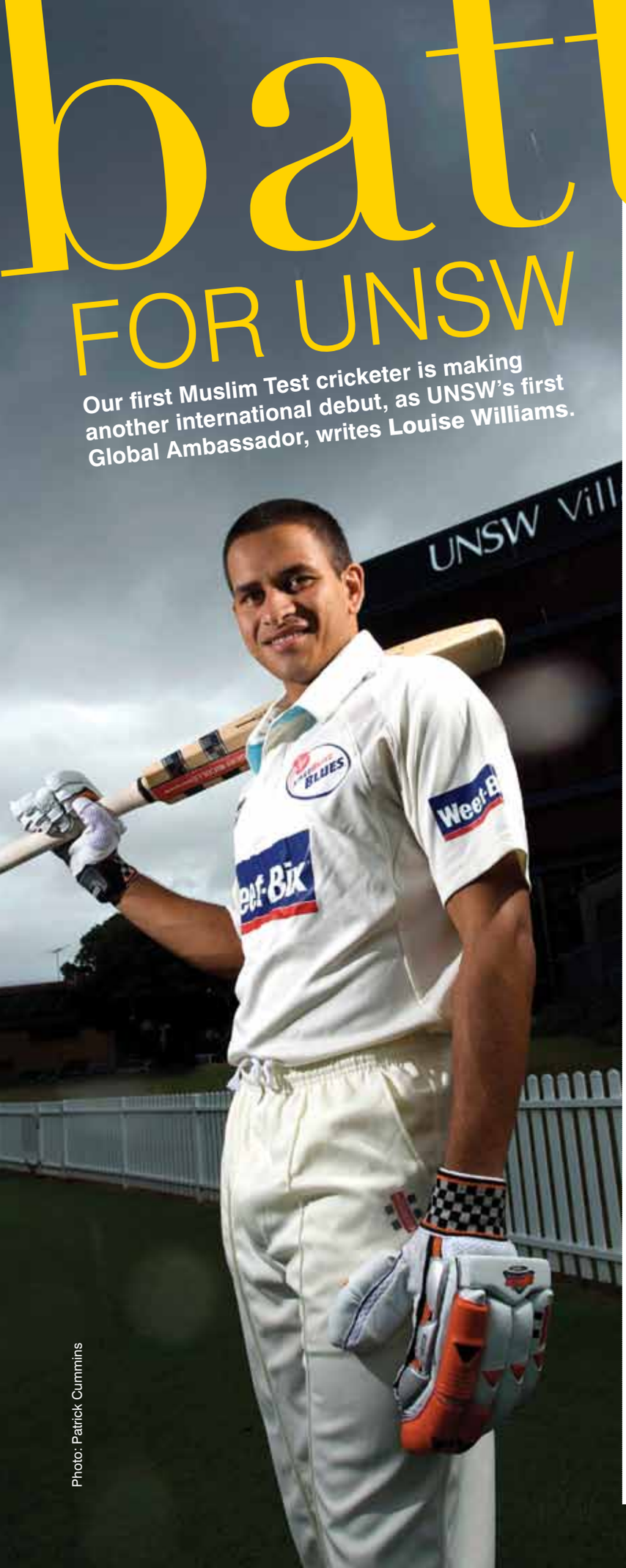


Photo: Patrick Cummins

Rising Australian cricket star, Usman Khawaja, knows what it's like to combine a demanding sports career with university; during matches, when he wasn't on the field, he used to hole up in the change rooms to study.

"It was basically the only time I had during the weekends … I was also training almost every day," says the 24-year-old of the three years he spent studying full-time at UNSW while simultaneously making his way up the competitive cricket ladder.

Now the left-hander, who made his much-publicised Test debut earlier this year as the first Muslim to play for Australia, is back with UNSW, but in a very different role.

As the University's first Global Ambassador he'll be juggling an international cricket career with trips, functions, speaking engagements and campus visits to promote UNSW through his own experiences.

"It's not a hard sell," he says. "I just have to give an honest account of how much I enjoyed my time at UNSW. I knew I wanted to do something and this seemed like a good thing to do."

Usman says university "was so much fun" and as a Pakistani-born Australian there "were no barriers for any culture at UNSW".

Usman's résumé reads like one long "dream run" – if you don't know the back story. He says he realised at high school that he didn't want to get stuck behind a desk, and although cricket always "came first" he also knew he wanted a university qualification to keep his future career options open.

"I had travelled around quite a bit with my parents when I was younger and flying always appealed to me – although I never thought I'd actually do it," he says.

But, after performing strongly in the Higher School Certificate, Usman was accepted into UNSW's Bachelor of Aviation (Flying) program, his first preference and a course with both an international reputation and its own training planes.

Only a month after graduating, he debuted for the NSW Blues, aged 21, and after progressing to the Australian squad he filled injured captain, Ricky Ponting's, number three batting spot in the fifth Ashes Test at the Sydney Cricket Ground, to positive reviews.

Now he's been signed to play for Derbyshire in the UK, during the Australian off-season.

The Australian media made much of Usman's religion during his Test debut, which didn't surprise or worry him.

"It was so far in the back of my own mind. All I could think about was representing Australia – that's not something you can expect to do, you just have to go out and do your best. It was a dream come true."

And then he received a message congratulating him from the Vice-Chancellor of UNSW, Professor Fred Hilmer, which triggered a series of discussions "about what he could do for UNSW".

Pro-Vice-Chancellor (International) Jennie Lang was one of those involved in the later discussions.

"The University is delighted to have Usman as our first Global Ambassador," says Lang. "He's an outstanding graduate and embodies UNSW's values at the highest level.

"As the face of the Global Citizens 360° X 365 Program, Usman will promote participation in international education exchanges, as well as encouraging students to take part in co-curricular activities such as sporting and cultural programs that foster teamwork," she says.

As for Usman, he sees the role as a help in any post-cricket career.

"You know I have never had a 'proper job' so I think it will build some useful extra skills," he says of the UNSW Global Ambassador's role.

"I would love to play cricket professionally for a long time. At the moment the future is an open book. But down the track I will always have my degree, so I will have options."

ghost in the machine

An eerie, yet beautiful, film developed at UNSW's iCinema is one of the centrepieces of this year's Sydney Film Festival. Susi Hamilton reports.

The darkened room is dominated by the stark image of a naked baby's body.

A ghost-like character appears next to me, following my footsteps. From another direction, a voice whispers, urging me to help move the heart towards the lifeless body.

"We only see what we want to see," a voice says calmly. A piano plays gently in the background.

Looking around the 3D, 360-degree cinema, I see the other four people in the "film screening" are also involved. They are hearing voices and seeing shadowy figures too.

The characters reveal themselves as Elizabeth, who has been imprisoned in a concealed basement in Austria, along with her four children by her father. The father lives above ground with his acknowledged family. My mind ticks over – echoes of the Fritzl case.

This is audience participation like no other. It feels as if we are immersed in something serious – and the story won't end well unless we take part and find a way out.

It works on another level too. Just as we are part of the story (our avatars travel on eyeballs), the "bad guys" or the black sentinels, have an active, ever-changing role. Each has artificial intelligence (AI), making this the world's only truly interactive cinema experience and the only one where no two viewings are identical.

A unique collaboration … (l–r) Director Dennis Del Favero with Artificial Intelligence Engineer Maurice Pagnucco.

Photo: Karl Emmett

While the subject matter might be macabre, the treatment is nothing short of stunning. The 3D technology has us ducking low-hanging vines at one point and at another, revelling in the peace of a light snowfall over us. The monochromatic palette and understated direction lends a subtlety to the story which could otherwise tend towards horror.

As we finally manage to collect all the body parts and give life to the baby – and in doing so, release the daughter, Elizabeth and her children from the labyrinth – there is an air of jubilation. We burst into the daylight outside, humming with excitement at what we have just experienced.

Other audience members haven't been so lucky. In some instances, they have remained trapped in the labyrinth. Instead of snow falling peacefully, the baby dies and black soot falls on the audience.

The 15-minute film has piqued the interest of the Sydney Film Festival director, Clare Stewart.

"Rich and enigmatic in its associations and brilliantly simple at its core, I think it demonstrates prescient technology in a way that is approachable and intriguing at the same time – the best combination," enthuses Stewart.

The film will be part of the popular festival this year, which runs from 8 to 19 June.

What is exciting the film world is the unique collaboration between art and artificial intelligence and where it might take us, what some are referring to as AI cinema

"This foreshadows a dramatic shift in what cinema can be," says the project's director, Professor Dennis Del Favero, ARC Australian Professorial Fellow in the College of Fine Arts (COFA) and Faculty of Engineering. "Instead of storytelling in cinema being about what the viewers think and believe, it can also be what the characters on the screen believe and think."

The film, *Scenario*, had a difficult birth. The team of researchers all agreed on a fairytale as a starting point, but they were having trouble finding a suitable narrative for the artificial-intelligence technology. Then the story broke about the Fritzl family in Austria.

"Coincidentally, we had already come up with the baby at the centre of the story," says Del Favero. "The Fritzl case was interesting because it was about the discovery of a baby that led to the unravelling of the story about the underground family. Nurturing a baby is a very powerful, charged symbol for human society."

Into another world ... audience members take part in the film.

Photo: Emmy van Ewyk

This helped the ARC-funded Discovery project move away from a gaming narrative and gave it a cinematic dimension, according to AI scientist Associate Professor Maurice Pagnucco.

"To me, *Scenario* is not a game," says Pagnucco from the Faculty of Engineering. "There is an element where you have to do something unexpected, as the virtual characters always act in unexpected ways, unlike in a game where these characters behave in predictable ways."

That it is a cinematic achievement is no mean feat of engineering.

"From an AI point of view, it is quite a complex environment because there are a lot of things going on," says Pagnucco, who is Head of the School of Computer Science and Engineering.

"We are tracking humans and responding to each of the events in real time. There are hundreds if not thousands of events every minute. We are tracking the people and their movements as well as those of the 15 characters."

With the help of UNSW's Literary Fellow at the time, playwright Stephen Sewell, Del Favero worked on making the experience an immersive one, by writing situations within which there were non-exclusive rules.

"The world of the story is deeply psychological," says Sewell. "The story is essentially about the reconstitution of a dead person. That goes back to the [Egyptian] myth of Osiris and Isis – and also of Christ's ascension."

Memory is also a key theme.

"Memory is not something in the past, but is something that you live every day," says Del Favero, who looks every inch the film director, in his sharp suit jacket and tie, paired with neat jeans and thick, black-rimmed spectacles. "You filter everything through your memory. This is about your own childhood memories, but also your memories of recent history and being inside that basement. You have to use your memory to get to the end. You have to remember where the black sentinel characters are, so you can outmanoeuvre them. They have to remember where you are, so they can thwart you."

While it may never replace mainstream cinema, the researchers believe it could be suitable for a niche audience – such as home theatre.

"You could easily have a system like this in your home. It could be projected on to your walls," says Pagnucco. "Say you are watching a film you could walk into a scene and interact with other virtual actors. Maybe you are participating with your neighbour, who is in their house, while you are in yours."

"The cutting-edge nature of the technology is the most exciting part of it," says Sewell.

"Two decades ago, if I had described Facebook, you wouldn't have believed it. It could be the same with artificial intelligence cinema."

"Great creativity takes place when it is part of technological breakthroughs. This is the beginning of a massive change in technology."

Interactivity might already be the buzz word in social media, but where people will take this technology is up to users themselves.

"Two decades ago, if I had described Facebook, you wouldn't have believed it," says Del Favero. "You would have thought: 'How is that possible?' But now it's increasingly becoming our public forum, where we meet and interact. It could potentially be the same with AI cinema. The future could very well surprise us."

It takes a village ...

Support net for families … Nathalie, and nurse Sheryl Scharkie with Jean-Paul.

At-risk families with newborns in Sydney's south-west have experienced remarkable benefits from a UNSW trial that involves ongoing nurse visits to their homes. Steve Offner reports.

Nathalie's son Jean-Paul was just a year old when she began to suspect things weren't quite right.

"I couldn't pick him up," she says. "He was enormous ... at 12 months he weighed almost 30 kilos."

By the age of two, Jean-Paul was uncontrollable.

"If you touched any of his things, he'd go nuts. I've had my fingers broken and my nose," she says. "He'd destroy things around the house, just take them apart. Toys, furniture, everything."

Her eldest child, Juliette, also suffered behavioural and developmental problems and Nathalie knew she needed help. But getting it was another matter. In a relationship with a man who was abusive and controlling, she wasn't allowed to see her mother and she wasn't supposed to leave the house.

"I was extremely isolated," she says.

When she eventually got in to see her local paediatrician, she was stunned by his response.

"Because I had two children with issues, it just looked like bad management. The doctor told me I was a bad parent and I needed to learn parenting skills."

It was only when Nathalie alerted a child and family nurse during a regular home visit and child assessment that the family finally got the help it needed. Within weeks Nathalie had left her husband, was enrolled in a mothers' group and had been referred to a second paediatrician.

Jean-Paul was diagnosed with a string of developmental and behavioural problems, among them severe ADHD, Tourette syndrome, oppositional defiant disorder and obsessive-compulsive disorder. He is now on medication and getting support at school.

Almost five years after the home visits began, Nathalie is two

Photo: Patrick Cummins

> "I was extremely isolated … Because I had two children with issues, it just looked like bad management."

years into a Fine Arts degree at university, and well on her way to becoming an art teacher.

The home intervention program that helped turn Nathalie's life around was MECSH – the Maternal Early Childhood Sustained Home-visiting program. Centred on Liverpool in Sydney's south-west, MECSH is the subject of Australia's first randomised trial of a sustained home-visit program in a disadvantaged area.

Nathalie was recruited to the program when she presented to hospital while pregnant. Regular child development tests are designed to pick up problems such as those experienced by Jean-Paul and the close relationship with the nurses meant Nathalie was able to talk openly with them about her home life.

Led by UNSW researchers, the success of the program – together with a sister study that focuses on Campbelltown's sizeable Aboriginal community – is now driving a major reorganisation of the way health services are delivered in south-west Sydney.

The program starts from the premise that children will only thrive if their family thrives. Apart from basic health monitoring, it aims to nurture parenting and coping skills and to give parents the know-how and activities they need to boost their child's development.

Program leader Associate Professor Lynn Kemp says the philosophy behind MECSH is simple: "It's about identifying where there are differences in outcomes for people's health that are unfair and unjust and actually working to see what we can do to overcome those differences."

While the idea of nurse home visits for vulnerable mums is not new, what makes MECSH unique is the sustained nature of the program – mothers receive up to 25 visits in the first two years of their child's life – and the fact the program is embedded in the existing universal health system.

"In NSW all new mothers are visited by a community nurse soon after they give birth," says Kemp, who is also Director of UNSW's Centre for Health Equity Training, Research and Evaluation.

"But a visit once or twice early on by a community nurse is a very different proposition from a MECSH-style program which recruits at-risk mothers before they've given birth and follows them closely for two years or more."

Kemp says Australian governments are investing in the programs largely because overseas trials have shown their outcomes are so good. And not just in the short term – benefits extend into later life with less child abuse and neglect, lower use of welfare and even less criminal behaviour. Surprisingly though, little research has been done in Australia.

"Most of the studies have been done overseas and most have focused on single-culture communities, teenaged first-time mothers and home visiting outside the normal health system," Kemp says.

What MECSH found in Miller – a suburb near Liverpool where researchers studied 208 vulnerable mums – was that positive outcomes are not limited to young or first-time mothers and that at-risk mums can be identified and recruited through the existing health system structures. Embedding MECSH in the mainstream health system – and using the existing network of child and family nurses – also shows such programs can be replicated anywhere.

A tiered approach is the key.

For MECSH to succeed it needs to operate in a system where the first tier – the nurse working with the family – has ready access to the second tier – extra support from other services and professionals, Kemp says.

"Individual contact with families is essential but not sufficient in itself. If the nurses simply wrote a referral to a specialist and it sat in an in-tray for three years, we would have been wasting our time. They need to be able to not just write the referral, but also be able to pick up the phone and get an immediate response.

"Essentially, we had to redevelop the service system."

Developing trust and working partnerships between the nurse and the family is also vital.

"The good thing about using child and family nurses is that these nurses are usually the kind of people that a mother will let in the door when they knock."

Kemp has little doubt the program is cost effective. "It ended up costing about $10,000 for each family involved over the two-year period. That's nothing compared with what was saved through prevention."

Maree, mother of Daniel, 18, eight-year-old Matthew and Eliza, five, agrees the MECSH program would be welcomed by any new mother, regardless of their location and socioeconomic status. Identified as a vulnerable mum – Maree's second child, a little girl, died in infancy – she was recruited into the program during a regular antenatal consultation at the local hospital.

For two years Maree and Eliza received around 25 home visits by a child and family nurse and a MECSH early childhood researcher.

"You've got your own nurse who you can ring at any time you want, they'll come immediately. In the first few months they came and checked up every week. It was awesome," Maree says.

"I looked forward to her coming because, of course, when you first have a baby, you're a little bit isolated. It's just you and the baby and you need someone to talk to. And they don't just talk to you about the baby. They ask you about your personal things, how you're feeling, and they do the little survey, to make sure that you're not going through the baby blues. They're just so there."

Five years after the visits began Eliza is now in kindergarten and doing well, and according to Maree, ahead of the other

Photo: Patrick Cummins

At play … Matthew and Eliza at front with (l–r) Maree, David, Daniel with partner Miranda.

> "Our nurses are the kind of people mothers let in the door when they knock."

children in her class in reading and writing.

She has no qualms about attributing Eliza's achievements to MECSH.

"Eliza looked forward to the nurses coming, the activities. The nurses challenged Eliza, and she loved it," Maree says. "Having the nurses there was good for her and for me."

The peace of mind also allowed Maree and husband David to concentrate on other things. Along with their eldest son Daniel they bought three trucks and started their own transport business.

"We own them all outright. We're not in want of anything. We're just running a small family entity, and hopefully later on in life, it'll be something for [the] kids to be able to make an income out of, or do what they want with," David says.

One of MECSH's early childhood researchers, nurse Sheryl Scharkie was involved with both Maree and Eliza, and Nathalie and Jean-Paul. Sheryl says it's these positive outcomes that make her job worthwhile.

"This is what it's all about. Nathalie's situation was at the extreme end of the spectrum, with all Jean-Paul's problems and the situation she was living in. But even with Maree's family, the fact they now have their own business means there's something for them to work towards with their kids.

"Just that small success is what the program's all about."

**The names of program participants have been changed for this story.*

From little things, families thrive

Campbelltown's Aboriginal community is also benefiting from ongoing visits by nurses to families with new babies.

In 2009, a UNSW team led by Associate Professor Lynn Kemp won a $2.14 million NHMRC grant to investigate how sustained home visits in early childhood could help Aboriginal families in the area.

The program – known as Bulundidi Gudaga meaning "healthy child from healthy pregnancy" in the local Tharawal language – is being rolled out this year under the leadership of Associate Professor Kemp and Dr Rebekah Grace. Like the MECSH program, Bulundidi Gudaga will target mothers and babies before and after birth in the hope of improving their health, development and wellbeing.

"This is a particular community where we know there are inequities," Kemp says. "As the MECSH results came out, it became evident that some of the areas of need for the Aboriginal families in Campbelltown are things this particular intervention are likely to improve."

Informing the Bulundidi Gudaga program is the seminal "Gudaga" study, which systematically describes the health, development and health service use of Aboriginal children and the health needs of the region's Aboriginal families.

Led by Associate Professor Elizabeth Comino, the Gudaga study began in 1996, when researchers met with the community to talk about the health and health service needs of Aboriginal infants and their families. At that time, the vast majority of research on Aboriginal health had focused on remote communities. Very little was known about urban communities on the east coast.

"We actually couldn't work with the community because we didn't know anything about them," Comino says. "It was very hard to get services to take an interest in developing programs for Aboriginal families here because there was no information about what they might need."

It became apparent that in this information void, health policy for urban Aborigines was being driven by assumptions, Comino says.

"One of these assumptions was that the problems of Aboriginal people in the Northern Territory are problems of distance and access to services, and that if Aboriginal people live in an urban environment then those problems disappear.

"We've found that's not true."

Before beginning their research, the Gudaga team spent years working closely with the community to establish strong relationships. There was also a commitment to work in a culturally appropriate and ethically sound manner. Finally between 2005 and 2007 all mothers in the maternity ward at Campbelltown Hospital were surveyed to identify Aboriginal infants. Since then, 125 of these infants and their families have participated in the research, with regular tracking of their health, development and service use. The oldest children in the cohort started school this year.

The Gudaga study shows, among other things, that mothers of Aboriginal infants were younger, less likely to be married and less likely to have completed school than mothers of non-Aboriginal infants. Breastfeeding duration was shorter than the NSW average and immunisation rates, while high, were often given later than the NSW immunisation schedule.

"The research has changed the way services think about, and respond to, issues that affect the Campbelltown community," Comino says. "The Bulundidi Gudaga home visits begin this year and this shows a significant investment in improving health services to Aboriginal women and children."

By Steve Offner.

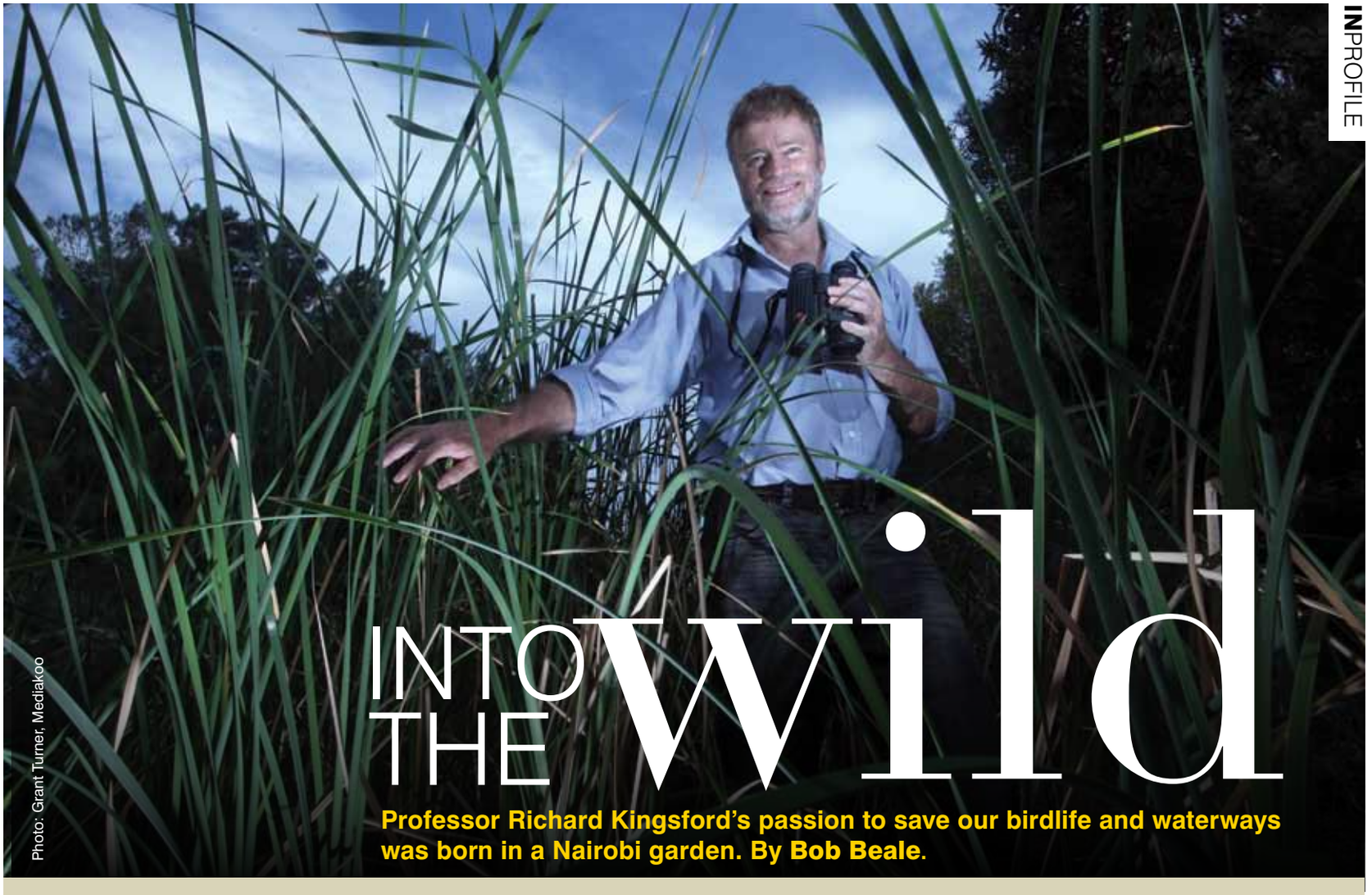


Photo: Grant Turner, Mediakoo

INTO THE Wild

Professor Richard Kingsford's passion to save our birdlife and waterways was born in a Nairobi garden. By Bob Beale.

When Richard Kingsford was six, his grandmother took him into her lush garden near Nairobi with some binoculars and showed him her favourite bird – the beautiful paradise flycatcher.

It had a bright-blue eye-ring, a perky black crest and rich chestnut plumage. The male of the species was a stunner, with a long, dramatic flowing chestnut tail twice its body length. The boy's eyes popped and he was instantly hooked.

Growing up on a sheep farm in rural Kenya, Kingsford's passion for nature found plenty of nurture. "My parents used to play tennis near Lake Nakuru and after the match they'd drive us out to the lake: the sight of hundreds of thousands of flamingoes massed there was amazing," he recalls.

When Kingsford's family emigrated to Australia to begin grazing livestock on the banks of the Abercrombie River near Goulburn, a new range of wildlife experiences greeted the then 12-year-old. Platypus swam in deep waterholes and wallabies sheltered in the shade. But it was once again the water and birds that captured his imagination and were to become the twin themes of his adult career.

Africa's loss has been truly Australia's gain with Kingsford today one of our pre-eminent experts and activists on the country's waterways and birdlife. After completing his science degrees at the University of Sydney and realising the exciting prospects opened up by research, he joined the NSW National Parks and Wildlife Service to take part in an aerial survey of waterbirds in eastern Australia, a survey he has repeated for more than 25 years and which now embraces the entire continent.

After thousands of hours' flying time logging bird numbers – as indicators of the health of the waterways they feed and breed in – he has seen first-hand how so many ecosystems hang together and change over time, or have change forced on them by boom-and-bust climatic events and human activity.

The serious decline in so many bird populations during that time has also fired him with a passion to push a message of sustainable use of natural resources, one that often brings him into conflict with powerful rural lobby groups, notably irrigators unhappy at his advocacy of a much greater share of water from the Murray–Darling river system for environmental purposes.

He takes the conflict as part of the rough and tumble of public debate. In part, that belief in speaking out – and a love of teaching – motivated him to become an academic in 2005, after almost 20 years with National Parks. Now, as director of the UNSW-based Australian Wetlands and Rivers Centre, he stands out among academics for his tireless commitment to engaging in public debate.

He points to the recent floods, to highlight how science can put a different perspective on events.

"While most of the public focus on this extraordinary event was understandably on its emotional, social and economic costs, the flip side is that all that water is recharging our major aquifers and bringing new life – birds, fish, frogs and insects – to some rivers and flood plains that were desperately parched and stressed after such a long drought."

While he is disappointed that many of his colleagues do not have the same focus on public communication, it is also true few have found themselves at the heart of so many contentious environmental issues in such a short time. Australia's notorious climate of extremes has seen record droughts, and major river systems in crisis after years of mismanagement. Kingsford strongly believes science can provide information to sway public debate. As he puts it, "science has the excitement of finding out new things and is a fundamental foundation for viewing life, a way of thinking that is logical and can be progressed, but it can also influence decision-making for the better."

University OF THE future

Technology is changing the way students learn, but is it also transforming research in the process? Louise Williams reports.

The way Bill Gates sees it, the university, as we know it, is an endangered species.

"Five years from now – on the web for free – you'll be able to find the best lectures in the world," the Microsoft billionaire said last year.

And in Gates' opinion, this constantly expanding digital smorgasbord of educational choices "will be better than any single university" in the world.[1]

Another giant of the global digital communications revolution has a different spin.

In his blog, Sergey Brin, the 36-year-old co-founder of Google, proposes bypassing centuries of scientific epistemology to close the time lag between research breakthroughs in academia and their real-world application.

Brin's particular interest is in accelerating research into Parkinson's disease – he carries the high-risk LRRK2 genetic mutation. His model, extensively detailed in *Wired* magazine last year[2], proposes "mining" huge data sets using vast amounts of computer power and analytical algorithms, in much the same way Google can build detailed consumer trends by extracting patterns from mass online behaviour.

Gates and Brin enjoy a unique perspective when it comes to understanding the impacts – and exceptional opportunities – of new technology; they are steering change from the top. Whether this translates into a keen insight into the future of higher education is a more contentious question.

There's little doubt technology is not only changing the way we teach and learn, it is also challenging centuries-old academic structures and practices, the very notion of what it means to be literate and, potentially, the primacy of universities as the world's arbiters and repositories of knowledge.

In our new world of online plenty, "no matter what you are interested in you can go online and join a group of people attracted to something because they want to learn about it", says senior lecturer and online learning and teaching developer at UNSW's College of Fine Arts, Simon McIntyre.

He says educational institutions were once at the forefront of the way society communicated and learned, but since the boom in new communications technologies education has fallen behind.

"People in their garages who develop technologies like Facebook and Twitter are shaping the way the world interacts and connects and education is now playing catch-up."

Universities are investing in online course components and investigating the attention spans and communication patterns of the digital-savvy Gen Y or "millennials" (b.mid-1970s–2000). Some have raced off to buy islands in the online world of "Second Life", where they are building virtual universities that students can attend as "avatars" of their real-world selves. Others, including many of the world's most prestigious universities, are posting thousands of degree courses online for anyone with an internet connection to follow.

This transition is uneven and how effectively universities adapt as technology continues to evolve will determine their future, McIntyre says.

American e-learning expert, Professor Ashwin Ram, believes universities as elite, "walled gardens of academia, laced with ivy" are already a thing of the past.

"Ninety-five per cent of college students are spending up to 10 hours a week in social networks[3]– blogging, updating their profiles, trading pictures, and – yes – talking about schoolwork," he posted in his research blog[4].

"The web is their classroom, Facebook is their community, the world is their study group. The days of walled gardens are over … if universities won't adapt, students will do it without them."

Demise of the "sage on the stage"

Throughout much of the 20th century the getting of wisdom involved a largely one-way transmission of facts, theories and ideas. In school classrooms it was mainly "chalk and talk" from an authoritative teacher up the front; in universities we had various "sages on the (lecture) stage" or the less-inspiring "drones on the throne". By 2000, 82 per cent[5] of the global population could read and write and the classroom played a critical role in shaping lives worldwide. Knowledge resided in books, publications and educated minds.

The traditional tools of teaching are now under intense pressure. As early as the mid-2000s, US universities reported 30 to 40 per cent of students were refusing to buy textbooks even if they were required reading. A 2010 US study[6] of student "distraction" in lectures reported most students regularly used laptops and mobile phones in class for socialising, gaming and completing work for other subjects – and most believed it was legitimate to do so.

Universities made their first tentative step into "blending" online and face-to-face learning by posting course notes and resources online, instead of handing out paper. Then came interactive discussion boards, blogs and online quizzes and tasks. Library hours were replaced by web searches. All of which fitted more or less into existing course structures.

But, what happens when one lecturer or an entire university puts their lectures online? UNSW Computer Science lecturer, Richard Buckland, for example, became an accidental international video star on YouTube and iTunes U with his clear, congenial teaching style.[7] If lectures are online anyway, do students really need to attend? And, if students aren't inspired by their lecturer, there's nothing to stop them dropping into another university's lectures on YouTube instead.

Patrick Stoddart, UNSW's Senior Manager of Technology Enabled Learning and Teaching, believes the conventional one-hour lecture in some disciplines may soon be replaced by something like a well-produced 20-minute video using multimedia formats.

"Academics should ask themselves, is lecturing the best way to teach this course? And is lecturing one of my strengths?" he says.

Videos would be viewed in advance and on-campus time used to discuss and debate content.

"This is slow burn change, but when students experience an innovative use of technology

"People in their garages who develop technologies like Facebook and Twitter are shaping the way the world interacts and connects and education is now playing catch-up."

WIRED INTO LEARNING

When Associate Professor Gary Velan came up with a new online assessment task for undergraduate medical students at UNSW it ticked all the boxes. Nearly all students thought it was helpful to guide their learning, two-thirds said they actually enjoyed studying with it – and all students steadily improved their marks.

The tool, which gives students interpretive feedback as they work their way through a number of "real-life" medical scenarios won Velan, from the Department of Pathology in the Faculty of Medicine, one of Australia's highest teaching awards, the $25,000 Australian Learning and Teaching Council (ALTC) Award for Teaching Excellence.

As part of the online program, students might be asked, for example, to examine and interpret an ECG printout of a real patient. Once they've worked out the reading illustrates a heart attack, they have to uncover what medical factors led to the attack and examine the characteristics of the patient's heart. At every step, incorrect answers are accompanied with explanations as to how the mistake could have been made and why an alternative answer is correct.

The approach is popular, allows students to study anywhere they have a laptop and establishes a "continual improvement cycle", Velan says. It has since been adopted by a number of other UNSW faculties.

Karin Watson … lecturers will be "guides on the side" to students.

Simon McIntyre … education is playing "catch-up" to social media.

Photos: Patrick Cummins

"We have to get over the myth that mobile phones have eaten the brains of our children and talk productively about using new communications tools."

in one course they will ask for it in other courses."

That might be a class "wiki" in which different small groups write up the course notes each week, allowing the lecturer to immediately see whether or not they have understood the key concepts; or it might be interactive online questions. (See breakout page 13.)

And with "smart" mobile phones putting a new wave of "apps" in our hands, some educators are already considering the educational impact of "augmented reality". That is, the ability of students to look at a building, for example, through a mobile phone camera and to see its history overlaid in images, to hear or read related commentary and to add their own input to the mix. This doesn't mean we'll end up teaching brain surgery to students scattered around the globe via Twitter, but it may mean medical students will routinely "virtually" walk through 3D-immersive digital models of the human body or practise surgery in a virtual environment from anywhere that suits.

It also means education, knowledge and achievement are opening up to a much broader range of students, particularly "visual learners" who didn't have a chance to shine in text-based education systems, says international e-learning expert Marc Prensky.

"What many educators often forget is that reading and writing – although they have enjoyed primacy for hundreds of years – are very artificial ways to communicate, store and retrieve information."

Prensky argues that only 10 to 20 percent of people in any society are highly literate and points out that YouTube already hosts more video content than was produced in the entire history of broadcast television, including millions of "how to" videos which show, not tell.

"I would expect in coming years large numbers of additional video sites will blossom containing most of all of the information that is currently available mainly or entirely in print – video is the new text," he says in a 2009 paper.[8]

Digital natives

COFA lecturer Karin Watson believes teachers and lecturers of the future will become "a guide on the side", with much of their contact with students taking place within multiple environments online.

Not all academics are enthusiastic about new ways to teach, nor necessarily competent to do so. But, criticism that new learning and teaching formats merely pander to a generation of students whose attention spans have been stunted by constant connectivity is debatable.

Former Apple and Microsoft executive, Linda Stone, coined the term "continuous partial attention" and described today's multi-taskers lives "as a never-ending cocktail party where you're always looking over your virtual shoulder for a better conversational partner".[9]

Australian internet expert, Associate Professor Matthew Allen, from Curtin University, vigorously disagrees.

"We have to get over the myth that mobile phones have eaten the brains of our children and talk productively about using new communications tools. There is an untapped reservoir of interest and enthusiasm and if you can find the right tasks which empower students, it's like reaching a (teaching) tipping point," he says.

Allen says students' expectations "are more about how mobile communication is changing social mores (for all of us) than about the characteristics of a particular generation".

Research by Allen and McIntyre also dispels the myth that the "millennials" are digital natives; being savvy social networkers is not the same as knowing how to use communications technology for education, they say. They, too, have to learn how.

The bottom line, says McIntyre, is that technology is only a tool, so it's only as effective as the person who is using it. Otherwise, new technology can be an irrelevant gimmick.

Why universities will still matter

The web is a repository of vast amounts of information; wise, witty, true, false, boring and banal. Gates is probably ahead of his time in suggesting the average among us are capable of plucking a superior education from cyberspace. Gates didn't even need Harvard University back in the 1970s, he dropped out.

But, a huge amount of university teaching content is already online. The elite Massachusetts Institute of Technology (MIT) for example offers 2,000 of its courses, which can be downloaded free by anyone, anywhere in the world. This from the world's third highest ranking university which annually enrols only 1,600 or so exceptional students, who pay US$53,210 a year (2010–2011). To date, MIT's online program has notched up 50 million hits.

The debate over whether individual academics or academic institutions should give their valuable intellectual content away on the web has a long way to run. Supporters of open learning believe the web should be a vast, democratising space that allows as many people as possible to look over the shoulders of the intellectual greats; particularly the less privileged without local access to quality education.

They also believe universities have nothing to fear from this burgeoning new repository of knowledge because students will continue to have good reason to pay to enrol; and not just because we are social animals who enjoy face-to-face interaction.

Says Allen, "The purpose of universities is to qualify and accredit people to fill skilled roles in our society. Universities have a primary role in ensuring our society has a steady stream of trained professionals who can be reliably assumed to know certain things."

No matter how many people watch online courses and join forums, if their knowledge and competence hasn't been reliably tested they cannot claim they are qualified, he says.

And, it's more than that says McIntyre: "Nowadays knowledge is like air, it is all around us. The future role of formal education may be to help us navigate through this information in a really useful way. We need the ability to discern; to analyse and compare the relevance and credibility of information. You can get a lot of information off the web, that's not the same as getting an education."

But, then there's Gates' question about the future of "single institutions".

There is no longer any technological barrier to prevent students from enrolling in one degree program, but picking up online subjects for credit at any number of different universities around the world. Remote and rural students, too, should have much easier remote access to city universities, or to new study formats like short blocks of on-campus attendance, with most study completed online back home.

Theoretically, tertiary study could become an opportunity "to choose your own adventure". Innovative universities might form select "international consortiums" that would allow students to tailor degrees, with on-campus stints in Sydney, London and Beijing, for example, and a huge array of subjects offered on campus or online from the entire list of combined course resources.

Yet, universities jealously guard their individual reputations and their place on the competitive, global-rankings ladder. Everyone knows all degrees are not equal; their value depends on the reputation, history and standing of the university that confers them.

For individual institutions – with their campuses physically anchored in one place and their budgets built around the face-to-face delivery of core programs – it's likely to be a very complex way forward.

At the same time the internet is facilitating the entry of private players into the local and international education market, some of which will compete with universities for paying students.

Postgraduates, in particular, want access to experts from the professions and industries they aspire to join. So when a group of globally renowned, private-sector achievers offers user-pay courses online, for example, which way will future students go? Take the US-based Animation Mentor program that[10] promises a "real-world" curriculum and has strong links to the Pixar studio. The US$20,000 fully online course already has considerable cachet within the globalised animation industry, despite the multitude of multimedia programs offered by universities and colleges.

The future

The core business of universities is knowledge. But, where will knowledge reside in the future and what will it mean to be educated?

"I think what we are seeing is a repositioning of epistemology, and this is really important," says Stoddart. "For about a century and a half we have had the notion that peer-reviewed scientific, academic and journal papers are the collective font of knowledge; that this is our global repository of scientia."

> "Large numbers of additional video sites will blossom … video is the new text."

But, as Brin's Google-driven science demonstrates, there are new ways to do research. His test case on Parkinson's risk factors generated published results within eight months, compared with six years for the conventional academic publishing cycle.

And how will we judge the value of education for an individual student?

Says Stoddart, "Should the literacy of the new be the ability to rapidly find information through the internet and apply that knowledge or the older idea that you have to store knowledge yourself – that you need to be knowledgeable?"

In the foreseeable future it will be something in between, he says.

"I don't think you can use the knowledge you can find readily unless you have a core of knowledge and that ability to do deep thinking," he says.

Footnotes are available at Uniken's *website http://www.unsw.edu.au/news/pad/uniken.html*

DIY EDUCATION

Sydney IT manager, Lee Furlong, has never attended university but is currently developing a "smartphone" application to integrate client bookings from iPhones into the main computer system of a large transport company.

As a self-confessed "nerd", Lee has been finding ways to teach himself since he was first photographed for the local Manly paper at the age of 12, tracking satellites in his front yard using a home-made contraption including the metal lid of the family rubbish bin.

His computer programming and management skills have landed him a series of well-paid jobs, even though his knowledge comes straight off the internet, apart from one short course at the local TAFE "many years ago".

He says he started with computer magazines, then began downloading text documents from the web about eight years ago. Today he's following a computer science course online from Stanford University for free, and spends hours engrossed in various online forums.

"What is available online is getting better and better. It used to be text documents that took five minutes to download, now you can stream video and there will be some guy going through everything step by step." If he had his time over, Lee says he might have gone to university early on. He has noticed that programmers with formal training "know why they are doing something, when I just know I need to do it".

That's why, now aged 36, he's looking around for a classroom course to supplement his knowledge, where he can "put up his hand and ask a question of a real person" for the first time.

Photo: iStockphoto

Sexting is the new love letter for adolescents, but the legal repercussions can last a lifetime, writes Fran Strachan.

A 16-year-old takes a semi-naked photo of herself and sends it to her boyfriend's mobile phone.

Although she is in a legal, consensual sexual relationship, and the image was meant for her boyfriend's eyes only, by being under 18 and pressing the send button she has left herself vulnerable to a child pornography conviction under the Commonwealth Criminal Code.

The sending of sexually explicit or suggestive sex messages, sexting, is on the rise and, according to one US study, one in five teenagers has done it.

"There's a perfect storm forming around young people's sexuality in an era where there are valid parental concerns surrounding sexuality in the public realm," says Dr Kath Albury. "But a young woman isn't bad, sick or broken because she sent a picture of her breasts to her boyfriend."

Albury, from the Journalism and Media Research Centre, is studying the grey area of 16- and 17-year-olds in NSW who are legally permitted to consent to sexual activity, but are at risk of being prosecuted under child pornography charges for sexting because of discrepancies in state and federal laws.

"The legal definition that makes every image of a person under 18 child pornography, regardless of who produced it or the conditions in which it was circulated is problematic," says Albury. "The laws that have been put in place to protect young people against paedophiles are, ironically, what leave them vulnerable to prosecution.

"The law presumes that anyone who produces or circulates an image is a predator, with no room to imagine the young people who might choose to produce or circulate material.

"They have the right to be protected but they also have the right to produce information and images without being placed on a child-sex registry as a consequence."

As a sexual health educator, a role for which she was awarded a UNSW Community Engagement Award, Albury believes young people should have the opportunity to maintain agency in relation to their own sexuality.

Co-author of *The Porn Report*, a comprehensive account of adult-content industries and its consumers, Albury believes part of the problem surrounding educating teenagers about the ethical and legal implications of sexting is that adults find it difficult to discuss sexual exhibitionism.

"People taking photos of themselves naked is nothing new, it started in the 1800s with the

> "A young woman isn't bad, sick or broken because she sent a picture of her breasts to her boyfriend."

> "People taking photos of themselves naked is nothing new, it started in the 1800s with the invention of the camera."

invention of the camera. There's nothing anomalous about young people experimenting with soft porn, but the technology has changed and the law hasn't caught up with that," she says.

New 3G technologies allow images to be uploaded to social networking sites or exchanged between phones, instantaneously creating a lasting and often humiliating "digital footprint" for the person photographed, especially when images are distributed out of context.

Education Department responses to sexting are the equivalent of "Just Say No", a response that Dr Albury understands but doesn't think is particularly nuanced.

"The legal penalty is of no use to the teachers and youth workers at the front-line of this issue because there is no structured response," she says. "If they get the police involved they are potentially responsible for that person having a criminal charge against them for the rest of their lives.

"There needs to be a typology around the different contexts of sexting for law and policy makers. Questions need to be asked – is it bullying? In which case it requires mediation, education or penalties of a diversionary nature. Or is it a flirtation or part of a relationship? In which case it needs a totally different approach."

Framing sexting as dangerous and involving the police in every case obviously isn't the answer but developing transparent guidelines and policy responses is a starting point, Albury says.

She has applied for an ARC Discovery Grant with colleague Associate Professor Kate Crawford and QUT legal academic, Associate Professor Ben Mathews, to work with youth advisory boards to develop useful guidelines and policy responses to sexting that include input from educators, youth service providers and importantly, young people.

"There needs to be a thoughtful discussion with young people about what sexting means to them and how it relates to their friendships and romantic relationships. This isn't about good kids and bad kids, the issue needs to be approached on a case-by-case basis."

An interview with Dr Albury can be seen in the Law and Society collection on UNSWTV. www.tv.unsw.edu.au

The naked truth … Dr Kath Albury.

Photo: Patrick Cummins

BEYOND THE RULE OF THUMB

The definition of domestic violence could be expanded to include non-violent acts under a proposal by the Federal Attorney-General, writes Annie Cossins from the Faculty of Law.

It was only a little more than 100 years ago that it was legal for a man to beat his wife with a stick no thicker than his thumb: hence, the rule of thumb.

Western societies may have moved beyond sanctioning the beating of women, but the ancient court system has in many ways remained the same.

That is why our criminal courts deal with violence and sexual assault, and the Family Court deals with the civil issues that arise in relation to property and custody disputes. But do victims want to be complainants in a criminal case, at the same time as they are dealing with Family Court matters?

Family violence generally involves a cycle of violence, manipulation and control that can only be understood in the context of a particular partnership. This means the whole picture of violence and abuse needs to be understood to provide appropriate remedies to the victim, irrespective of whether they seek to redress criminal behaviour or to solve a property dispute. The Australian and NSW law reform commissions have recognised this in some way in their separate reports on family violence.

In response the Federal Attorney-General has proposed amendments to the Family Law Act that broaden the definition of family violence to include such acts as stalking, economic abuse, emotional abuse, deprivation of liberty, damage to property and injury to animals.

The proposal is a recognition that violent partners use a range of behaviours to control their spouse. It is a welcome step, but in reality a larger overhaul is needed.

Importantly the law needs to take an integrated approach to family violence rather than splitting a family's problems into convenient legal compartments. A victim of family violence is a product of all their experiences of emotional, physical, economic or sexual abuse and this makes them vulnerable to delays, indifference, and bureaucratic and legal difficulties.

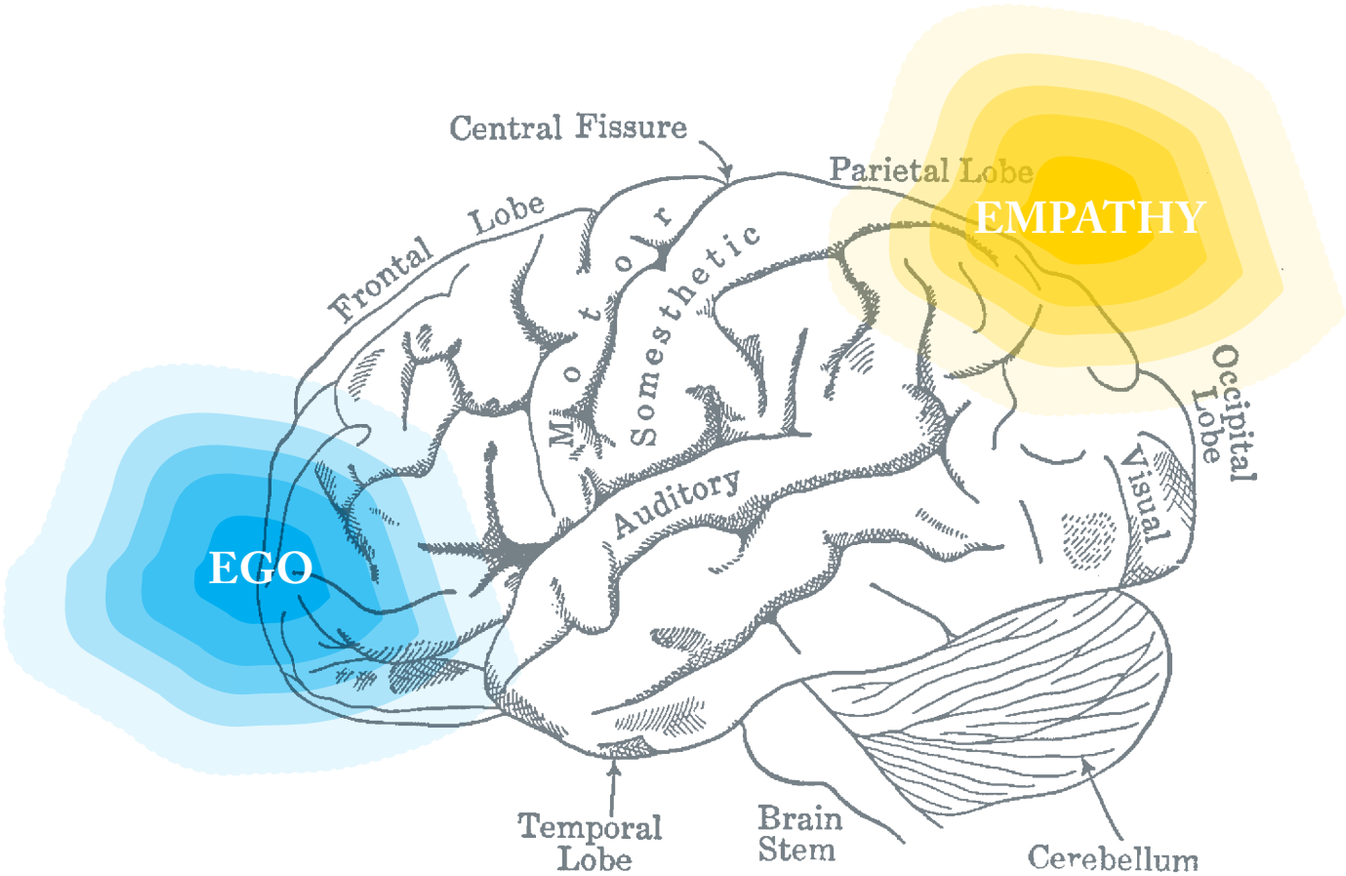
Annie Cossins is Associate Professor in the Faculty of Law.

New York's Brooklyn County has taken the radical step of creating an Integrated Domestic Violence Court that hears all criminal and civil issues arising from a family dispute in the one hearing, including divorce proceedings. This means there is one court hearing for one family for all its disputes.

It gives the presiding judge access to all the information about the family's problems and allows the court to concentrate its resources to address the complex needs of families in despair.

It puts the needs and safety of victims of family violence first. Although the judge hears all the matters in the one hearing, the civil and criminal matters have different evidentiary standards and burdens of proof.

It may be that an integrated domestic violence court is too radical for Australia, but the model shows that splitting up a victim's experiences of family violence between our civil and criminal courts is likely to be the least satisfying and least logical way to approach the endemic nature of domestic violence.



the business brain

Ego-driven bosses are being trained to increase their empathy, while improving the business bottom line. By Jane-Anne Lee.

Could a dose of self-awareness and empathy have prevented the sexual harassment scandal that cut short the retail career of former CEO Mark McInnes at David Jones? Or would a little behaviour readjustment have helped former US president Bill Clinton avoid the intimate relationship with intern Monica Lewinsky that almost caused his downfall?

According to Malcolm Dunn, Director Executive Development Services, AGSM Executive Programs at the Australian School of Business, the answer is yes and training high achievers and leaders to overcome egocentric behaviour is his business.

High achievers, driven by the need to prove themselves, can lack an understanding of others, says Dunn. While such leaders often do a good job in the short term, a lack of empathy tends to result in collateral damage and – sometimes – the collapse of their organisations. But hard-wired behaviours can be overcome, he says. Through neuroplasticity – the ability of the human brain to change as a result of experience – he believes it's possible to open up the parts of the brain related to leadership, to traits such as empathy and wellbeing, which are not developed through traditional cognitive-education processes.

Dunn is working with top executive teams in the corporate world, where he sees a mix of group power dynamics or what he terms "ego-driven intellectual aerobics" on show. Using an intervention process, he is developing new neural capacity for leaders through learning models, coaching and extensive practice. "Intervention is helping executives to change the source of their motivation from compensation to a more positive, self-transcendent style of leadership. The result is that they get a kick from helping others instead of themselves," he says.

Initially, some leaders are outwardly perceived as successful because they are delivering good numbers, according to Dunn. "But it's a different story behind the scenes, where there is little delegation or development of potential successors. They stay with the organisation for two or three years then move on, leaving the damage behind," he says. The challenge for many leaders – CEOs, in particular – starts with their relationship with the board, says Dunn who admits to being shocked by the lack of courageous behaviour in boardrooms.

Research on neuroscience conducted mainly in the US has provided new understanding on just how hard-wired are memories, behaviours and even future projections. "It offers a better understanding of how different

> "… there's the macho corporate culture where cowboys don't cry."

parts of the extended brain, including the nervous system, react to our environment. It's possible to start using different parts of the brain and to build new connections," Dunn says. "Transforming executives have the opportunity to consciously change how they think."

The starting point is an unpacking process, figuring out how an executive has become who he or she is and understanding what can be done differently. But true behaviour change only occurs when they are in the system where they are under pressure from boards and shareholders and need to be self-resilient. "Through coaching we can create a connection between our two brain hemispheres to develop more balanced, creative, cognitive thinking."

Neuroplasticity is achieved through various stages of learning. In the first stage – unconscious incompetence – individuals are unaware of their shortcomings. "Some sort of awakening is required that what has been done in the past doesn't work anymore."

This leads to "conscious incompetence" and then "conscious competence". At this stage individuals have changed their behaviours, but must work at maintaining these traits.

The final stage is "unconscious competence", where – like driving a car – behaviours and thinking become automatic. It happens from an unconscious state.

But this is no quick fix. In the past, the focus has been on three- or five-day leadership development programs, which have had a high failure or rescission rate. With coaching, the process takes six to nine months, but generates better success rates.

Most leaders are resistant to change, Dunn admits. At the outset of interventions, bosses often behave inappropriately. Ultimately, however, most bosses want to be better people and improve their performance, he says. "They need to see how the benefits will link back to the business creating a happier board and shareholders."

Interestingly there is a gender divide when it comes to the uptake for developing new ways of thinking, according to Dunn, and, as a general rule, men need the most work. "Social conditioning has not given many men the tendency to nurture others. And there's the macho corporate culture where cowboys don't cry," he says. On the flip side, female leaders can be overly nurturing. "Some women have also had to 'outman the men' to get ahead and need help regaining a sense of their own feminine power."

Reflective thinking helps leaders build self-sustaining skills. Coaching helps build a consciousness – "a mindfulness muscle" – that is crucial for executives, Dunn says. "Once you open Pandora's box and start noticing yourself, others and your interactions, it's hard to close it. It is a far richer relational world where we can have a deeper understanding of team and organisational dynamics."

Dunn believes the need to change hard-wired behaviour is more important in today's business world. With the next generation of employees rejecting authoritarian leadership, empathy and the ability to inspire and invite voluntary contribution is increasingly important. "If you look at new work done on engagement, it is about creating an environment that is more flexible and tolerant where people can blossom. Apple and Google are examples of organisations that have developed a culture that allows rapid innovation so they can take bright young people and help them to reach their potential."

For this story and others like it, go to Knowledge@ASB: *http://knowledge.asb.unsw.edu.au/*

Inspiration and perspiration … (l–r) ASB's Shahid Majeed with Executive MBA student Jordan Vamvakidis.

leading **the way**

Although some people are born leaders, many leaders "learn by trial and error on the job", says Shahid Majeed. A new program aims to take the genetics out of leadership, by offering a crash course in how to be an inspirational boss.

Majeed is the founder and director of the LEAD program at the Australian School of Business, which aims to give potential managers the tools they need to become effective leaders.

The LEAD program starts with a week of workshops with key industry speakers. The workshops are then followed by a weekend team-building camp that provides students with the chance to develop their leadership and interpersonal skills.

The program takes its name from Leadership, Education, Association and Development, and is the first of its kind offered by any business school in Australia. However, it is an exclusive club with only the top 60 postgraduate coursework students invited to take part.

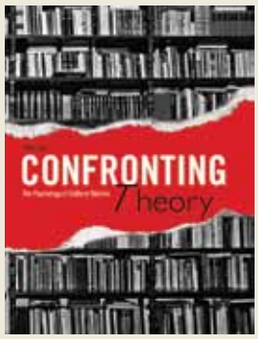
Executive MBA student Jordan Vamvakidis says the program offered him the opportunity to expand his horizons and frame leadership in a different light.

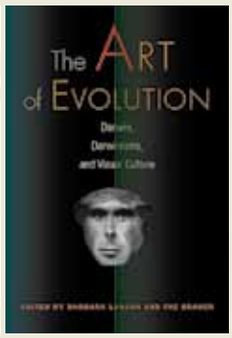
"I can now tap into expertise and contacts I wouldn't otherwise have come across. I've also discovered crucial lessons in determining my leadership style. One of those is self-awareness. The boot camp moved me outside my comfort zone, and I realised how everything a leader says and does impacts people.

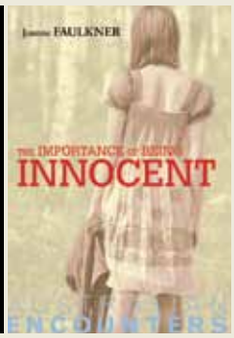
"The whole LEAD program has given me the insights to start thinking like a leader; what strategies to use, and how to implement them. I can't wait to put this into action."

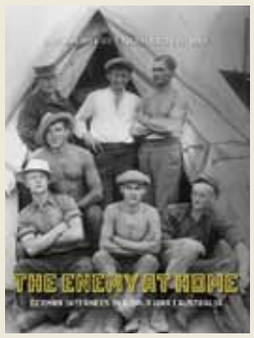
By Julian Lorkin.

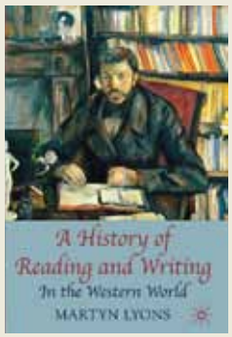
RECENT **BOOKS** BY UNSW STAFF

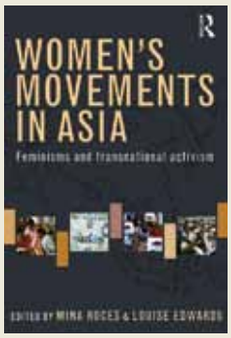












***Confronting Theory – The Psychology of Cultural Studies* by Philip Bell, School of English Media and Performing Arts**
Confronting Theory presents a critique of what has come to be known as theory in cross-disciplinary humanities education. Rather than dismissing theory writing as pretentious and abstract, *Confronting Theory* examines its principal concepts from the perspective of academic psychology and shows that although many of these analyses sound like revolutionary psychological theory, few, if any, have empirical implications that students can evaluate.
Publisher: Intellect Press

***The Art of Evolution – Darwin, Darwinisms, and Visual Culture* edited by Fae Brauer, School of Art, College of Fine Arts (with Barbara Larson)**
The Art of Evolution presents a collection of essays by internationally renowned experts in the study of science, literature, photography and art, many known for their ground-breaking work on Darwin. The book is not simply about the visual imagery that immediately followed the publication of *On the Origin of Species*, but traces the impact of Darwin's ideas on visual culture over time and around the globe.
Publisher: The University Press of New England

***The Importance of Being Innocent* by Joanne Faulkner, School of History and Philosophy**
The Importance of Being Innocent addresses the current debate in Australia and internationally regarding the sexualisation of children, predation on them by paedophiles and the risks apparently posed to their "innate innocence" by perceived problems and threats in contemporary society. Joanne Faulkner argues that, contrary to popular opinion, social issues have been sensationally expounded in moral panics about children who are often presented as alternatively obese, binge-drinking and drug-using, self-harming, neglected, abused, medicated and driven to antisocial behaviour by TV and computers. This book instead suggests that modern Western society has reacted to problems plaguing the adult world by fetishising children as innocents, who must be protected from social realities.
Publisher: Cambridge University Press

***The Enemy at Home – German Internees in World War I Australia* by Gerhard Fischer, School of Languages and Linguistics (with Nadine Helmi)**
When nearly 7,000 people of German and Austrian descent were detained in Australia during World War I, talented Bavarian photographer Paul Dubotzki was among them. These unlikely prisoners-of-war came from all walks of life – farmers, tradesmen, businessmen, in fact anyone with German connections – and many, including beer baron Edmund Resch and acclaimed orthopaedic surgeon Dr Max Herz, had lived in Australia for decades. In *The Enemy at Home* Dubotzki's rediscovered photographs and excerpts from inmates' diaries reveal what life was like inside the Holsworthy, Berrima and Trial Bay internment camps.
Publisher: UNSW Press

***A History of Reading and Writing in the Western World* by Martyn Lyons, School of History and Philosophy**
Offering a fresh history centred on the reactions and experiences of ordinary readers and writers, Lyons deals with key turning points that occurred throughout the centuries, such as the invention of the codex, the transition from scribal to print culture, the reading revolution and the industrialisation of the book. Tracing the major historical developments across Europe and North America which revolutionised our relationship with texts, this book provides an engaging and invaluable overview of the history of scribal and print culture.
Publisher: Palgrave Macmillan

***Women's Movements in Asia – Feminisms and Transnational Activism* edited by Mina Roces, Faculty of Arts and Social Sciences (with Louise Edwards)**
Women's Movements in Asia is a comprehensive study of women's activism across Asia. With chapters written by leading international experts, it provides a full overview of the history of feminism, as well as the current context of the women's movement in the Philippines, China, Indonesia, Japan, Burma, Singapore, Vietnam, Malaysia, Thailand, Cambodia, Hong Kong, Korea, India and Pakistan.
Publisher: Routledge

Suggestions for new books to include in the next issue of* Uniken *should be sent to uniken@unsw.edu.au.

A vision splendid

An original music score composed by Professor Andrew Schultz has inspired a unique visual interpretation by a UNSW animator. By Fran Strachan.

Combining art and music … an airy sound translated onto the screen.

Images: Alyssa Rothwell

"It was light and short and playful," says animator Alyssa Rothwell, recalling the first time she heard the music that has inspired her latest digital work. "I could hear a narrative, if only an imaginary one, and it took me on a journey."

Ether Etude, written by award-winning composer and head of the School of English Media and Performing Arts (EMPA), Professor Andrew Schultz, was composed for flute, clarinet and string quartet. The piece was commissioned by the MLC School for its Australian Music Day and was first performed by Ensemble Offspring.

Schultz, who offered the composition to Rothwell, a media production lecturer in EMPA, to visually interpret, describes the piece as having a "slightly wonky, unsteady character" much like the effects of ether. He says the title also alludes to "the high floating gassy ether of the sky".

Rothwell understood the ethereal nature of the music instantly.

"My initial reaction was that it was very airy, I imagined something being picked up by the wind and taken somewhere," she says.

"I played around with all sorts of ideas that belong to the air and then I read Andrew's notes and realised I was on the right track, that I'd picked up on what he wanted the music to communicate."

Rothwell is adamant her animation should leave the audience space for their own interpretation and doesn't want to impose a narrative on the music.

"Andrew's composition is perfect, I don't want to clomp around on it. I want to be sympathetic to his original vision," says Rothwell.

"Andrew's composition is perfect, I don't want to clomp around on it. I want to be sympathetic to his original vision."

Rothwell's animated version of Schultz's composition is largely monochromatic and incorporates paper cut-outs and imagery she hand draws with ink and paint.

"The animated work is a hybrid – I use traditional media with digital tools like Flash and Photoshop, incorporating elements of stop motion and hand-drawn vector animation."

The result for *Ether Etude* is abstract – textured, layered trees and Australian landscapes offer original visuals compared with the generic look of mainstream animations.

"I try to resist the visual styles imposed by animation software because they prescribe an aesthetic and everything looks like it's made on the computer. With this animation I'm seeking to create something uniquely Australian, and it doesn't make sense to default to a slick digital aesthetic," she says.

Rothwell has been an animator for the past 16 years. She completed an MA of 4D Studies at COFA before studying and working at Melbourne's Centre for Animation and Interactive Media. She has been based at UNSW for the past 11 years.

Rothwell has presented Australian Film Commission-funded animations at the Pompidou Centre, Paris, and has recently created animation and digital backdrops for Theatre of Image productions: *Go Pinocchio!*, *Lulie the Iceberg*, *Pixel & Friends: The Colour Show*.

As an ex-dance teacher, Rothwell says it's been hard to resist interpreting the music from a choreographer's perspective.

"I instinctively wanted to make the animation more dance-like, so I've compromised by developing a gentle dance between sound, space and air."

Numerous hours have gone into the animation, which Rothwell aims to complete in time for the Hiroshima Animation Festival.

"The work requires experimentation and a great deal of testing to develop something that is unique," she says. "Animation requires patience and perfectionism to create the right feeling."

Rubbing against HISTORY

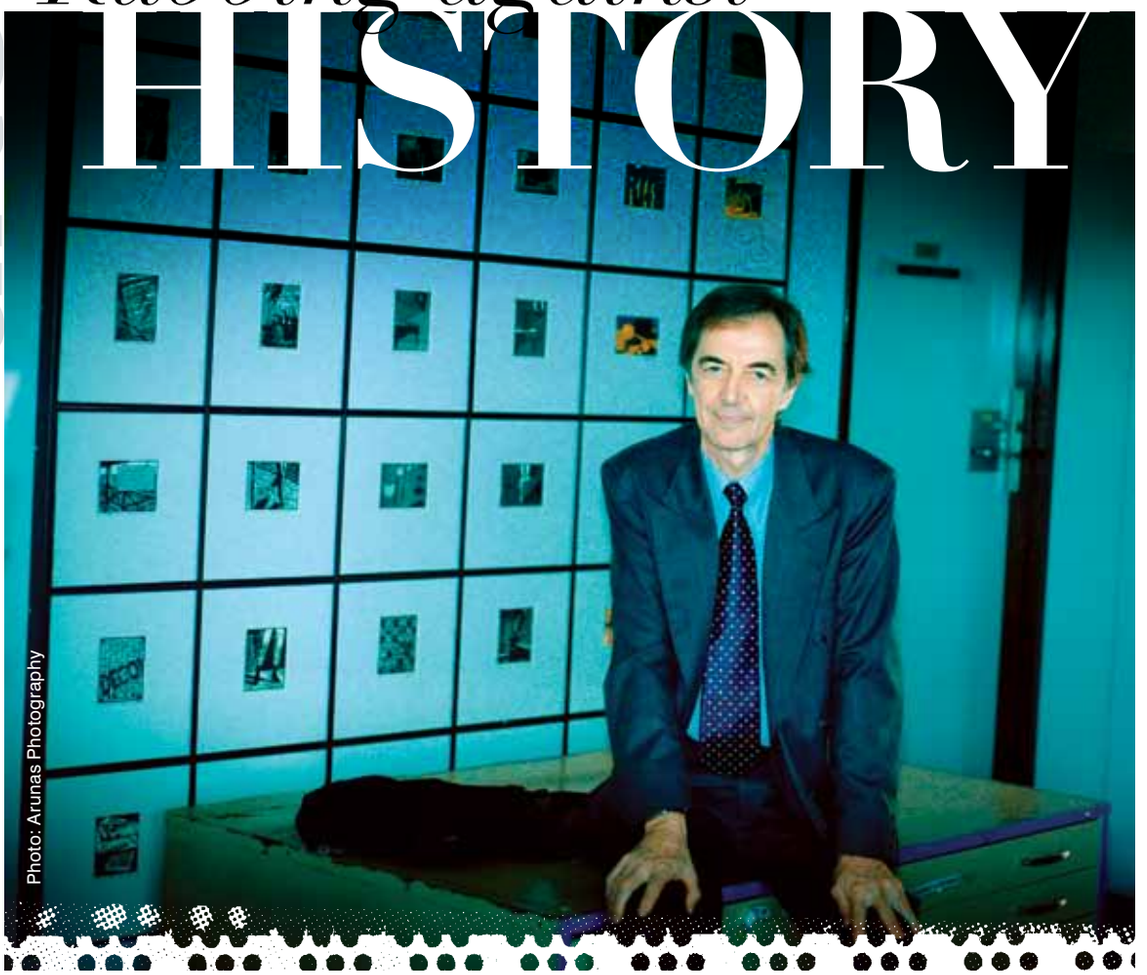


Photo: Arunas Photography

Ian Howard has spent a lifetime intent on making an impression. By Susi Hamilton.

Getting through a security check with a member of *The Chaser* can be tough at the best of times, but Ian Howard did just that – and in North Korea, no less.

In 2007, the Dean of the College of Fine Arts (COFA) and artist was part of a delegation to the secretive country with political satirist Charles Firth from *The Chaser* and politician Meredith Burgmann.

The resulting exhibition "North Korea: War with flowers" was an exhibition of the trio's work along with paintings by celebrated Chinese People's Liberation Army artist, Colonel Xing and North Korea's Ri Dong Kouk.

"There are so many flowers, either paper or real ones, particularly in Pyongyang, but underneath, there is a deep crisis – politically, militarily and economically," Howard says.

"There is a war happening, even with their own people. However pacification is supposed to happen with the swish of a flower."

Drawn to North Korea because of his interest in the relationship between civil and military cultures, Howard used persistence in the face of "Orwellian" bureaucracy, to gain access to sensitive infrastructure.

After much negotiation, Howard made his trademark "rubbings" – an impression of a surface similar to capturing the relief of a coin on paper – of the US naval vessel, *Pueblo*, the spy ship captured by the North Koreans in the dying days of the Vietnam War.

"The importance of rubbings is, it's like archaeology," says Howard. "You're working with an extraordinary object with the intention of bringing it to the public in a gallery or museum."

Howard often brings civilians, even artists, into contact with military personnel and institutions. When this occurs, greater mutual understanding and better decision-making is achieved, he believes.

This interest in the military was born at the height of the Vietnam War in the early 1960s, when Howard was a 20-year-old art student, eligible for conscription.

"Of an evening, we would be protesting against the Vietnam War," he says. "Yet in art school, it was the end of the modernist period and we were taught not to represent anything in our paintings. It was taboo. There was this clash of what art should be about. That politicised a number of people.

"The first show I had after graduating was "Realism: A return to subject matter". I used objects, photographs and rubbings that represented the real world. [Artist and critic] James Gleeson reviewed the show commenting how 'Ian Howard and others were bringing content back to the world of art, which was a good thing'."

Another area of interest is borders.

"It is a perverse human invention to put a wall, barrier or fence up, to declare this is mine, this is a nation or state," he says. "In nature there is commonality, however a dividing wall doesn't just separate, it creates and then exaggerates a difference between the two sides. Politically and strategically, walls create long-term problems. They might be a short-term fix, but they create other bigger problems while avoiding the necessity to solve the original issue."

One such edifice was the Berlin Wall. In 1974 he managed to elude authorities to make a canvas and wax impression, which today is in the National Gallery of Australia.

"The importance of rubbings is, it's like archaeology. You're working with an extraordinary object with the intention of bringing it to the public ..."

Howard has done similar artwork on the Great Wall of China, Hadrian's Wall in the north of England and the Israeli barrier that separates the West Bank from Jerusalem.

Photography is also an interest. Howard's most recent exhibition featured pictures of dead flowers and burning houses.

"I wanted to show the contradictions here, the beauty and the longevity of things that are dead," he says.

He has also recently returned from a project on the Pakistan—Indian border (assisted by two Pakistani students undertaking higher degrees at COFA), where the demilitarised zone at the Wagah Gate is surrounded by "extraordinary pomp, ceremony and even good humour". This, says Howard, "is an example where the presence of civilians, actually civilises an otherwise hostile situation". A situation Howard, as artist and dean, would like to see happening all over the world.

An interview with Professor Howard can be seen in the Art and Design collection on UNSWTV. www.tv.unsw.edu.au

Photo: **Tom Rayner**

STRIKING A POSE

Unlike many birds, the male and female Rainbow Bee-eaters are both beautifully coloured. The male, on the right, has slightly longer tail streamers than the female. This photo was taken near Ayr, Queensland in August.

ABOUT THE PHOTOGRAPHER: Tom Rayner works as a researcher at the Australian Wetlands and Rivers Centre in the School of Biological, Earth and Environmental Sciences. For the past four years, he has been researching the restoration of the Macquarie Marshes in western NSW through environmental flows and documenting it through photographs. An exhibition of his work "Restore" will be held from 6 May to 12 June at Perry Lane Café Art Studio in Paddington.

Please email photographs for possible inclusion in future issues to uniken@unsw.edu.au. Subject matter must relate to UNSW research.