PLAYING GOD
Uncovering the legal risks posed by synthetic biology

FIGHTING FAT
Are parents to blame for childhood obesity?

RAGE AGAINST THE DISEASE
New research could stop asthma in its tracks
How is the rise of Asia changing the world?

Over the past decade, the scale and pace of the change has already had a profound impact on Australia’s society and economy. It will continue to afford us great opportunities to share in Asia’s new found prosperity, provided we can harness the right capabilities. It is estimated that by 2025 the majority of the world’s middle class will be located in Asia and for the first time in our history Australia’s geographic position in the world will provide it with a competitive advantage across the provision of a range of goods and services. As the minerals boom temper and incomes rise throughout Asia, the demand for high-tech manufacturing, banking, tourism, education services as well as food will offer wonderful opportunities for Australia to broaden its economic base and grow its real income and wealth.

How will UTS be impacted by the Asian Century?

As a university, UTS is already well engaged in Asia. Through our Key Technology Partnership Program, UTS has over the past three years developed comprehensive research partnerships with 10 high-quality universities in China, India and Japan. In China alone, UTS has established six joint research centres to leverage our research infrastructure, funding and publications. Last year, we sent more than 1500 students to more than 10 Asian countries with the majority coming from BUiLD as part of our mobility program to build the global skills and intercultural capabilities of our students to enable them to work effectively in the region post graduation.

What does this mean for students?

UTS will also have an important role to play in building an Asia-literate and language-capable nation that will be able to effectively take up the opportunities provided by the Asian Century. UTS already teaches Japanese and Mandarin, two of the four national priority Asian languages, and we are working on how we can deliver Indonesian, Hindi and other languages through consortium and online delivery platforms. The new jobs being created will require our engineers, architects and scientists to be Asia-skilled as well as our business, law and arts graduates. UTS’s International Studies program takes us some of the way to providing the necessary opportunities for our students to build the Asia capabilities that will be needed in the future but we also need to look at new and innovative programs and delivery formats. If Australia is to fully engage in the Asian Century, we need to also be training students to build the Asia capabilities that will be needed in the future.

25 years ago I was …

Living in Japan and was Professor of Economics at the University of Tokyo – a very exciting time in my life.

What causes at UTS are you currently championing?

I am always championing BUiLD – UTS’s global leadership program – and SOUL – UTS’s social leaders’ program. The BUiLD program, which we started three years ago, has more than 2000 students signed up and SOUL, now in its second year, has more than 500 students actively engaged in volunteering. I am also trying to champion our UTS Staff Giving Program which provides scholarships to needy students.

My motto in life is …

Try to make a difference!

Photographer: Jesse Taylor
Ultimo: a concrete jungle; grey but for the flashes of colour from traffic lights and shopfronts. An artificial mass of granite and glass, construction sites and commuters fetching coffee. The hum of smartphones simultaneously vibrating. The chaotic stillness of gridlocked traffic.

At UTS, these vignettes are set to vanish as the aerial view of our on-campus student housing complex is converted from an empty concrete slab into a lush, edible paradise.

Associate Professor in the Faculty of Design, Architecture and Building Sara Wilkinson is the driving force behind the groundbreaking research project that commences construction this month.

"The possibilities are quite astonishing," says Wilkinson. "It will be focussed on working out what we can grow in Sydney and which substrates and plants work best at altitude."

Funded by a grant from UTS’s Centre for Contemporary Design Practices, the development will be a pilot for other rooftop gardens throughout Sydney’s CBD. It will feature four-by-three metre garden beds which will be used for research.

The plan is to produce ‘best practice’ or ‘how-to’ guides that enable people to learn how to build their own rooftop gardens and how much it might cost.

“We have made contact with some local community groups, Indigenous groups and social housing groups in Redfern which we hope will lead to the creation of more rooftop gardens throughout the city,” says Wilkinson.

One garden bed will be available to staff and students to grow plants of their choosing, providing them with the opportunity to develop horticultural skills, meet like-minded people and escape the hustle and bustle of the city.

"Research suggests that being in nature provides benefits to health and wellbeing, as well as increased social engagement,” says Wilkinson.

"Living in the city can be lonely and isolating. This is a chance to do something active, to do something constructive with others and to spend a bit of time in a quieter and more peaceful environment."

Communication student and UTS Housing resident Angus Geraghty believes the garden will help students feel connected to the community.

"The rooftop is a place where residents often get together and socialise. When I moved here from Newcastle it was the first place I went to make friends and I know other new residents who wanted to feel connected did the same. A garden could make students feel more connected, and I think that’s great."

Wilkinson agrees. “We really need to make our urban environment as socially and environmentally sustainable as we can. The food produced in the garden will be used for cooking on campus and also for people to take home, if they like. We plan to use worm castings from the Institute for Sustainable Futures’ (ISF) wormery, located in their staff kitchen, to fertilise the gardens. The aim is to try to ‘close the loop’ on waste as much as possible.

“The great thing about this project is that it is bringing together a truly multi-disciplinary group of academics and researchers across UTS. It’s a really great learning experience and fusion of knowledge.”

Expressions of interest are now open for staff to volunteer to maintain the garden beds. For more information or to get involved, email sara.wilkinson@uts.edu.au.

Bella Westaway
Bachelor of Arts in Communication (Journalism)
Photograph (S Wilkinson) supplied by: Sara Wilkinson
Photograph (garden bed) supplied by: Seb Crawford
Altruism unleashed

“The benefits of volunteering in the community sector are enormous and it’s not only about developing workplace skills,” says UTS Shopfront Student Engagement Coordinator Claire Pettigrew.

“It’s a chance to learn about the world, apply skills in practical and useful ways, and develop a taste for leadership and social change.”

They’re just some of the reasons Pettigrew is part of the team behind Perfect Match: Volunteer Speed Networking. The 9 August event has been developed to celebrate National Student Volunteer Week (4 to 10 August). The event is a collaboration between the UTSSOUL Award (a leadership and volunteer program, run by Shopfront, that requires students to complete 100 hours of volunteer activity across their degree), BUILD, the Brennan Justice and Leadership Program, UTS Careers Service and The Centre for Volunteering.

The Centre for Volunteering is NSW’s peak body for promoting and supporting volunteering and community participation. Their work includes the Volunteer Referral Service which, much like Perfect Match, matches individuals to volunteer roles posted by The Centre’s members.

Pettigrew says the UTS event will give students access to a range of ongoing and event-based volunteer roles with large non-profit organisations that cover a spectrum of issues like disability, welfare, education and mentoring, fundraising, poverty, Indigenous rights, and health and wellbeing. The organisations include the Smith Family, Cancer Conquest Cycle and Anglicare.

“What better way to celebrate National Student Volunteer Week than by networking students with some of the key players in the non-profit sector,” says Pettigrew.

Organisers describe the UTS event as a cross between O’Day and speed dating. Pettigrew says, “The idea is we get 12 community organisations and approximately 100 students into the same room and we facilitate some serious speed networking. There will be music and buzzers and stopwatches; it’ll be very exciting.”

And, Pettigrew hopes, more engaging and less intimidating than a regular interview process.

Community Development Manager from The Centre for Volunteering Jacinthe Brosseau agrees. “The event is about having fun with the volunteer recruitment process, providing useful and relevant information about volunteering with, of course, a bit of cheekiness included in the mix.”

Both hope the event will encourage students to get involved by promoting and celebrating the wide range of volunteer programs UTS and The Centre for Volunteering offer.

“UTS is hugely supportive of volunteer and leadership initiatives,” says Pettigrew.

“This event gives us a chance to collaborate and to profile to students a variety of ways to be active in volunteering and in developing leadership and influence.

“While there are lots of opportunities students can tap into, sometimes it’s all a bit overwhelming. There are so many social issues, and so much important work to be done, but often it is really difficult to harness that great will, especially when students feel time-poor.”

Brosseau agrees. “One barrier that often comes up in the research on youth and student volunteering is the lack of access to information about volunteering and the lack of access to relevant volunteer opportunities.”

With more than 100 positions up for grabs, it’s a barrier Brosseau and Pettigrew hope to remove.

Perfect Match: Volunteer Speed Networking will be held on Friday 9 August at 10am in Building 6, level 4, room 40. For more information and to register, visit bit.ly/15LIm6o or email soul.award@uts.edu.au

Jessica Wang
Bachelor of Arts in Communication (Journalism)/International Studies
Photographer: Fiona Livy

Comment on this article at UTS:NEWSROOM newsroom.uts.edu.au/news/2013/08/altruism-unleashed
against the disease
Imagine a world where asthma wasn’t a chronic disease, rather an inconvenient illness whose first symptoms could be easily treated. This vision could one day become a reality thanks to cutting-edge research into an immune receptor known as RAGE.

Though asthma was first discovered as far back as 450BC, the chronic inflammatory airway disease is still largely a mystery, says Senior Lecturer in the Graduate School of Health's School of Pharmacy Maria Sukkar.

“It’s a disease that’s triggered by various environmental factors like allergens and pollutants, and infections which can make it worse.”

According to Sukkar, in 85 per cent of asthmatics the disease is triggered by an allergen. It’s a process known as allergic sensitisation and inflammation. Essentially, “it’s an immune-inflammatory response that develops to something in the environment that ordinarily wouldn’t happen in someone who wasn’t going to get asthma.”

It’s this process of allergic sensitisation that Sukkar and a team of researchers at the Woolcock Institute of Medical Research (WIMR) – Australia’s leading respiratory and sleep research organisation – and the University of Queensland (UQ) are studying. The team includes UQ Senior Lecturer Simon Phipps, the WIMR’s Carol Armour and Margaret Hughes, UTS’s Matthew Padula and Steven Djordjevic and PhD students Md Ashik Ullah, Zaridatul Aini Ibrahim and Sharon Wong.

“What we’ve discovered is that a particular immune receptor in the lung, RAGE, is involved in this response.”

RAGE stands for the Receptor for Advanced Glycation End products. Sukkar says, “It’s been studied in cardiovascular disease, in diabetes, in arthritis. It has a long history in those conditions and the irony is that RAGE was first discovered in the lung about 30 years ago, but until recently, no one studied its role in Airways disease.”

Since Sukkar and the team started looking into RAGE five years ago, “our research has uncovered a role for this receptor in allergic sensitisation.

“What’s novel about our research is that this receptor, once it’s activated, can trigger the cascade of events in the immune response that drives the allergic inflammatory response that we see in asthmatic subjects. So we could say that asthma can develop as a result of the activation of this receptor by environmental allergens.”

The next step, says Sukkar, “is to see whether this is a general mechanism that applies across any kind of environmental trigger.” And, “to see whether there is a genetic basis for this. That is, do genetic variations in the RAGE gene predispose a person to asthma?” To do this, Sukkar and her colleagues have teamed up with Professor in Pulmonology Dirkje Postma, from the University of Groningen in The Netherlands.

"WHAT’S NOVEL ABOUT OUR RESEARCH IS THAT THIS RECEPTOR, ONCE IT’S ACTIVATED, CAN TRIGGER THE CASCADE OF EVENTS IN THE IMMUNE RESPONSE THAT DRIVES THE ALLERGIC INFLAMMATORY RESPONSE THAT WE SEE IN ASTHMATIC SUBJECTS.”

The potential public health benefits are huge. In Australia, asthma affects approximately 10 per cent of adults and up to 13 per cent of children. While the disease can be managed by anti-inflammatory inhaled corticosteroids, Sukkar says, “These drugs have to be taken on a daily basis, which as you can imagine, means a lot of people don’t actually adhere to their therapy or adequately control their disease. We really need to come up with new therapies that don’t just control the symptoms, but induce the remission of the disease.”

Sukkar believes RAGE could be a possible target for new drug therapies, including those RAGE-blocking drugs that are already being developed to treat cardiovascular disease, diabetes and arthritis.

Quite simply, says Sukkar, “For the last 20 years, there has been a lot of effort spent on developing drugs that target the immune pathways involved in asthma, but the problem is we’re now realising we were targeting the end of the pathway; that is shutting the gate once the horse has bolted. What’s exciting about our research is we think we’ve found something that’s key in triggering this process.

"We know the process of sensitisation is absolutely fundamental to the disease; it’s the strongest risk factor, but we still don’t understand why this process happens. If you can understand the mechanism you can start to understand the ‘whys’. The ‘whys’ are probably because there’s a genetic basis and an environmental basis and the two have to meet; you have to have this set of genes and meet this allergen and ‘boof’ you’ve got asthma.

“Some people go into remission, but most people don’t. It’s one of these conditions that is highly prevalent and it impacts on quality of life and it’s still potentially fatal – there are about 400 deaths in Australia from asthma per year.”

In yet another boost to this research, later this month the School of Pharmacy will welcome Sukkar’s former postdoctoral supervisor at the National Heart & Lung Institute at Imperial College London (and a world leader in asthma research) Professor Kian Fan Chung as a Distinguished Visiting Scholar.

“Collaboration and connection with other researchers is critical,” says Sukkar. “Our findings so far, are primarily based on studies in mice, and this work was done at the University of Queensland. What we’re doing now, in my lab here at UTS, is trying to show what we’ve discovered in the mouse is relevant to the human disease.

“Several PhD students are currently advancing this work. What we are doing now is getting cells from human lung tissue and exposing them to allergens and other asthma triggers to see if we can replicate our findings in human lung cells.

“This kind of work is fundamental; you can’t go from the mouse to a drug. If you do you’d probably miss something major. You have to understand the process and there’s a lot more to understand about this pathway. As exciting as it is, we’re really just at the beginning.”

Fiona Livy
Marketing and Communication Unit
Photographer: Joanne Saad

Comment on this article at
UTS:NEWSROOM
newsroom.uts.edu.au/news/2013/08/rage-against-the-disease
Australian children are growing fatter; but should blame for this obesity epidemic be laid solely on parents? Senior Lecturer in the Faculty of Health Elizabeth Denney-Wilson explains why obesity is a society-wide problem and why we all need to start making changes, now.

In 2010, 18.7 per cent of kindergarten children in NSW were overweight or obese; an average annual increase of approximately 0.3 per cent since 2004. A similar proportion of young children across Australia were identified as being overweight or obese in the 2007 National Health Survey of four- to five-year-olds.

Why, you may ask, is it a problem if a quarter of kids are overweight?

I’ve heard many times the story of someone’s brother/sister/cousin who was fat as a child but grew into a thin adult. In reality these cases are rare. There is ample evidence that both weight status and the behaviours that contribute to excess weight (like food consumption and physical activity) track from childhood to adolescence to adulthood.

Currently in Australia, almost two-thirds of adults are overweight or obese, but when they were children, hardly any of them (maybe 10 per cent) were. They gained their excess weight in their adult years.

Imagine what could happen if today’s overweight children keep gaining weight and are joined by thousands of currently lean children who gain weight just as their parents did? We’ll have a big problem (pun intended).
Carrying excess weight puts people at increased risk of many chronic diseases, especially heart disease, diabetes, liver disease and some cancers. My PhD research found even teenagers who were obese (especially boys) had risk factors like high cholesterol, high levels of insulin (a risk marker for Type 2 diabetes) and impaired liver function, suggesting they already had ‘fatty liver’ – just one form of liver disease.

Research from overseas has also suggested the longer a person is obese, the more likely they are to develop risk factors and ultimately chronic disease. Importantly though, many risk factors decline if a healthy weight is achieved. Clearly, early intervention is needed to prevent our children from becoming overweight.

Dietary behaviours, such as low fruit and vegetable intake and high consumption of sugar sweetened drinks (including soft drinks, sports drinks, cordial and energy drinks) have long been associated with obesity in children.

The recent child nutrition survey suggests only a quarter of young children are consuming the recommended serves of up to two fruits and five vegetables each day. Yet consumption of energy-dense foods, like cakes, biscuits and other sweets are common in the diets of Australian toddlers and young children, with most consuming treats on a daily basis. Clearly this is too often!

Parents play a vital role in shaping the food and physical activity environment in which their children are raised. Right from the start, food choices can have an impact on a child’s risk of excess weight gain. This includes whether or not an infant is breastfed, the timing of introducing solids, the type and quantity of solid food and even parenting style. Other questions occupying researchers in this area are how and why parents make decisions about what (healthy option or not), where (in front of the TV or at the table) and when (on demand or to a schedule) they feed their children.

The availability of large portions of relatively cheap food that have lots of calories (and are very appealing to both young and adult palates) makes choosing healthy options more difficult. This is especially true when children are old enough to be exposed to advertising messages and want some say in choosing their food.

Adults, and to a lesser extent children, from disadvantaged backgrounds are more likely to experience obesity, but the reasons for this disparity are complex and poorly understood. Potential causes are environmental and social factors including knowledge of healthy food, affordable access to nutritious food and physical activity options, as well as insecure housing and food insecurity. It’s an issue I and my colleague Associate Professor of Chronic and Complex Care Robyn Gallagher hope to explore in next month’s UTSpeaks: Fighting Fat.

So what can be done?

In young children, obesity prevention and management strategies are more successful if aimed at parents. Our emphasis needs to be on a whole-of-family approach to healthy eating and activity, including the restriction of television viewing.

In fact, the National Health and Medical Research Council (NHMRC) says the key is ensuring the focus in young children is not on weight loss, but on keeping weight stable so that they can ‘grow into’ their weight.

Their new guidelines for the management of overweight and obesity in adults and children identifies a number of strategies that could be utilised by families. These include supporting parents to set goals that improve their family’s food, physical activity and sedentary behaviours. This could be something like ‘we will eat together, as a family, at the table, with the TV off, four times each week’. Or ‘our family will go for a 20-minute walk on three days this week’. Perhaps even ‘I will write down how many hours each of us spend watching TV for the next two days’.

Goals don’t need to include massive changes – small sustainable changes that take into account potential barriers are most effective. For example, if you always come home from work starving, and reach for the chips, try eating a carrot or two in the car on the way home to take the edge off your hunger.

The NHMRC guidelines also suggest some key actions for parents: they should act as good role models, have healthy foods available in the home (and get rid of and stop buying the ‘treat’ or ‘occasional’ foods) and avoid giving children food as a reward – try a cuddle or a sticker instead.

As a community, we need to support parents because parenting young children is not always easy; toddlers in particular can be demanding and providing food as a means of comfort is simple and effective.
“HOW DO YOU DIFFERENTIATE BETWEEN THOSE BUILDING BLOCKS OF LIFE BEING SENT ACROSS INTERNATIONAL BORDERS FOR SCIENTIFIC RESEARCH, AND BEING SENT ACROSS INTERNATIONAL BORDERS FOR TERRORIST PURPOSES?”
The concept of creating whole new life forms from artificial material sounds like something from a sci-fi movie. Yet the advancing field of synthetic biology is very real, and brings its own legal concerns with it.

In 2005, scientists from a government laboratory in Atlanta, Georgia in the USA, successfully recreated the Spanish flu virus. It’s the same virus that killed an estimated 50 million people in 1918.

Senior Lecturer in the Faculty of Law David Leary says researchers around the world had good reason to be alarmed. Security fears stemming from the implications of such advancements in synthetic biology have opened up a whole new cause for concern.

“You’ve probably heard of genetically modified organisms (GMOs); but the technology that allowed scientists to recreate Spanish influenza is something completely new,” explains Leary. “GMOs were about genetically altering an organism; for example, manipulating a species of wheat that could tolerate salty soil or needs less water.

“Instead of manipulating something that already exists in nature, the fundamental preface to synthetic biology is taking the building blocks of life and creating a whole new life form. It’s an area open to breakthroughs for beneficial purposes, such as a cure for malaria or next generation biofuels.”

But there are dangers too. With the applications of synthetic biology only just beginning to be understood, Leary has been looking at the potential risks such breakthroughs pose, and whether existing laws and regulations around biotechnology apply.

“There’s been no detailed study by lawyers as to whether existing regulation effectively manages these risks or not. This project will be the first study of the regulatory framework for synthetic biology under Australian and international law.

“My research is trying to work out what’s going on and to come up with some ideas on where we need to regulate, or do we need to regulate, and look at how we move forward. We’ve got quite a robust regulatory regime for dealing with gene technology already. However, we’re now moving into synthetic biology and questions are emerging as to whether current legislation adequately manages the risks posed by this new field.”

With the ‘playing God’ consequences of synthetic biology raising social, ethical and moral concerns, on a more serious public safety level it also raises bioterrorism and biosafety threats.

“If a newly-created organism is intentionally or unintentionally released into the wild, what would these new life forms do to existing biodiversity? We already have concerns about naturally created alien-invasive species that come from other parts of the world and end up destroying eco systems. A good example is the foreign crown-of-thorns-starfish on the Great Barrier Reef, which feeds on coral. If we now introduce totally new life forms into the environment we simply still do not know what will happen.”

Just as the synthetic recreation of the Spanish flu by scientists poses health concerns if it ever managed to escape, Leary points out the dangers of a ‘hacker mentality’ taking hold.

“When we talk about hackers in a computer context, they do it just to prove that they can. With the availability of DNA sequence data and molecular biology techniques on the internet, along with the fact that specially synthesised DNA can easily be purchased, it’s not inconceivable that someone could engineer a virus or other life form to cause havoc. Or worse still, to be used in a terrorist attack. There is currently little oversight around these possible threats.”

The issues surrounding synthetic biology have come to the attention of the Convention on Biological Diversity (CBD), dedicated to promoting sustainable development and signed by over 150 government leaders at the 1992 Rio ‘Earth Summit’.

“They had a long debate more than 10 years ago about GMOs and the risk to biodiversity. The response was initially a moratorium and strict regulation placed on the field trials of GMOs domestically, and on an international level the enforcement of the Cartagena Protocol on Biosafety – a treaty governing the movements of GMOs across international borders,” explains Leary.

“The CBD is quite an interesting body of law. Every meeting held by diplomats each year has a part dedicated to emerging issues. In the last few years there’s been a debate at these meetings asking whether we need to look at how we regulate synthetic biology as an emerging issue in the context of the biodiversity convention. Do we need another protocol, like we have with the Cartagena Protocol? Or will the Cartagena Protocol suffice?

“What has been problematic, though, is that some countries who are already investing in research and technology in this field don’t want it to get on the agenda at the UN. They don’t want restrictions on their economic development.”

Outside the CBD, the possible risk of synthetic biology for terrorist uses has also been discussed within the confines of the Biological Weapons Convention, and to a lesser extent, the Chemical Weapons Convention. Both these international treaties were designed to stop the spread of weapons and technology used for biological and chemical warfare.

“Three to four years ago they set up a working group to look at what these new technologies mean for existing international treaties that regulate the import and export of biological weapons technology. They’re looking at that largely behind closed doors, trying to work out how to best respond to what is a complex problem.

“It’s not just a matter of ‘someone’s developed this new living form, let’s ban its import and export’. With synthetic biology effectively working at the DNA level, or even smaller than that, you’re talking about different things that could be used, in theory, to develop weapons.”

The challenge for regulators and policy makers is to come up with legislation that balances security and safety risks while still facilitating research.

“How do you differentiate between those building blocks of life being sent across international borders for scientific research, and being sent across international borders for terrorist purposes? You can’t. How does that feed into the quarantine and customs regulations in particular countries? And what gaps are there in the regulation of synthetic biology under international environmental law?

“I don’t know what the answers are yet, but I am keen to find out.”

Katia Sanfilippo
Marketing and Communication Unit
Photographer (lab worker): Joanne Saad
Photographer (ID Leary): Fiona Livy

Comment on this article at UTS:NEWSROOM
newsroom.uts.edu.au/news/2013/08/playing-god
When dedicated Laboratory Operations Manager and Casual Academic James Phillips retired in early 2010, he had been at UTS for more than half his lifetime.

In his farewell speech, Phillips said: “People would say: ‘You have been at UTS a long time’ and I would reply: ‘Yes, but it has never been boring, only challenging and changing’.”

First employed at the New South Wales Institute of Technology (NSWIT) in 1977, Phillips held the position of Chief Medical Technologist in the Department of Microbiology and managed the microbiology laboratories at the St Leonards campus at Gore Hill. He was responsible for training many technical officers and helping students obtain key laboratory positions in the “outside world”.

In 1988, Phillips also witnessed the transition from NSWIT to UTS and the subsequent growth in research opportunities, facilities and technology.

“People would say: ‘You have been at UTS a long time’ and I would reply: ‘Yes, but it has never been boring, only challenging and changing’.”

There are many things, however, that have remained constant. “The university is very friendly. If you want to approach academics or go online you can; it’s all open. It’s a good learning environment.”

This positive environment has nurtured Phillips’ passion for teaching. As part of his current role he teaches microbiology to undergraduates and visiting high school students.

“‘The Department of Microbiology used to employ external demonstrators and I said to the academics at the time: ‘I have a degree, can’t I do a bit of demonstrating?’ They said: ‘Yes’, and then one thing lead to another and I was demonstrator. Then I became teacher in charge. I suddenly had a yearning for teaching.”

Today, says Phillips, “We also have students coming from high schools – Years 10, 11 and 12. I teach them how to set up microscopes and do staining and tell them what microbiology is about. They love that.”

Phillips believes it’s this hands-on approach that has resulted in the strong academic integrity of the university and will contribute to its long-standing as a world-class institution. It’s also one of the reasons he found leaving UTS difficult.

That’s not to say he doesn’t have other interests. Phillips’ dedication extends far beyond UTS, into his family, the St Spyridon Greek Orthodox Parish and Community and St Spyridon College in Kingsford and Maroubra where he is a Director. It’s a lifestyle far removed from the typical ‘retiree’.

“I do a lot of things,” says Phillips. But, “Family comes first; always has.”

While painting his house, swimming, gardening and playing the occasional game of Sudoku fill some of Phillips’ time, he’s adamant that he doesn’t want to abandon his teaching career just yet.

“I hope to keep doing what I am doing; to continue teaching. I always ask students: ‘Do you think an old person teaching you is of good value?’ And they say: ‘Well, from one angle you have the experience and you’re not boring’. That’s a plus!”

“As long as I’m in good health I can teach and entertain, because as one academic once told me, teaching a class is more like a performance.”

Siobhan Kenna
Bachelor of Arts in Communication (Journalism)
Photographer (J Phillips): Joanne Saad
Photographs (1983 to 1985) supplied by: James Phillips

Comment on this article at UTS: NEWSROOM newsroom.uts.edu.au/news/2013/08/now-and-then
“I don’t think you ever really know your path in life. It can change at the drop of a hat.” So says filmmaker and media arts and production graduate Kim Mordaunt.

Life beyond the concrete sanctuary of UTS delivered both the unexpected and the unconventional to Mordaunt and fellow filmmaker and UTS graduate Sylvia Wilczynski. From teaching at community centres in Redfern to writing for communist newspapers in North Vietnam, their post-uni forays led them to the place that has inspired their most impacting work.

“We were in a bar in the mountains in the north of Laos and one night we ended up chatting to a couple of guys who were bomb disposal specialists. And that just opened our eyes,” remembers Wilczynski. “A lot of good films start in a bar!”

That “good” film was the documentary Bomb Harvest – celebrated by critics for its human rights message and technical brilliance. Mordaunt says it was the “incredible spirit” of the Laos people that served as a catalyst for “wanting to tell this fresh story”.

“In the most bombed country, per capita, on the planet, to see people wanting to move forward, find positivity and fun – wanting to break cycles of hatred – that is so inspiring.”

Their most recent film, The Rocket – Mordaunt and Wilczynski’s critically-lauded feature debut – is about a young boy’s journey across bomb-scarred Laos, on the search for belonging in a country verging on modernisation.

“One of the themes is the legacy of war,” explains Mordaunt. “But it’s definitely an extension of us wanting to be inside this place, its history and future.”

The Rocket has received huge accolades since its screenings at the Sydney and Berlin Film Festivals, with its biggest wrap, and a US distribution deal, landed at Robert De Niro’s Tribeca Film Festival in April.

As director and producer respectively, Mordaunt and Wilczynski shared their humble beginnings in the then-UTS Communication Faculty.

“The greatest thing about UTS when we were there was that the students were so eclectic, and this is where you can really start forming those relationships that will last a very long time – not just friendships, but people that you will go on to work with,” explains Mordaunt. “It’s very hard to make films on your own.”

“Part of going to UTS is honing in on what particular aspect of filmmaking interests you,” adds Wilczynski. “Once you start to learn that there are many roles on a film, with a director being just one, you begin to form those partnerships with people and develop stories.”

Her advice: “Book that equipment out as much as you can, get together with your fellow students and make films. “It’s so competitive in this industry, so you need to really start making work, and making mistakes. Show you’re adventurous.”

While the paths to career and personal fulfilment after uni don’t necessarily reveal themselves in obvious ways, Mordaunt asserts that with patience, the indirect route usually leads to the greatest inspiration.

“The development of your career can have all these different parallels, and they’re not always a direct job in the industry. It might be that you’re involved in cultural programs while you’re trying to make films, and then the two things kind of come together and create this need to tell a story,” he says.

“One of the main things is to have a hunger, to know about the world and to want to understand what makes people tick. And then to work your butt off, usually, initially, by working with and learning from people whose work you admire. There’s no quick and easy route to success in this industry.”

Daniel Cunningham
Bachelor of Arts in Communication | Journalism |
Images supplied by: TM Publicity

Comment on this article at
UTS:NEWSROOM
Dustin Gold and Rebecca Meyer first met in Year 10. Today the 21-year-old friends not only study the same degree, but also serve in the Army Reserve. They reveal what it’s really like juggling combat exercises and exams, and why UTS has been recognised as a Supportive Academic Institution by the Australian Defence Force.

**DUSTIN GOLD**

Bec and I both went to the same high school – Barker College in Hornsby – which is where we met. We both had similar interests – we were involved in cadets and sports – so I suppose it makes sense that we ended up in the Army Reserve and studying law and social inquiry.

When we finished school we both went our separate ways – Bec went off for a gap year in Europe, whereas I decided I would join the Army full-time as a soldier. I did all my training and I was posted to the 20th Surveillance and Target Acquisition Regiment in Brisbane. I spent some time there before deciding to go to university, which is when I came to UTS. I wasn't quite ready to step away from defence – I was still very interested in the notion of service, the opportunity to do something for my country – so I decided to join the Reserve.

At the moment I'm a troop commander, but that's not to say in a few years' time I might not be a legal officer or I might not be involved in policy decisions in some other position. Actually, I have two roles in the Army Reserve – during the week I work for a group called Defence Reserves Support and they are part of the Cadet, Reserve Employer Support Division. My 'real' Army Reserve role as a Lieutenant is to command a mortar troop within the 2/17th Battalion. I've got 30-odd people that work for me and they range from 17-year-old students up to 50-year-olds encompassing all different civilian careers be they professionals, like lawyers and doctors, or tradies, firemen and postmen.

In my other role, I'm a bit of an intermediary between business and the Defence Reserves; it's an opportunity to ensure businesses are aware of the benefits Reservists bring back to their civilian employers. Employing Reservists is not just about corporate responsibility – Reservists are the sorts of people who are committed to developing their leadership abilities; they have the opportunity to work in teams and to solve problems that go beyond those we face in everyday life.

Certainly being in the Army Reserve is a little more difficult than having a regular part-time job because when we go away to work it's usually part of a battle group or combat team; it's not the kind of job where you can phone in sick and say you're not going to make it.

UTS has been extremely supportive. I think I've sat three or four of my exams on the actual exam dates, with most of them being rescheduled. Unfortunately, military training tends to be scheduled around the uni breaks and exams. Recently, I nominated UTS for the Australian Defence Force's Supportive Academic Institution Award. I wanted to say thanks for the support they have shown me and Rebecca, and the many other Reservists here.

Bec and I certainly see each other more at uni; I've never seen her on an exercise, we've never done any Army training together. It's great having that second voice at uni who can say, You know what, it's not an advantage to spend nine days out at Singleton in the cold and the rain, eating...
ration packs and then come back and sit an exam three days later’. There are a lot of people who would be interested in serving their country, but a lot of the time I guess it goes into the ‘too hard’ basket. It can be hard, but it is possible and the support of UTS makes it that little bit easier.

**REBECCA MEYER**

I’m what’s called a Signalman; I’m a soldier in the 8th Signals Regiment, so I’m one of the ones that gets in and does the ‘dirty work’. There are three different kinds of Signalmen – you have Telecommunications Technicians, Information System Operators and then you have what I am which is a Radio Operator. The name is rather self-explanatory; I operate radios and set up communication systems for units.

Dust and I met for the first time on band camp – the two of us were those super-cool people who were in the band! I played the trumpet and he played the saxophone. We had a lot of classes together, we both did surf lifesaving, swimming, public speaking, obviously band and cadets and just became really great mates. Dust is extremely loyal when it comes to all of his friendships; you know that he’ll always have your back. He’s really motivated and works incredibly hard behind the scenes.

His attitudes towards work and life are why he makes such a great Officer in the Army.

**Studying together at uni is incredible; it makes everything so much easier.**

If Dustin has something on for the Army I’ll be in class so I can ensure that he doesn’t miss anything and vice versa. Even if we didn’t have one another in the same degree, UTS has a great support system – they’ve been extremely accommodating in ensuring we’re able to sit our exams at a different time to make sure our experience and service with the Defence Force isn’t hindered at all.

**You look at UTS’s graduate attributes and you can actually find a whole bunch of correlations with the Defence Forces’ values – integrity, initiative and teamwork.** I think it’s fantastic UTS got the award and hopefully more people will join the Reserve.

I haven’t had to juggle too many exams, but there’s always that voice in the back of your mind saying, ‘I don’t know when the next exercise is on, but I really want to go. What if I have uni? What do I do?’ And that’s the difficulty – time management, and being there for everything you want to do. In terms of service, you have one Tuesday night a week for training at your unit, so one night a week you’re going straight from work or uni to the Army. Then you have one weekend a month where you’re out doing more training and there are lots of different exercises throughout the year. When those exercises come up it’s really, really good to get on board because they’re the most interesting and where you learn the most.

**Quite often though, those exercises cut into university time and work time – I actually have three jobs, so juggling all those things can be difficult.** I work at a real estate agency, called Cale Property Agents, setting up and organising a non-profit organisation called Taloodles Therapy and Assistance Labradoodles, which they run from their offices. I also work for my old school and as a swim instructor. I have a whole bunch of different things I want to explore and I’m not quite sure where I’m going to be in five or 10 years’ time, but that’s the beauty of my degree – I’m gaining a broad range of experiences and a better understanding about the world we live in.

Fiona Livy
Marketing and Communication Unit
Photographer: Joanne Saad

Comment on this article at
**UTS NEWSROOM**
For Tom Matthews, sport isn’t merely a weekend affair, it’s a way of life.

The powerful midfield runner is one of the first recipients of the UTS Elite Athlete Program’s (EAP) Gordon UTS Rugby Scholarship – a grant recently created by the UTS Union and Gordon Rugby Club. The two institutions teamed up this year to encourage more talented rugby players to enter university and to expand their skills on the field through Gordon’s extended development system.

“I think this scholarship is very important for young athletes that want to excel in their sport whilst completing a degree,” says Matthews. “Both my university and sporting commitments take up a significant portion of the week, however the support of UTS and Gordon Rugby through the EAP Scholarship program has made it all possible.”

The scholarship provides recipients with financial assistance via a cash grant, free use of the UTS Fitness Centre and consultation programming services, subsidised sporting fees and academic assistance.

Matthews, who has played rugby since the age of six, has been a first grade player for Gordon Rugby Club for three years.

“My dad introduced me to the sport in 1996, and I have enjoyed it every year since. It’s a sport that teaches you very important values and skills, like teamwork, leadership and personal responsibility, that can be applied in everyday life, as well as giving you life-long friends.”

It’s also a sport that’s seen the 22-year-old achieve much success, with Matthews making regular appearances in the Australian Barbarians.

“As a member of this team you get the opportunity to travel Australia-wide to play against the Super Rugby franchise development teams, including the ACT Brumbies, Melbourne Rebels and Western Force academies. So far I have played with the Australian Barbarians in Sydney, Canberra, Melbourne and Perth.”

Juggling sport with a combined business and mechanical engineering degree, however, can be challenging. “I try to make sure I stay on top of my uni work so that I have enough time to commit to training, preparation and games.

“The EAP scholarship has been instrumental in helping me achieve this balance. It has allowed me to work around any clashes that may occur between my academic and sporting life, such as scheduling difficulties between examinations and games. I’ve also improved my fitness through the use of the UTS Union Fitness Centre in between classes. I’m in there probably three times a week.”

Far and away, says Matthews, “The best attraction for me is the academic assistance the scholarship provides. Support from the university with scheduling and special consideration in the event of injury allows me to fulfill both my academic and sporting commitments to the best of my ability.”

And with a view to one-day work as a motorsports engineer, it’s set to be a winning combination for Matthews.

“I believe that if you pursue something you really enjoy and you work hard to achieve your goals, you will be successful.”

Sofie Wainwright
Bachelor of Arts in Communication (Journalism)
Photographer: Joanne Saad
Dancing on Coral was the fourth book and second novel by the celebrated author Glenda Adams. With this book, Adams’s reputation as a writer of sparkling prose and subversive wit was cemented forever, though not without controversy: in 1987 it won several awards, including the Miles Franklin, but the NSW Premier’s Literary Award prize money was unfairly withheld because Adams was still living overseas. How ironic that this novel, itself drenched with irony, should portray the desperation and the desire of that quintessentially Australian post-war impulse to escape. Dancing on Coral is the story of 1960s suburban girl Lark Watter, who follows a man and a dream by ship across the Pacific to the USA. Accompanied by the maddening yet wise Donna Bird (draped in scarves and always scribbling in green ink), Lark encounters frustration more than fulfilment when she finally reaches her romanticised destination of New York. The eponymous scene is one of the best I have ever read: and it must not be explained, so readers ought to buy this novel and find out for themselves. This reprint (part of Text Publishing’s Classics series) includes an excellent introduction by author and literary editor Susan Wyndham.

Debra Adelaide
Faculty of Arts and Social Sciences

Glenda Adams was a writer and academic who taught creative writing at UTS for 10 years until 2003. She passed away in her hometown of Sydney in 2007.

The semi-autobiographical novel Wicked is the doorway through which we enter Zuzana Fort’s ‘private little hell’. Written in diary form, the book spans four years in the life a young refugee, Mary, as she battles the challenges of adolescence and, more importantly, the monster that is anorexia nervosa. We journey with Mary from the home of a damaged family in Czechoslovakia, to a far-from-comfortable Austrian refugee camp and, finally, to Australia where Mary eventually sets out to rebuild her life. It’s a story that travels through the good times, the bad times and the worse times. With every page turned we face the battle with Mary, seeing the world through her eyes and feeling the burden of such a disease. Mary’s voice appears immature, though you soon understand that it is simply raw, honest and real. At times, the diary entries get repetitive, demonstrating the constancy of her struggles. What is most intriguing, yet simultaneously distressing for the reader, is that the spirit, energy and talent of this young girl is evident, but the burden of her illness and the other stresses in her life bring them down so much so that the appeal of the book is at risk of being lost.

Madelyn Lines
Bachelor of Arts in Communication (Writing and Cultural Studies)/International Studies

Writer, actor, director and scriptwriter Zuzana Fort graduated from UTS with a Bachelor of Arts in Communication (Media Arts and Production) in 1998. Wicked is her first novel.

“Writers make up the world from the real, and from our own imaginings. We don’t know our own selves; we don’t know what we are capable of until we write those selves into being,” writes UTS alumnus Anna Funder in her foreword to the 2013 UTS Writers’ Anthology. In this, the 27th anthology, 32 burgeoning, fresh voices give us their take on human nature. Like the voices, the selves – real and imagined – brought into being in The Evening Lands are many and varied and they respond to their circumstances accordingly. Readers glimpse dignity in one woman’s misery, a child’s resignation as her family unit dissolves, the true meaning of small mercies in the face of natural disaster, and the choices we make as bystanders, witnesses and participants in the lives (and deaths) of others. Human weakness – our frailties and our failings – are to be found in this collection. So too is the subhuman, personified by human traits such as our need for safety and instinct for survival. But to quote from the poem that lends its title to this book, “What does it matter/What we call human, and what we don’t call human?/The rose would smell as sweet” – from The Evening Land” by D.H. Lawrence.

U:BOOKWORMS

During August, the Co-op Bookshop on Broadway is offering Co-op members a 20 per cent discount on Dancing on Coral and a special member price of $15 on The Evening Lands (RRP $20), reviewed in this issue. For more details, email uts@coop-bookshop.com.au.
UTS UNLOCKED

Put Thursday 22 August in your diaries. It’ll be the most fun you’ve had at UTS in a long time. Promise!

UTS:Uncovered is a little gem of UTS’s 25th Anniversary celebrations. The day, which was the brainchild of the Human Resources Unit, is designed to give staff and students a peek behind the doors and walls of UTS. A full roster of events, from facility tours (ever been down to the boiler room?) to wine tasting, seeks to educate and entertain.

“From the technical to the creative, there will be something for everyone,” says Event Coordinator Michelle Treloar.

One of the must-dos is the CSI workshop in the forensic science labs. The session guarantees to debunk the forensic myths that abound in TV drama and give a taste of real forensic work. With fingerprint dusting, collection and analysis activities, participants will experience science like never before.

“You’ll be doing a simulated crime scene investigation, dusting for prints and using the world-class forensic equipment,” says Treloar.

“We don’t want it to just be a look at our equipment; we want staff to get involved, for it to be interactive and hands-on so you get a genuine experience of the facilities.”

Another activity on the list is the guided tour of UTS’s new student housing block. Offering one of the best rooftop views in Sydney, groups will be taken through the state-of-the-art student residence including the rooftop courtyard, theatrette and piano room.

“Touring Yura Mudang housing made me wish I was a student again,” says Treloar. “The building is almost as high as the Tower and they have this amazing rooftop garden where students are growing carrots and beetroot and other veg. It has a beautiful view over Sydney – it’s where you’d want to be on New Year’s Eve!”

If you’re looking to get something off your chest, then the Soapbox event should be your next stop. Hosted by the Faculty of Law, this lunchtime session encourages staff and students to grab the microphone and rant for three minutes on any social justice or legal topic they’re inspired by. No censorship, no limits, no boundaries!

“Some of the issues we’re anticipating will come up are human rights, gay marriage, female prime ministers, the election – anything that’s topical really,” Treloar says.

If you’ve ever wondered what happens in an earthquake, make time to see the shake table demo. Worth millions of dollars and one of the largest in the southern hemisphere, the table has been developed to investigate and improve the structural stability of buildings in earthquake-prone regions.

And, if after all that activity you’re a little thirsty, swing by the Loft for a glass of perfectly spiced mulled wine. The Union bartenders will be running mini mulled wine making workshops – a tasty winter addition to your next dinner party!

UTS:Uncovered will be held on Thursday 22 August. To see the full list of events and times, visit 25.uts.edu.au

Izanda Ford
Marketing and Communication Unit
Image by: Meegan Desmond
## AUGUST

### INTERNSHIP AND VOLUNTEERING FAIR
Talk to organisations about vacation programs, internships, work experience and volunteer opportunities in Australia and overseas
1pm to 3.30pm / Tower, level 4

### UTS ROLLER RINK
Get your skates on and celebrate Winterfest at the UTS roller rink
Tower forecourt
Until 24 August
$5 for UTS students and kids under 18, $15 for general admission
utsunion.com.au

### KURING-GAI HIGH TEA
Celebrate UTS’s 25th Anniversary with scones, slices, tea, coffee and live music
9.30am to 11am and 2pm to 3.30pm
Kuring-gai campus main foyer

### 25TH ANNIVERSARY STAFF AND STUDENT DEBATE
Cheer for your team as staff and students debate the big issues of our future and the ethical conundrums they create
Great Hall, Tower, level 5
events@uts.edu.au

### BIRTHDAY ON THE GREEN
Join in the 25th Anniversary celebrations with this carnival that includes musicians, an inflatable rock wall, mechanical surf machine and free snacks for staff and students
11am to 4pm / Alumni Green, City campus
events@uts.edu.au

### WHEELCHAIR BASKETBALL EXHIBITION MATCH
Get involved and join a skills sessions with Sydney Uni Wheelkings coach Gerry Hewson, round robin games and an exhibition match with Paralympians
12pm to 4pm / Multi-Purpose Sports Hall, building 4, level 2
events@uts.edu.au

### THREE MINUTE THESIS COMPETITION
Watch as UTS’s brightest research students explain their work in just three minutes
5.30pm for 6pm start / Great Hall, Tower, level 5
events@uts.edu.au

### BEHIND THE SCENES: UTS UNCOVERED
Staff are invited to check out UTS’s earthquake machine, digital sound studios, wine-making course, Traditional Chinese Medicine Clinic and more interactive workshops that showcase cutting-edge technologies
11am to 3pm / City campus
25.uts.edu.au

### STAFF TRIVIA NIGHT
1980s-themed trivia night for UTS staff
5.30pm to 9pm / Great Hall, Tower, level 5
events@uts.edu.au

### UTS OPEN DAY
Check out UTS’s facilities, attend information sessions, learn about courses and career options, meet UTS students and staff, and see what it’s like to be a uni student
9am to 4pm / City campus
openday.uts.edu.au

Email your events for October to u@uts.edu.au by Friday 30 August.

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### ART & U

**Margel Hinder, Growth Forms, 1959/60, braised copper on steel armature, 400 x 150 x 150cm**

*Growth Forms* by Margel Hinder is one of the larger sculptures in the UTS Art Collection. It also has one of the most unusual histories, having been displayed in four different buildings in its lifetime.

The four metre high braised copper and steel sculpture was originally created by Hinder for the Western Assurance Building in Sydney’s Pitt Street in 1959. In 1980, the building was sold and the developer started to cut it up for scrap. With intervention from both the Art Gallery of NSW and the New South Wales State Architect, it was saved and placed in the colonnade of the State Office Block in Macquarie Street.

Unfortunately, in 1997, that building was also demolished. *Growth Forms* moved again, this time to UTS after negotiations with the developers of the State Office Block site, Lend Lease. For the next 10 years, the cactus-like *Growth Forms* was a feature at the front of the Tower building’s main foyer. Today, it is located on level 2 of building 4, overlooking Alumni Green.

Hinder, originally from Brooklyn, New York, was described in a recently published monograph on her sculptures as “one of Australia’s most creative modernist sculptors”, and with her husband Frank, she played an important role in introducing 20th century modernism to her adopted country.

In addition to the sculpture itself, the UTS Art Collection is also fortunate to have one of the maquettes, a small scale model, for *Growth Forms* created by Hinder during the design process.

For more news and stories about the UTS Art Collection, visit our blog:
utsartcollection.wordpress.com

Janet Ollevou
UTS Art Collection

Art & U profiles a piece of work from the UTS Art Collection every issue.
UTS has done its bit for the environment by using environmentally friendly paper and ink to produce U:

UTS CRICOS Provider Code: 00099F
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Camera Operator in the Marketing and Communication Unit Sissy M Reyes is one of the creative geniuses behind these striking images. They were part of the recent Mex-tlì, Mexican Goddesses photographic exhibition created by Reyes and her creative partner Yunuen Pérez. The exhibition aimed to challenge the stereotypical representation of Mexican women in Australia.

Images supplied by: Sissy M Reyes and Yunuen Pérez