SIMPLE IDEAS THAT ARE MAKING A BIG DIFFERENCE

From little things BIG THINGS GROW
The first year of our second half-century saw a remarkable step change in our performance across the University. Last year we released our learning and teaching strategic framework, Learning for the future; achieved a 100 per cent rating for research at or above world standard in the Excellence in Research for Australia initiative; received five future fellowship awards from the Australian Research Council; and accepted nearly $10 million in gifts and pledges from donors, partners and alumni. Truly, 2015 was a remarkable year.

Following last year’s success, I am very excited for 2016. After the thoughtful development of our plans for the University over the past few years, we are beginning to see the fruits of labours as we put them into action. With the learning and teaching framework finalised, and the research framework well into implementation, I am looking forward to the transformation of the University that is to come.

That transformation is no more evident than in the campus itself. With the campus master plan well underway, new construction and major refurbishment projects are reshaping the University daily. The latest large-scale project will see buildings and roads renamed and new signage installed. For the first time buildings, will take on a street address, with roads and avenues named accordingly. A move away from the coordinates-style building identifiers towards proper addresses – a number and a street name – will create the sense of an academic neighbourhood and foster our sense of community and ownership over our campus.

Off campus, we are strengthening our relationships with corporate partners to deliver better learning and teaching and research outcomes for our students. Google has provided more than $500,000 in support for robotics initiatives, while Johnson & Johnson supports a number of student engagement activities such as the Indigenous internship program and Women in MBA program (WiMBA) through the Macquarie Graduate School of Management (MGSM). The Optus Engineering Cadetship program commenced in July 2015, with six first-year engineering students being supported by Optus throughout their engineering degrees.

As ever, we continue to reach out to our alumni at home and around the world, and to make that connection as valuable to each of our 167,000 graduates as possible. Events in New York, London, Hong Kong, Beijing, Shanghai and Singapore were held last year and I enjoyed meeting so many alumni in each city. With graduates in 142 countries, I look forward to meeting our alumni wherever I travel, gaining local knowledge and insights, and sharing stories of the Macquarie experience. It is an exceptional and powerful network, and I encourage you to reach out to your fellow graduates wherever you travel. Your experience at Macquarie can give you so much more than just your qualification.

I hope you enjoy this edition of Sirius, and I wish you the very best for the year ahead.

S Bruce Dowton
The Vice-Chancellor and President
IN MEMORY OF MEMORY
Reconnecting with lost memories may be as simple as listening to music.

MACQUARIE MOMENTS
The fine art of sports mascot stealing, as told by Macquarie’s hockey team.

THE WAR ON WORDS
Ever wondered how you find yourself agreeing with outrageous political comments? It all comes down to wordplay.

CHANGES ON CAMPUS
New construction and major refurbishment projects are reshaping the University before our eyes.

HEART OF DARKNESS
Discover the internet’s version of the Wild West, where organised crime is rampant and law enforcement holds running battles with cunning opponents.

THE CHALLENGE OF THEIR LIVES
How donated funds by alumni brought country kids to Sydney to enter the FIRST Robotics challenge.

YOUNG GUNS
Meet the alumni whose chance encounters have inspired them to make the world a better place.

THE VALUE OF HEALTH INFORMATION
Dr Henry Cutler, Director of Macquarie’s Centre for the Health Economy, looks at why more information about health doesn’t necessarily translate to better healthcare.

UNDER PRESSURE
Australian government policy is increasingly coming under pressure from well-connected lobbyists. Are we headed for a US-style future?

WHERE ARE THEY NOW?
Catch up with some old friends and discover just how diverse Macquarie’s alumni network has become.
Macquarie’s victorious Maguts with the mascot dressed for competition.

Ahad says that Macquarie’s hockey team is known as the Maguts, a tradition that dates back to the formation of the club only a year or so after the University’s foundation.

“Because Macquarie didn’t have enough players to field a team, we had to borrow from the Gordon Hockey Club to compete in what were then known as hockey carnivals. The team was known as the Macquarie and Gordon United Touring Squad (MAGUTS), and the name stuck.”

The chosen mascot was a seven foot-long stuffed worm, and became a highly sought-after trophy because of Macquarie’s stellar hockey reputation, he says.

“Team members have a great emotional attachment to the mascot and guard it around the clock to fend off any attempts at theft or disfigurement by rival teams during the annual week-long University Games.”

Of course, in between guard duties, Macquarie’s hockey team staged raiding parties of their own.

“We captured the UNSW totem pole a couple of times. It was paraded around publicly until a deal could be struck for its return, but we couldn’t let it go back unchanged by its experience: once, we sent it back in Macquarie colours.

“Another time there was a bit of an accident during the modification process, and the totem pole unfortunately broke in half.”

They weren’t happy, he says, and teamed up with UTS to exact revenge, with matters coming to a head mid-game.

“Emotions were running pretty high, and a raiding party invaded the pitch during a game,” he says. “Macquarie players flung aside their hockey sticks as they raced to defend the mascot, with the ensuing tug of war meaning the magut was ripped in half.

“Meanwhile the other team used the distraction to score a goal. It was a pretty contentious move.”

Ahad says that after the magut’s bean bag filling inners spilt all over the field the team was forced to reassess some of the mascot’s design features.

“We decided that stuffing it with old clothes would make it more robust, but it also made it weigh about 30 kilos.

“I don’t think it’s been stolen since.”

MACQUARIE moments

Mascot stealing is all part of university games, but for Macquarie’s high profile hockey team, coming out in front in the game of mascot theft became almost as important as winning competition matches.

Words Rachel Sullivan
Images James Manning
IT IS THE LITTLE THINGS THAT MAKE
A BIG DIFFERENCE. THAT’S WHAT
SUSANNA MATTERS DISCOVERED ON
HER EXTRAORDINARY JOURNEY FROM
AN UNDERGRADUATE TO FOUNDER OF
AN INTERNATIONAL CHARITY.

It is an epiphany shared by other alumni who have also gone into the world as forces for lasting change: a chance encounter with a homeless man who loved to read has grown into a national organisation that supplies books to homeless people; a three-month working holiday in Africa was the launching pad for an international educational foundation; and an HSC encounter with Aboriginal studies has led to a passion to improve rural access to health.

For Matters (BA/Dip Ed, 2013), who studied teaching, her ‘moment’ was realising it wasn’t her teaching, but rather monthly menstrual periods that made her female students at a Kenyan village miss school.

“I was shocked,” Matters recalls. “I had heard about this issue but had never considered I would encounter it in my own travels.”

The issue is not confined to Muhaka village in Kenya, where Matters was based. In developing nations the onset of menses often means the end of education due to factors ranging from cultural to a lack of hygienic sanitary products, with UNICEF estimating that one in 10 menstruating African girls skip school each month or drop out completely.

Matters organised a shipment of disposable pads for the Muhaka school. “This donation was considered so precious and exciting that the pads were locked away and issued as needed,” she recalls. “The smiles on the girls’ faces as they held a packet of pads was a powerful and emotional moment.”

However, she soon realised her donation was no solution at all. “I couldn’t keep being the tooth fairy of sanitary pads forever,” she told the Australian Women’s Weekly last year after being named among its Women of the Future.

“IT’S NOT A GLAMOROUS ISSUE, BUT IT’S
ALSO ONE THAT ISN’T GOING AWAY.”

“It’s not a glamorous issue, but it’s also one that isn’t going away. I couldn’t turn my back on my students and I thought, If I don’t do something about it, who will?”. And so in January 2012 Goods for Girls was born. The charity not only teaches

Since Goods for Girls began, school attendance has soared, while the village women who make the pads have an income for the first time.
Goods for Girls founder Susanna Matters says that the smiles on the girls' faces as they first held a packet of pads was a powerful and emotional moment.
local women to make rewashable sanitary pads, it also undertakes hygiene training around women’s health and distributes the sanitary pads. Since the project started, 86 per cent of village girls choose to use the rewashable pads and school attendance has soared, with a 44 per cent increase in the number of girls attending every day.

“My involvement with Goods for Girls is a daily reminder that it is small, simple things that have the greatest long-term impact,” Matters says.

“We’re not doing anything glamorous or very costly and we are using basic technology, but we are seeing improvements in young women’s self-esteem, living standards, health and education.”

The work has also had a lasting impact on the community as a whole. The village’s women who make the pads earn a modest income – for many their first – which has allowed them to buy mobile phones to communicate with family far away.

“Over four years Dave Everett says local staff in Katuuso School, Uganda, have taken ownership of the school so that it no longer feels ‘white man-led’.

“I’m not going to die if I don’t have a book, but it’s amazing to have the choice to take one home, to get something that I don’t necessarily need, but in an odd kind of way everyone needs.”

More importantly they have re-invested their earnings into vocational education such as computer workshops, tailoring classes, and internships at the local dispensary.

“These women have become breadwinners and role models,” Matters points out.

Like Matters, Dave Everett OAM (BA (Development Studies and Culture Change), 2010) found his calling during a 2007 volunteer exchange to Kenya.

“The trip was meant to be for three months and it turned into a year,” he recalls. “I really loved the work and after that year I came back to Australia and changed my degree to development studies.”

While completing his degree, Everett and Annabelle Chauncy, a Sydney student he met in Africa, launched the School for Life Foundation. Both then aged just 21 years, they raised more than $1.6 million, developed a partnership with Rotary, gathered a Board of Directors and negotiated with the Ugandan Government to make their vision a reality.

Everett says they were driven by a deep belief in the power of education to change communities – and the results to date have borne that out. Based in the village of Katuuso, about 1.5 hours drive from the Ugandan capital of Kampala, the foundation has built a primary school and is slowly growing its intake – currently around 320 students – while it completes a secondary school nearby.
And while infrastructure is important, Everett says their approach emphasises quality education rather than simply churning students through. “In Uganda only 10 per cent of kids in Year 4 can read at Year 3 level,” he says. “In our school that number is 92 per cent.”

Everett can relate to Matters’ experience of their work having unexpected outcomes. In Katuuso, school teachers have become community mentors, there is increased respect for children’s rights and villagers are showing growing pride in their community through improvements to their homes.

However, it was being brought into line by his staff that gave Everett, who was last year awarded an Order of Australia, the greatest pleasure. “When we first started there was a lot of ‘yes sirs, no sirs’ and it all felt very much white-man led,” he reveals. “But over four years the staff have become more empowered and have a lot of ownership over the school and they will actually yell at me now – that is where a lot of my pride comes from, that it is no longer just an idea of ours, but rather a school run by Ugandan staff.”

Current Macquarie Bachelor of Speech and Hearing Sciences student Ashlee Jaensch has also taken the approach that age should be no barrier. Recently named Ku-ring-gai’s Young Citizen of the Year, she has thrown herself into the vexed issue of rural health practitioner shortages. An active member of the Rural Students Health Network she travels across the state promoting rural health careers and inspiring young people, especially from Indigenous communities, to think about a health career in remote Australia. It is a passion that was born out of her own experiences growing up in regional South Australia and an interest in Indigenous issues sparked by her HSC studies.

Fellow undergraduate Sarah Garnett, who is studying a Bachelor of Arts majoring in Anthropology, found a niche closer to home. After the death of a family friend, she channelled her grief into working with a food van for homeless people in Sydney. One night she encountered a man sitting under a streetlight reading while waiting his turn at the van. She began bringing him books and from this The Footpath Library was born.

Today, The Footpath Library has branches in Sydney, Brisbane, Melbourne and Perth and gives away 3000 books a month via libraries installed in shelters and refuges, and mobile services that take food for the mind and soul directly to the streets.

One of its clients is Grahame, a woman who spent 10 years without a home, who reflects: “I’m not going to die if I don’t have a book, but it’s amazing to have the choice to take one home, to get something that I don’t necessarily need, but in an odd kind of way everyone needs.”

The simple act of receiving a book reignited her passion for learning and prompted her to go back to school to complete her HSC. Grahame is now contemplating university and a career as an academic. “I feel like I have a future now,” she says.

For many of us, university was our first taste of independence – and as students, that freedom came without the high financial barriers that many face today. Everything is different for current students, but what hasn’t changed is Macquarie’s commitment to giving students who face hardship the education they deserve.

There are many gifted and hardworking students across the country who, through no fault of their own, simply cannot afford the costs of university study. Without help, these young Australians will never get the education they need, and their incredible potential could go to waste.

For many students, a scholarship alleviates the need to make difficult choices, such as whether to work extra hours during a scheduled lecture in order to pay for living expenses. For some students, it is the single factor that ensures they are able to attend university in the first place.

Through the support of Macquarie’s alumni community, your generosity today will give these promising young people opportunities they may have no other hope of achieving.

Visit mq.edu.au/supporting for more information and to support current students.
THE WAR

on words

Ever wondered how you find yourself agreeing with outrageous political comments, even if deep down you know you feel differently?
It all comes down to wordplay, and once you know the tricks, you can use them to your own advantage.

Words Dan Kaufman
Illustration Rosanna Vecchio

WHEN BOB CARR BECAME FOREIGN AFFAIRS MINISTER IN 2012, HE COMPARED TONY ABBOTT’S USE OF SLOGANS SUCH AS ‘NO MORE BOATS’ TO A “TRAINEE HYPNOTIST TRYING TO WORK WONDERS ON A COBRA IN A BASKET”.

Yet despite this ridicule, the cobra – the media and the public that consumes it – still reacted; no surprise considering the power that slogans wield.

“In our media-saturated society, slogans give a hook, a position in a nutshell that people can digest quickly,” says Professor Joseph Pugliese (BA/DipEd, 1985), Research Director of Macquarie University’s Department of Media, Music, Communication and Cultural Studies.

“The smart thing Abbott did was to mobilise those slogans like mantras, so that they sunk into the subconscious landscape of this country. It created a succinct way to mobilise opinion against refugees and asylum seekers.

“There’s that hypnotic effect. The more you say it, the more normal it becomes – that’s the key. It normalises the message you want to get across, even though it could be outrageous or unacceptable – but you say it often enough and it becomes part of the landscape and people accept it as legitimate.”

VIRAL SPREAD

Furthermore, the repetition of words works for more than just slogans.

“One of the ways in which language works is in reiteration and patterning, and what we technically call ‘collocation’,” explains Dr Annabelle Lukin (PhD, 2003), a Research Fellow at the Centre for Language and Social Life and senior lecturer in linguistics.

“Collaction is hearing similar words in similar company all the time, so that part of the meaning of a word ‘comes from the company it keeps’, to quote JR Firth, who was a British linguist in the 40s and 50s.”

Lukin uses the phrase ‘women’s work’ as an example, saying that most people still automatically associate it with work such as nursing and housework despite decades of feminism.

“One of the things the Liberal Party has done to Labor is to create this very close association between Labor and debt and deficit, and you can see this in Costello’s discourse over the period he was Treasurer,” Lukin says. “Even if you don’t say debt and deficit, the Liberals have created this conjunction between Labor and debt and deficit.

“So you can shift the ground through a policy where you go looking for consistent collocations and you get everybody on your team to say them whenever they can, and after a while it’s like a virus that spreads around – so you find yourself thinking something even though if you consciously think about it you don’t believe it.”

Language can also be used to reframe a situation, such as by replacing people with abstract notions. Lukin says a good example is when Julia Gillard spoke about ‘smashing the people smugglers’ business model’.

“One of the interesting things that happens in the public discourse around refugees is you have to be seen as strong, but hopefully not be seen to be cruel to the people fleeing many of these terrible regimes,” Lukin says. “So this phrase of ‘smashing something’ – you get that macho sense of taking very firm action, but the object of the verb is ‘the people smugglers’ business model’, which is something quite abstract.”
What makes the use – and abuse – of language so insidious is its subconscious effect upon us.

“It [language] has this breathtaking reach in our lives – so for it to have that power and presence, it has to be really complex, but we have to be able to use it so that we don’t think about every word coming out of our mouths,” Lukin says. “Most of what’s going on linguistically is hard to see.”

This is where grammar can be cleverly used by those in the know.

“In the Budget speeches Wayne Swan would say something like ‘The economy is growing’ – which is middle voice – and Peter Costello would say something such as ‘We are growing the economy’, which is effective voice in the active style,” Lukin says.

Although some people are familiar with active versus passive voice – a sentence is active when its subject does something to the object, such as ‘The cat chased the mouse’ as opposed to ‘The mouse was chased by the cat’ – effective voice is when an agent causes a process, and middle voice is when no agent is mentioned.

“This has been a feature in the reporting of war, where you can say ‘The war has escalated’ or you can say ‘The US has escalated the war’,” Lukin says. “So you get that distinction again between middle voice and what we call effective voice, so in effective voice you are giving external agency to the process – the process doesn’t engender itself, it is caused by an agent.

“If you want to report in a way that appears neutral, then you use middle voice because it looks like you’re not giving responsibility to anyone or anything for creating the conditions you’re reporting on. So you say ‘The war is escalating, the war continues, the war has begun’. All of these structures you see are a one-participant structure in grammatical terms without any external agency.

“Another example is that you can say ‘10 civilians died when a US air raid struck a suburb in Baghdad’. You say the Iraqis died – not that they were killed. This same grammatical distinction operates everywhere.”

Choosing words that conjure the right associations is key. As Lukin points out, the word ‘violence’, for example, creates different associations in most people’s minds than ‘war’.
“All of our associations around war are largely neutral or positive,” Lukin says. “For instance, we talk about people serving the nation, fighting for something – war is toward some greater good, so that’s entailed in the semantics. We’re far more likely to say he ‘fought and died’, not ‘he fought and killed’.

“There is an ideological schism in our language. If we validate the use of force it’s called war. If we don’t, it’s called violence, and it’s a violation, illegal and an infringement of people’s rights.”

In her research into the reporting of war, Lukin found that journalists almost never used the word ‘violence’ – except if they were talking about anti-war protestors.

“Even a protest by students in Sydney where a couple of chairs were thrown around gets reported as ‘violence in a protest in Sydney’. And then Bob Carr comes out and says it’s never okay to use violence to make a point, so there’s this heightened condemnation of violence by people protesting against the war, and at the same time the coalition is unleashing this whole bombardment on Baghdad that by conservative estimates, in that two-week period, killed … the absolute minimal figure would be 4000 civilians.”

**DEHUMANISING LANGUAGE**

The use of dehumanising language, where people are referred to as animals or objects, also relies on word associations.

It’s easy to find examples, from the US Republican presidential candidate Ben Carson comparing Syrian refugees to rabid dogs late last year to the Nazis referring to Jews as rats. However, dehumanising language seems to be especially favoured by the military.

Pugliese, who wrote *State Violence and Execution of Law: Biopolitical Caesurae of Torture, Black Sites, Drones*, says “(US drone pilots) call the actual victims of drone strikes ‘bug splat’, and so basically they reduce humans to entomological waste.

“That animal language divests people of their human rights and reduces them to animal objects upon which violence can be performed legitimately and with impunity,” he adds.

In other words, it makes it easier for soldiers to kill.

“Perpetuating that kind of violence is not something that humans easily accept, because we seem to be so florid and prolific in our ways of justifying, legitimating and rationalising the killing of people,” Lukin says.

“You have to create in your warrior class the disposition to accept the killing of another human being, and a key thing is to make the killer believe that the object of the killing is someone somehow less than human.”

Closer to home, refugees arriving by boat are called ‘illegal’ by the government – even though refugees actually do have the right to seek asylum under the Universal Declaration of Human Rights – and are referred to on Nauru and Manus Island as ‘detainees’, which sparks the connection in peoples’ minds with prison.

“It criminalises refugees and asylum seekers before the fact; it brands them as illegitimate, illegal and thus potentially criminal,” Pugliese says.

One of the more ridiculous – and horrific – examples of euphemisms is the US government’s description of torture as ‘enhanced interrogation techniques’.

“Through the use of euphemisms they were pretending they weren’t torturing, and in a sense the public bought that because you had the PR estate talking about ‘enhanced interrogation techniques’ instead of torture,” Pugliese says.

“In effect it enabled them [the US] to violate their own anti-torture statutes and the international covenant against torture to which the US is a signatory and has ratified.

“You can see how language is really insidious and is enabling practices that actually violate the state’s own laws.”
Reconnecting with lost memories may be as simple as listening to music. It’s just one of a number of pioneering areas of research into dementia at Macquarie.

Words Bianca Nogrady
Images Chris Stacey
Music occupies a special place in our hearts and in our memories; so much so that it is being explored as a tool to help people who have lost their map to the past and their ability to remember.

Macquarie University researchers Professor Bill Thompson and Dr Ameé Baird are looking at how music might be used in individuals with dementia, not only to help reduce stress and anxiety, but also to re-engage the parts of the brain affected by degeneration.

Thompson likens music to a kind of neuropsychological Swiss army knife, which can be used to tackle multiple psychological functions.

“It’s tackling attention, it’s interacting with emotion, it’s interacting with language-like processes such as music syntax; how the pieces fit together, how the different notes and chords go together and the sense of an ending, for example,” says Thompson, Director of the Music, Sound and Performance Lab at Macquarie and Chief Investigator of the ARC Centre of Excellence in Cognition and its Disorders (CCD).

“And of course, it’s triggering autobiographical memories at the same time, and often triggering imagery and visual memories.”

LASTING CONNECTIONS

In this way, music uses a large number of effective psychological tools that enhance states of mind and can reconnect people with their past and with cognitive function that has been eroded by dementia.

Baird, a clinical neuropsychologist, NHMRC-ARC Dementia Research Development Fellow and CCD Associate, became interested in the impact of music on dementia after hearing about retired musicians with Alzheimer’s disease who were still able to play their instruments.

“We know that people with dementia enjoy music, they can respond to music, they can sing along, but it’s not really well researched why that is and how it works,” she says.

Baird has been working with an elderly woman with severe dementia who has been able to learn new songs despite the impact of the disease.
“She didn’t know who I was but if I started to sing the song that I taught her she was able to sing along,” she says. “It shows that the parts of the brain that control memory for music and the ability to sing are not as affected by dementia. Somehow music remains; music abilities can remain preserved.”

Both Baird and Thompson hope that these unique features of music may be harnessed for their therapeutic benefit. There are already studies showing that people with dementia are much less agitated or distressed by standard care activities such as bathing and dressing if familiar music is played to them while these activities are going on. Something as simple as reducing anxiety and agitation could not only have a profound effect on the quality of life of people with dementia and their carers, but could also reduce reliance on medications that come with potential side effects.

But Thompson says there is so much more that music may be able to do.

“Researchers are starting to realise that musical activities are more than just a diversion that reduces anxiety, but can actually help to slow down the progression of the effects of dementia on memory and cognitive function,” he says. “When people with dementia are engaged with music, they can sometimes recover fragments of past memories, and get bursts of awareness and cognitive function.”

Thompson is also collaborating with Chilean musician and Macquarie University researcher Dr Waldo Garrido on a study of the way music is used to evoke nostalgia and a sense of homeland among diaspora and refugee populations. As Thompson points out, people with dementia can be thought of as having experienced their own kind of diaspora; a dislocation from memory rather than from geography.

“In the same way that refugees from Chile or Syria have a strong need to connect with their sense of self and homeland when they are relocated in a new country, people with dementia are like refugees in the sense of being disconnected from their former selves,” Thompson says.

“Their experience of isolation is similar to that of diaspora populations, and music can be a valuable tool for helping them reconnnect with their identity and personal homeland.”

REMEMBERING TOGETHER

Reconnecting with memory is also the focus of work by Macquarie University’s Dr Celia Harris (PhD, 2010), but instead of music being the trigger for memory, Harris is exploring how couples serve as each other’s memory triggers.

While much of the research in cognitive psychology suggests that group memory is less effective than individual memory, Harris points out that most of this research is done using groups of strangers trying to remember lists. But she is interested in transactive memory theory, which posits that couples working together...
are greater than the sum of their parts; meaning they can remember better together than alone.

“They have this rich shared history so they can provide each other with really rich, personalised cues to trigger each other’s memories. That’s something that somebody who doesn’t know the person simply can’t do,” says Harris.

Her research with long-term couples has shown that, in general, this theory holds true, but with one major caveat; how the couples interact with each other dictates whether they help or hinder each other’s memory, in particular, how they speak to each other.

“Things that were helpful were things like cueing each other, rapid turn-taking – switching back and forth between the speakers – and things that were unhelpful were things like correcting each other, and having one person who was the designated expert on a topic who dominated and shut off the possibility of the other person contributing,” she says.

Harris’ work could help in situations where one half of a couple suffers damage to their memory capacity, for example through brain injury or dementia. Case studies with individuals with an acquired brain injury are showing just how much difference being in a couple can make.

“We found amazing effects in the difference between a person remembering just with an interviewer, where they can remember virtually nothing, and then with their partner, they can remember a great deal more,” Harris says.

The hope is that carers and partners of people with dementia could be taught how to interact in such a way as to give the greatest benefits to the affected person’s memory. Harris says the key is sensitive providing of cues; letting the person speak until they start to taper off then coming in with support and a reminder, and allowing the person to pick up the thread again.

“Some people do it naturally and have learned how to do it, but some people don’t do it, so there’s potential there to teach them how to do it better.”

**FIGHTING ON A DIFFERENT FRONT**

While dementia most commonly affects people later in life, when those in long-term relationships are most likely to be able to benefit from remembering together, one particularly cruel form of dementia strikes younger individuals in their 50s and 60s. Macquarie University’s Associate Professor Ian Blair is researching frontotemporal dementia, and why this form of the disease can co-occur with the seemingly unrelated motor neurone disease (MND).

Frontotemporal dementia has a strong genetic component, and as Blair and colleagues have discovered, frontotemporal dementia shares genes with MND, also known as amyotrophic lateral sclerosis.

“What’s become increasingly evident over the past ten years is that there is a profound overlap between MND and frontotemporal dementia, and it’s also increasingly recognised that a substantial proportion of MND patients develop frontotemporal dementia and vice versa,” says Blair.

Both diseases result from the death of neurons; in the case of frontotemporal dementia, the frontal and temporal lobes of the brain and in the case of motor neurone disease, the motor nerves in the spinal cord and part of the brain.

“We suspect that there are similar biological mechanisms that underlie what triggers the death of those groups of nerve cells in both diseases,” Blair says.

So far, Blair’s research has focused on the inherited forms of both motor neurone and frontotemporal dementia, but now the hope is to identify the causes of the sporadic forms.

“In the sporadic forms (those that occur without a family history), what we’re talking about is an interaction between probably many genetic variants and the environment, so the genetic features put you at risk, but when you couple that with an environmental exposure, then you get the disease.”

“The more we can learn about the triggers, and the influence genes have on how the diseases progress and interact, the more we can understand why these two devastating diseases occur and hopefully, one day, even prevent them,” he says.
CHANGES ON-campus

With the campus master plan well underway, new construction and major refurbishment projects are reshaping the University before our eyes.

Words Rachel Sullivan
Images Chris Stacey

THE LATEST LARGE-SCALE PROJECT WILL SEE BUILDING NAMES AND ROADS RENAMED, NEW SIGNAGE INSTALLED AND FOR THE FIRST TIME, BUILDINGS WILL HAVE A STREET ADDRESS, WITH ROADS AND AVENUES NAMED ACCORDINGLY.

Several former Macquarie students recently returned to their old stomping ground and were amazed by some of the changes that have taken place since they graduated.

Amanda Dodds (née Leverett, B Media, 2006), says she has been amazed by the transformation of the old library into MUSE – short for Macquarie University Spatial Experience.

“The old library had that classic musty smell you associate with old books, and the layout and style of the study desks made it a bit dark and pokey,” she says.

“Even though it’s the same building, MUSE has a completely different vibe – much lighter and brighter, and with so much more life.”

“Despite its total makeover, it still pays homage to its past, with some of the old desks incorporated into the design, the old book return chutes still visible from outside, the stained glass windows and of course Jack the Dinosaur in his glass case in the entry foyer.”

Amanda also remembers the old film studios at Building F9C, which now houses the engineering labs.

“Before the days of Building Y3A with its state-of-the-art facilities, we would be filming and have to wait for the noise from trucks and planes and even people talking outside to die down so we could continue shooting.

“While F9C hasn’t changed much on the outside, the grassy area across the road where we used to sit to have lunch certainly has: it’s now the Macquarie University Hospital.”

She says the food court also offers a much better choice of food these days.

“Although I do fondly remember the make-your-own sandwich bar, where you had to pay by weight. It probably wasn’t very hygienic, but it was great value for struggling students.

“The old SAM Bar has also been made over as the UBar, but it still feels pretty familiar on the inside, and has the weird murals behind the pool tables.

“Outside, the old metal chairs have been replaced with undercover spaces, wooden benches and spaces with cushions. There’s also lawn furniture and some artificial grass where students play lawn bowls on Fridays.”

David Han finished his degree in finance and actuarial studies only two years ago, but he says already a lot has changed.

“There have been a lot of renovations, including most of the lecture theatres I used to use – Macquarie Theatre, C5C, and Theatres 2 to 5 in E7B.

“All of the tired, old wooden tables and chairs have now been replaced by contemporary seating, better lights and better audio visual systems.

“Back when I started, lectures weren’t recorded, so you actually had to go them,” David says. “Now they’re all recorded and you can even see where the mouse is pointing on a Powerpoint presentation.

“It makes it so much easier to study or to review things you might not have understood.”

David agrees that with the coming of MUSE and all of the other changes around campus, it feels much livelier.

“The physical change has led to other changes as well,” he says. When I first came here the buildings all seemed to be made of grey, old concrete and had a really tired feel.

“Now there’s lots of colour everywhere, and heaps of variety. At MUSE you can sit on a chair, a bench, the floor or a beanbag to study. It all feels much more dynamic.”
NEW LOOK FOR E7A
When renovations are complete, Building E7A will be home to four departments from the Faculty of Science and Engineering.

SPACES TO RELAX
Shaded by the original grove of trees, new seats bring a vibrant splash of colour to the central courtyard.

LIBRARY OF THE FUTURE
The new library is a dynamic place for students to study, with books now retrieved by high-tech robotic cranes from the University’s vast collection.

WORLD-CLASS HOSPITAL, WORLD-CLASS RESEARCHERS
Researchers from the new Faculty of Medicine and Health Sciences collaborate with the hospital to ensure research discoveries translate more easily to improve patient outcomes.

CALMING THE TRAFFIC
The re-routed road from the Herring Road entrance has reduced traffic entering the University and made the campus more pedestrian friendly.

MAKING A POSITIVE IMPACT ON HEARING LOSS
The world-class Australian Hearing Hub continues to attract leading researchers as well as alumni who benefit from the many services on offer.

MUSE, MACQUARIE’S SOCIAL LEARNING SPACE
The days of hutch-like study desks are a distant memory at MUSE, where students can study while seated on a chair, the floor or even a beanbag.

GOING STRONG
With a new look and feel, Marxines is still one of the best places to catch up on campus.

The Macquarie University Alumni Relations Office can give alumni a guided tour of the campus.

E: alumni@mq.edu.au
THE VALUE OF

health
INFORMATION

Never has there been so much information so readily available, but despite improvements in information technology, our health system is struggling to maximise its true value. Dr Henry Cutler, Director of Macquarie’s Centre for the Health Economy, looks at why more information doesn’t necessarily translate to better healthcare.

OVER THE LAST DECADE, BOTH STATE AND FEDERAL GOVERNMENTS HAVE PURSUED GREATER KNOWLEDGE AND INFORMATION AROUND PUBLIC SERVICE DELIVERY, WITH THE INTENT OF IMPROVING PERFORMANCE AND INCREASING EFFICIENCY AND EQUITY.

There is no better example than the MyHospitals website, which provides performance information on key public hospital outcomes, such as financial performance, waiting times and hospital-acquired infections.

But there are many other types of information within the healthcare system. Clinicians make decisions based on medical literature, treatment guidelines, their own experience and those of their peers, as well as ‘signals’ provided by decision support systems. Patients make decisions based on information received from their healthcare professional, their own preferences and experiences, and those of others, and alternative information sources such as Google.

Providers use historical and real-time information every day to maintain clinical quality, improve performance and ensure they remain fiscally sustainable. Information is also sought by government to formulate policy and make funding decisions.

PROCESSING HEALTH INFORMATION

The healthcare system is also characterised by information asymmetry, with providers holding more information than patients on treatment effectiveness, and members knowing more about their health status than private health insurers. This creates ‘special features’ within healthcare, leading to market failure and the need for government intervention.

Historically, investment has been targeted at removing uncertainty for patients and clinicians through developing diagnostic tests, improving clinical care practices, and searching for medical breakthroughs: the National Health and Medical Research Centre spent $845 million on medical research in Australia in 2014 alone.

But for many treatments, outcomes still remain uncertain. For example, a person diagnosed with stage IV melanoma has only a 10 – 20 per cent chance of survival over five years from diagnosis.

Uncertainty within healthcare also stems from our limited ability to process large amounts of complex information. This means patients, clinicians, providers and government often rely on simplified decision rules when making choices, with research showing that the more complex a clinical guideline, the less likely it will be adopted.

“People also sometimes make ‘wrong’ decisions when seeking information for their own diagnostic purposes.”

The healthcare system is undeniably complex and characterised by a high level of decision uncertainty among patients, clinicians, providers and governments. This stems partly from incomplete information, such as unobservable patient characteristics, unknown disease impacts, and the outcomes from care. The seven-fold variation in knee replacements in public hospitals, and the eight-fold variation in coronary angioplasty and stenting in private hospitals, attests to variation in medical opinion across Australian hospitals.
Patients in particular find it difficult to process complex health information. Clinicians and patient support groups help patients better understand their potential treatment options and health outcomes, and to navigate the healthcare system, but many are still left confused. And while international research suggests people feel empowered when offered a choice of provider, many find it difficult to interpret performance information. People also sometimes make ‘wrong’ decisions when seeking information for their own diagnostic purposes: they escalate their health concerns based on information sourced from the web that can be erroneous, incomplete or both, and they often lack the necessary health literacy to correctly interpret the information. Dubbed ‘cyberchondria’, this phenomenon has encouraged people to access healthcare services unnecessarily, wasting valuable health resources: research undertaken by Microsoft found that only 25 per cent of people who sought medical attention based on a web search had a condition that justified that medical attention.

**BARRIERS THAT LIMIT INFORMATION VALUE**

Mountains of health information are being generated on a daily basis with IBM predicting medical data will double every 73 days by 2020. They have developed a super computer [Watson Health] to provide clinical decision support within the ever-changing information landscape. It can read 40 million documents in 15 seconds.

However, information is not always shared across patients, clinicians, providers and government. Many patients – especially those with chronic conditions – access a multitude of health services that each collect bits of information. Better sharing of that information across primary, acute and community care providers could generate insights into developing better quality care, tailored to individual needs.

Both state and federal governments recognise the benefits from sharing information, having recently invested in developing processes to link large datasets across government departments and agencies, but they are limited somewhat due to the Privacy Act 1988, a law that regulates the use of personal information.

There are also costs associated with health information, stemming from collection, storage interpretation and communication. These costs generally fall on providers and government, with limited capacity to recoup costs from patients. Over the last five years, the federal government alone has spent more than $1 billion developing the personally controlled electronic health record (PCEHR), which is yet to deliver on utilisation objectives.

The value of information may also be limited if subsequent decisions from that information are restricted. For example, while public hospital performance information is used by providers to improve practice, its value is somewhat limited for public patients given they cannot choose their hospital or treating clinician.

**DO WE NEED MORE INFORMATION?**

Given patients, clinicians, providers and government find it difficult to process large volumes of complex information, is more information valuable, or will value be lost in the sea of complexity that already characterises our health system?

More information certainly has the potential to reduce uncertainty in decision making and the likelihood of poor decisions leading to reduced health outcomes. It helps the decision maker optimise their objectives, whether it be maximising health, or minimising health resource wastage. But the value of information depends on a multitude of factors, including the level of uncertainty, the likelihood that additional
information may change a decision, the cost of making a wrong decision, and the cost of collecting and using health information. Its value also depends on whether decisions based on new information are implemented.

Estimating benefits and costs of additional information is complex, particularly when the value depends on currently available information, or potential future information. For example, patient genomic data becomes more valuable with increasing knowledge about how genes influence disease.

Measuring the value of additional health research is particularly fraught with difficulties given that research is often used to develop further research and therefore does not lead to immediate translational outcomes. Benefits may only be realised decades into the future.

Health economists, such as those working at Macquarie’s Centre for the Health Economy, have been exploring the value of conducting further research to inform healthcare decisions using a method called ‘value of information analysis’. This method uses statistical decision theory to estimate the benefit of a decision from collecting additional information compared with a decision made using existing information. Then, after subtracting the cost of conducting the additional research, the net value of additional information is estimated.

Value of information analysis has been used to determine whether additional information is needed when deciding to fund drugs and medical devices, preventative programs and medical research. It has also been used to determine the optimal sample size in clinical trials. But it often assumes that any optimal decision can be implemented perfectly – unlikely given the structural rigidities, communication barriers and limited funding that characterise the healthcare system. Methods for adjusting value of information estimates to account for imperfect implementation have been developed, although these are still in their relative infancy.

**TAKING THE LONG-TERM VIEW**

The prolific collection of information within the healthcare system will continue unabated into the future, along with advances in information technology to help us better understand that information. Some information will be essential given increased treatment choices and healthcare complexity. However not all of its worth will be immediately obvious, with decisions regarding patient treatment and organisation of the healthcare system still likely to be made using simple decision heuristics.

But this new information will present an opportunity to profoundly change the way healthcare is delivered in Australia. Empowering patients to make better choices about their own healthcare needs through information on quality, independent from their clinician, can remove some of the market failures inherent in our healthcare system.

For health researchers, the proliferation of information presents an enormous opportunity to develop new ideas that can generate exciting research. And most importantly, it can also improve the lives of Australians.
HEART OF darkness

The dark net is the internet’s version of the Wild West, where organised crime is rampant and law enforcement holds running battles with cyber criminals. Macquarie researchers are leading the fightback.

Words Fran Molloy
Images Chris Stacey
ON SILK ROAD – AN ONLINE MARKETPLACE ON THE DARK NET - DRUG BUYERS LEFT EBAY-STYLE RATINGS ON THE SERVICE LEVELS AND PRODUCT QUALITY OF THEIR DEALERS, WHO ADVERTISED ORGANIC CANNABIS, FAIR TRADE OPIUM AND CONFLICT-FREE COCAINE.

Payments were made through the stateless crypto-currency Bitcoin, and the drugs usually arrived by post, vacuum-packed and imaginatively disguised.

Despite the FBI’s shutdown of Silk Road in a spectacular 2013 raid, this has had problematic outcomes, with customers moved from Silk Road – which had a charter prohibiting the sale of stolen identities, pornography or weapons – to a range of different sites where they are exposed to a wide gamut of criminality.

FRACTURED FAIRY TALE

Dr James Martin, Director of Criminology at Macquarie University’s Department of Security Studies and Criminology, says that within the internet’s vast landscape there are dark depths, beyond the reach of Google’s indexing, known as the Deep Web.

Within that Deep Web lies the Dark Net – shadowy corners holding encrypted sites that can only be explored through a special browser called TOR (short for ‘the onion router’) – corners where everyone is anonymous and illicit behaviour runs rife.

It is the internet’s version of the Wild West, where organised crime is rampant and law enforcement often stymied – but the Dark Net is a complex place, not wholly bad or good.

“Some prefer to call it the Anonymous Web, because the terms Dark Net or Dark Web sound so sensationalist,” Martin says, adding that while ‘dark’ implies a shady, malicious place to some, it can also infer concealment or anonymity, and reflects the initial intent of TOR encryption.

“The Dark Net was originally set up by US Naval Intelligence, ostensibly to allow people living under authoritarian regimes to communicate without fear of detection from their own government.”

WEARING THE WHITE HAT

Martin’s own research interests include the phenomenon of organised crime and illicit drug trading on the encrypted Dark Net.

In his 2014 book, Drugs on the Dark Net: How Cryptomarkets are Transforming the Global Trade in Illicit Drugs Martin says that cryptomarkets constitute a ‘perfect storm’ of potential crime hysteria and moral panic by combining the emotive and little-understood issues of illicit drugs and the Dark Net.

But for analysts working outside government cryptomarkets, drug networks are not the prime target.

Robert McAdam (BA, 1998) is a white hat hacker – a former police officer and Macquarie University graduate, who for more than a decade has run Pure Hacking, a highly regarded IT security consultancy serving financial, government and business clients.

For his clients it is the Dark Net’s organised crime networks that keep many of them awake at night.

For the last few years, the firm has offered a black ops service, trawling the Dark Net to close down commercial threats.

Finding items like credit card details and stolen identities or intellectual property offered for sale means that clients’ security breaches can be locked down fast, McAdam says – often before any damage has been done.

Dark Net markets facilitate some real damage, he adds – and not just to corporations.

“It can take 12-24 months for a person to re-establish – a trust relationship with banking institutions after their
One side creates a new way to either defend or attack, and the response is a counterattack or defence to that – this perpetual technical arms race just keeps on going.

identity has been stolen. It can really be quite traumatic,” he says.

But despite popular belief, McAdam says that cyber security isn’t always playing catch up – it’s often ahead. He uses the analogy of an arms race to describe the scenario.

“One side creates a new way to either defend or attack, and the response is a counter-attack or defence to that – this perpetual technical arms race just keeps on going.”

WAR ON DRUGS

It’s impossible to tell how much of this technological arms race is linked to the global drug trade, but Martin argues the connections are inevitable.

In Australia, the Australian Crime Commission estimates that international mail and air cargo accounts for 96 per cent of all incoming drugs seized.

While Martin says the vast majority of drug sales happen the old-fashioned way, through interpersonal networks, that is now changing.

Online drug sales offer users plenty of advantages, with user reviews providing an indication of quality and drugs and dealers vying to rank higher to improve sales and achieve higher prices.

However, Martin believes that the associated harm is probably less than that occurring through conventional modes of drug distribution.

Drug users online tend not to be stereotypical addicts, he adds. “The minimum requirements to buy drugs online are a bank account, a computer, reasonable IT skills. These users tend to be middle class, perhaps better educated.”

He says that data shows that around 90 per cent of illicit drug takers use them in a non-problematic fashion – a similar proportion to alcohol users.

“They may indulge on weekends but otherwise live productive, fulfilling lives and their drug use doesn’t come at a significant cost to them.”

He even argues that online drug sales present a less harmful alternative than conventional drug markets.

In Martin’s book, which was used as background research by the trial judge presiding over the case of Silk Road mastermind Russ Ulbricht, he projects that crypto-markets will diversify, increasing in popularity and taking on a greater proportion of the global illicit drugs market, and radically transforming this market in the process.

Interestingly, he also argues that drug prohibition has been one of the greatest policy disasters of the 20th century.

“It hasn’t reduced the associated harms – if anything,” he says. “It’s created a whole new set of harms. Many scholars argue that the war on drugs that governments have been waging since the 1970s make illicit drugs much more harmful than they’d otherwise be.”

The most obvious is the creation of the world’s largest and most lucrative black market, worth hundreds of billions of dollars, most of it controlled by organised crime.

He says evidence shows de-criminalisation of drugs deliver tangible benefits – in Portugal, for example, the introduction of decriminalisation of all drugs has lowered crime, reduced both adolescent and long-term drug use and delivered higher rehabilitation rates.

“Decriminalisation and a quality controlled drug marketplace could, ironically, be the solution to decades-long trench warfare on drugs costing billions of dollars and many thousands of lives,” Martin says.
Australian government policy is increasingly coming under pressure from well-connected lobbyists. Are we headed for a US-style future?

**Words** Fran Molloy
**Images** Chris Stacey
And while grassroots campaigns by non-government organisations (NGOs) can tap into social media to get broad public support, these lobby groups are up against powerful and well-financed professionals when it comes to influencing government policy.

Dr Li Ji (PhD International Communications 2013) is a researcher at the Soft Power, Analysis and Resource Centre (SPARC) at Macquarie, where her research investigates the ethical use of ‘soft power’ in public diplomacy and governance, and how it is used to build relations between nations, organisations and communities.

She says that the terms soft and hard power, used primarily in international relations, also provide a lens for understanding the exercise of influence in a national context.

“Soft power is based on attraction, while hard power is forceful and coercive. Governments control people not only through (hard) decision-making power, but also through ideologicial power that can shape ideas, beliefs and perceptions.”

She says that in democracies, in a domestic context, soft power represents public perception, values and preferences and weighs heavily on the policy making process.

“Hard power such as public protests can certainly have immediate effects on the political conversation between NGOs and the government,” she adds.

Ji argues that powerful non-governmental organisations such as GetUp or the Climate Council have a strong influence on policy making through the exercise of soft power.

“NGOs normally represent civil society, and defend the weak and powerless against powerful governments and big business.”

By campaigning around policy issues like climate change, gender issues, migration or disarmament, they aim to influence the policy-making process, she explains.

“NGOs are a powerful force in influencing public opinion and receive significant media attention to achieve their agenda,” she says, adding that their approaches can include subtle manipulation of media.

“They achieve their preferred outcomes through effective soft-power strategies including media agenda-setting and framing campaigns and events.”

Industry groups have responded to this exercise of community soft power through campaigns of their own that attempt to persuade the public.

Soft power exercised in this form can be ineffective however – one recent campaign subject to a spectacular public backlash was the Mineral Council of Australia’s ‘Coal is Amazing’ campaign, which attracted numerous spoof videos.

Political donations are ostensibly given without ties to policy outcomes, with some organisations making donations to both of Australia’s major political parties.

But, Dr Ben Spies-Butcher, who teaches economic sociology in Macquarie’s...
Department of Sociology, says that while Australia does have a few restrictions on political donations, the system is ripe for exploitation – and the consequence of its abuse is a government that governs for the few, not for the many.

In New South Wales, the Independent Commission against Corruption has laid bare numerous cases of political corruption through donations to parties and individuals, and Australia’s High Court recently upheld the State Government’s ban on political donations from property developers against an industry challenge.

Spies-Butcher says that in recent decades, corporations around the world have worked to increase their influence on government through direct financial pressure – such as political donations that come with expectations of legislative payback – and through indirect measures such as well-funded media campaigns and sophisticated lobbying.

He says that while there is little research in Australia directly linking political influence and democratic outcomes, there are signs that patterns found in the US are reflected here.

“Research in the US by political scientists Hacker and Pierson has shown that the increasing inequity in wealth is directly linked to political influence,” Spies-Butcher says.

“The top one per cent of people by wealth have seen their incomes skyrocket and that’s due to their influence on laws that reduce taxes, keep wages low and cut regulations on industry.”

Spies-Butcher says that the other way that industry and private interests can influence government is through media campaigns and advertising as well as through lobbying media owners to take a particular policy position.

Media influence may be less obvious in terms of its impact on power but it is still a way of undermining its democratic process, he adds.

“In a democracy, the fundamental concept is that all votes should count equally, but the exertion of political influence through donations and lobbying and through the ability to influence through media control, means that there isn’t equal access in getting your voice heard.”

**POLITICAL DONATIONS – A SLIPPERY SLOPE**

One of the most obvious ways that corporations and individuals exert influence on government policy is through donations to political parties.

“This is definitely an area where states can regulate to control this kind of influence, but too often it doesn’t happen because political parties would be acting against their own interests,” says Spies-Butcher.

Former Federal Liberal leader John Hewson believes public funding of political parties is the best strategy to reduce the influence of donors and has called for the banning of all corporate and union political donations and for individual donations to be limited to $1000.

Dr Diana Perche (M Politics and Public Policy, 2003) is Director of the Master of Politics and Public Policy program at Macquarie where her research includes a focus on Indigenous affairs.

She says that commercial interests have always held sway over government policy and her work on policy decisions around Indigenous land between the 1960s and 1980s shows the huge influence of mining companies on government policy.

These are often at a state and local level, she says, making it harder to track.

“Changes made to the Land Rights Act in the Northern Territory in 2006 worked in favour of the mining industry by weakening the power of Land Councils,” she explains.

These changes reversed many of the provisions allowing Aboriginal people to have control over certain ‘community living area’ titles, land grants that had been excised from pastoral leases for Indigenous communities and which excluded mining and exploration and could not be sold.

Control of the land was given to government, which could then allocate use of the land to resources companies.

“While there’s no obvious direct financial benefit, powerful groups receive benefits from government that are often quite hard to discern. Sometimes it can involve a very detailed analysis of legislation, tracing things in enormous detail to actually work out where the benefits are going. It’s then easy to hide that sort of thing.”

The most glaring recent example of mining industry influence, she says, was the changes to the Resources Super Profits Tax proposal.

“Then, clearly, the dismantling of the mining tax when Abbott was elected was quite obviously the result of intense lobbying by the mining industry to essentially shut down this public revenue source.”
One of the most obvious ways that corporations and individuals exert influence on government policy is through donations to political parties.

However, she says, a bipartisan approach is often key to effective policy change.

“For example, both sides of politics took very conscious decisions in the late 80s and early 90s to push back against the tobacco industry, and we’re seeing fantastic results now. It’s not an easy path for governments to continue to limit tobacco consumption and tobacco advertising and plain packaging of cigarettes; it’s an enormous battle to fight.”

When the Liberal Party still accepts donations from tobacco companies, she says, there’s less incentive to stand firm against industry lobbying.

SUBTLE INFLUENCE

Perche says that the exertion of political power is more subtle than most people are aware of.

“There are very overt actions, such as the media campaigns and political donations, there are also covert actions. The public will never know about [a lot of the influence being wielded], because there are phone calls and direct access at functions and so on that never come out into the open.”

But she is less optimistic about the ability for NGOs to influence policy.

“The government program measures some health and education indicators, however, while the NGO campaign also addresses health and life expectancy, it has a strong focus on human rights, Indigenous self-empowerment and self-determination.

“There’s a big difference between the lobbying and the government response,” Perche says.

The government program measures some health and education indicators, however, while the NGO campaign also addresses health and life expectancy, it has a strong focus on human rights, Indigenous self-empowerment and self-determination.

“There’s a big difference between the lobbying and the government response,” Perche says.

THE SOFTER ALTERNATIVE

Home to a team of researchers committed to the diplomatic approach to achieving strategic objectives, Macquarie University’s Soft Power Analysis and Resource Centre (SPARC) is the first of its kind in Australia.

SPARC’s activities focus on quietly nurturing relationships between Australia, China and India, the growing importance of India-China cooperation and exploring new approaches to building international relations through soft power and public diplomacy.

mq.edu.au/research/sparc
I recently had the privilege of welcoming more than 1000 high school students from around the world to Australia’s largest robotics competition – the annual FIRST® Robotics regional championships. This year’s theme, ‘Stronghold’, challenged teams to design and build robots capable of avoiding obstacles, overpowering their opponents’ defences and eventually capturing their ‘castles’.

Among the teams, and close to my heart, were students representing Ivanhoe Central School from my home town in rural New South Wales. Volunteers from the Faculty of Science and Engineering visited the school as part of the Robots in the Outback outreach program, driving donated vehicles to Ivanhoe and 11 other schools to support, encourage and enable students to take part in FIRST®.

Thanks to our newly established Vice-Chancellor’s Fund, we were able to help these outstanding young people travel to Sydney and compete in the championship. For some, this was their first trip to Sydney. Others had never seen the ocean before, or travelled in a lift between building floors. The experiences of the weekend were more than just educational; they were transformational.

FIRST® Robotics aims to inspire a love of science, technology, engineering and mathematics (STEM) in children, and to develop and reinforce these skills in students. Macquarie University introduced FIRST® to Australia in 2006, not only to inspire students’ interest in STEM, but to help create a pathway for them to pursue these fields into further study, careers, and entrepreneurship in a variety of areas.

The team from Ivanhoe are now competing against peers from six different countries. They are being exposed to STEM in an engaging and thought-provoking way and in running their team as a small business, they are also learning about entrepreneurship, finance, marketing, accounting and, of course, competitive advantage. I am excited at the transformative role we are playing in these students’ education and their future.

Without the flexibility of an unrestricted fund to support young people like these, we would miss the opportunity to change their lives in this way. The Vice-Chancellor’s Fund allows us to be nimble and progressive in seizing these opportunities and encouraging education, research and innovation wherever we can. The support from our alumni and friends strengthens our purpose and brings our goals within reach. I am very grateful for your continued support and I greatly look forward to seeing everything we will achieve together.
WHERE ARE THEY now?

Catch up with some old friends and discover just how diverse Macquarie’s alumni network has become.

Abigail Allwood
Abigail Allwood (PhD, 2006) is the first woman and the first Australian to lead a NASA team searching for life on Mars.

Adam Druissi
Adam Druissi (B Econ, 1995) is the co-founder of Australia’s leading data analytics firm Quantium, which employs around 300 staff in Sydney, Melbourne, Brisbane and Hyderabad.

Michael Greene
Following a distinguished career working with both public and private sector clients, Michael Greene (B Laws, 1989) has become Managing Partner of renowned Australian law firm Henry Davis York.

Dharmica Mistry
Dr Dharmica Mistry (PhD, 2014) has been awarded the NSW Young Woman of the Year for her work researching and developing a new diagnostic blood test for breast cancer.

Liane Moriarty
Liane Moriarty (M Creative Writing, 2003) is the Australian author of six internationally best-selling novels, and one of the few authors in the world to ever have three books on the New York Times bestseller list at the same time.

Macquarie Alumni Chapters and Networks
1. Beijing 1000
2. Hong Kong 6000
3. London 700
4. Malaysia 900
5. Melbourne 2000
6. North America 1300
7. Singapore 2000

ARE YOU ONE OF THE 10,000 WHOSE LOCATION WE DON’T KNOW?

PLEASE UPDATE YOUR EMAIL AND ADDRESS DETAILS: MQ.EDU.AU/ALUMNI
Grace Cossington Smith (1892 – 1984), *The Yellow Chest of Drawers* 1962, oil on hardboard, Macquarie University Art Collection; Bequest of Mrs Audrey Horn in memory of her husband Robert Victor Horn Dr rer. pol. (Cologne), MEc (Sydney), 2015; Photography Effy Alexakis, Photowrite