UNCOVER MAGAZINE



The University of Canberra acknowledges the Ngunnawal people, traditional custodians of the lands where Bruce Campus is situated. We wish to acknowledge and respect their continuing culture and the contribution they make to the life of Canberra and the region. We also acknowledge all other First Nations Peoples on whose lands we gather.



Welcome to *UnCover*, the magazine for all members of the University of Canberra and our wider Canberra community.

We'd love to hear your story ideas, feedback and thoughts. Contact us via

stories@canberra.edu.au

For a digital version of this magazine visit www.canberra.edu.au/uncover/magazine

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The University of Canberra celebrates its 30th anniversary in 2020.

We hope you enjoy the stories of our amazing UC community, and join us as we celebrate being 30 years young.





Hello and welcome to the latest edition of *UnCover* magazine.

Hello and welcome to the latest edition of *UnCover* magazine.

This is a very special edition of the magazine, as the University of Canberra commemorates its 30th anniversary as a university, and — in what has been a very challenging year — we still have much to celebrate.

At only 30 years young, UC is one of the fastestrising universities in the world — ranked in the World's Top 20 Young Universities (*Times Higher Education Young Universities Rankings 2020*) and in the top one per cent of universities worldwide (*THE*, 2021). For the third year running, UC remains #1 in the ACT for full-time graduate employment and starting salaries (*Good Universities Guide 2021*). These are, quite simply, amazing achievements.

This is also the first issue I am presenting to you as Vice-Chancellor of the University of Canberra, and so I would like to begin with a quick introduction.

I am delighted to be here in Canberra, having moved from Ulster University, Northern Ireland, to take up the post. However, this is not my first foray in Australia. I lived in Hobart for many years while working at the University of Tasmania and I am an Australian citizen. I love the Australian 'can do' attitude and sense of community, and look forward to immersing myself in Canberra and the region over the coming years.

Over the past few months, I have spoken a lot about the challenges of 2020 and the uniqueness of my first few weeks here. However, this issue of *UnCover* is about honouring what we have achieved, and looking forward. And I am both proud and excited to do just that.

Before we go leaping into the future though, I want to take a moment to acknowledge the people of UC. This group

of people — this team, this community ... this family — has shown great adaptability and innovation as they have responded and adjusted to the trials of the past year. I have not known the team for long, but I feel immensely proud to be a part of this group. A group of people that is dedicated to providing the best education for our students and that continues to make a real impact in the world around them through their innovative research.

I look forward to working with staff, students, alumni and our broader community to create opportunities and to look positively towards 2021 and beyond.

The first feature article in this issue epitomises opportunity and growth. The Australian Geospatial Health Lab is combining medical geography with a public health perspective to shape healthier communities. This article examines how their research and technology works, and how it can lead to better policy outcomes for services within the community.

We also chat with the team behind the first Global Citizen's Assembly on Genome Editing, about their plans for bringing a diverse group of people together, from around the world, to discuss the ethical and legal challenges of gene editing.

The latest Digital News Report is a fascinating insight into Australians' news consumption throughout national and global disasters — and it is encouraging to hear that younger people are careful not to fall for fake news and are checking their sources.

As we consider the challenges throughout the pandemic and look to the future, our multi-disciplinary team of experts ponders food resources and how we can eat our way to a healthier and more sustainable future.

While families spend more time at home, it is timely to chat to an expert in parenting in the digital age and how we can all navigate this ever-evolving issue.

It was wonderful to read the profiles of our alumni in this issue; learning about their story since graduating to celebrate what they have achieved.

We can all agree that we are living in difficult times and we will need to adapt. I believe UC has both the resilience and the innovative thinkers to change and grow with the world around it, and I look forward to playing my part in that journey.

Happy 30th anniversary, UC.

Professor Paddy Nixon FRSA FBCS Vice-Chancellor and President

PUBLIC HEALTH: MAPPING THE BIGGER PICTURE

Shaping healthier communities through geospatial mapping and analysis.



STORY: **SUZANNE LAZAROO**PHOTOGRAPHY: **LIGHTBULB STUDIO, SOURCED**





In the realm of public health, the Australian Geospatial Health Lab (AGeoH-L) has the capacity to reveal the bigger picture — and the power to shape population health trajectories.

The bottom line: Where we live shapes our health outcomes.

The premise may sound simple, but where we live is composed of a complex, intricate interplay of factors.

Combining medical geography — via a powerful geographic information system (GIS), which captures and analyses spatial and geographic data — with a public health perspective, the AGeoH-L can highlight the patterns at work in different areas and populations.

A partnership between the University of Canberra and worldwide geospatial industry leader ESRI, the lab was launched in 2019. It analyses datasets simultaneously at area and individual levels to show the impacts of spatial variations which drive inequities in health outcomes.

"This is particularly clear when you look at Aboriginal communities," says AGeoH-L Director Mark Daniel, Professor of Epidemiology at the University's Health Research Institute (HRI).

"Between 2010 and 2018, we worked with over 100 Aboriginal communities in the Northern Territory. Our work showed that those worse off in terms of infrastructure and services, also have worse health outcomes for both chronic and infectious diseases."

Massive spatial variations can be seen even across the Australian Capital Territory (ACT), he adds.

"For example, there is a statistically significant disparity in hospital admissions for cardiac events in the ACT, which is clearly correlated to built environmental factors — access

to parks, food sources and both primary and tertiary healthcare, to name a few," Mark says. The better the environmental factors, the lower the number of cardiac event-related admissions.

HRI Director Professor Rachel Davey says that while Canberra has a very high socioeconomic status — because of the averaging of factors across the region — pockets of deprivation exist.

"These areas with a low socioeconomic status and poor health outcomes are almost 'hidden', and one of AGeoH-L's latest projects is exploring this health inequity across Canberra," she says.

Researchers at the AGeoH-L can drill down to pick apart tapestries of spatio-temporal data and analyse individual threads or weave them into multi-layered 3D visualisations.

▼ Associate Professor Neil Coffee at the AGeoH-L.



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The bottom line: Where we live shapes our health outcomes.



▲ AGeoH-L manager Marcus Blake and HRI Director Professor Rachel Davey, with Neil.

Datasets can include satellite imagery, road networks and transportation grids, property values, crime and safety statistics and healthcare costs, among others.

"Our spatial epidemiology combines traditional, census-based social and demographic data with objective measures of environmental context. like accessibility to food and health care," Mark says.

"We advocate for primary intervention preventing the development of risk in the first place — and secondary prevention - early detection and intervention on emerging risks, at targeted area levels."

The AGeoH-L is growing a formidable evidence base that shows — in an objective, defensible, scientific sense how people do not have full control over the things that shape their health.

"Health outcomes are not just about individual responsibility," Mark says. "Governments, medical authorities and health organisations must account for the environments in which people live and look at these spatial and environmental factors that shape lifestyles, health risks and outcomes."

He adds that the work at AGeoH-L is not about excusing individuals' poor decisions.

"It's about acknowledging that bad decisions are often a consequence of accumulated exposure to an adverse environment," Mark says.

"It's easy to point fingers at someone doing the wrong thing, without accounting for all the things in their lives — their environmental exposures that have led them to that point. People need to be enabled to make the right health choices."

Ultimately, basing town planning on a bedrock of such evidence will create a healthier populace, reduce the burden of chronic disease and alleviate some of the rapidly rising demand on the health system — most of which focusses on expensive acute care treatment of the kinds of preventable diseases that AGeoH-L seeks to prevent.

By enabling better policy and more efficient targeting of resources and services, the lab is a formidable driver of equity, its work illustrating why, where, and how the health playing field should be levelled.

"If we want to reduce health inequity, we need to accept the groups and areas suffering such inequity need resources, opportunities or benefits that need not extend to all population segments," Mark says.

"Our limits co-exist with the environments that shape them, and different environments simply need different levels of attention, funding and intervention."

A GENESIS IN **FRUSTRATION**

"Two decades ago, advances in statistics and computing power made it possible to look at area-level influences related to population health outcomes," Mark says.

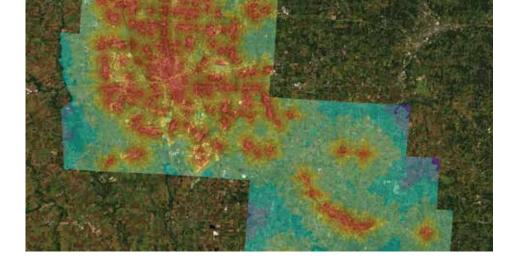
"I was doing this work in the United States using census tracks, administrative area boundaries for which social demographic data was available, then analysing those data against individual and aggregated health outcomes."

But this only revealed part of the story.

"For instance: we could say that people living in areas with lower collective educational levels or lower income levels have worse health outcomes — but what about the impact of local environmental factors?" Mark savs.

He realised he needed to work with medical geographers — like Associate Professor Neil Coffee, whom he would later work with at the University of South Australia in Adelaide, before they, and four other researchers, moved to UC to start up the AGeoH-L.

"Population health has always emphasised environmental impact, but what we typically do is deal with individual-level behaviour," Mark says. "We allow that behaviours are shaped by environments, but often don't actually express the environment except in terms of soil, water, contaminants, etc."



"One of the AGeoH-L's most unique features is its standardised classification system for spatial indicators, a world first."

Lifestyle is the intersection of environment and behaviour, Mark says. Because the environment, lifestyle and behaviour are reciprocal in relation to each other, each directly and indirectly (acting through the other) shapes clinical risk factor and disease.

Therefore, if initiatives are introduced to improve environments, healthful lifestyles and behaviour are correspondingly improved, clinical health risks are lessened and health outcomes, improved.

Before moving to Australia, Mark had assembled an interdisciplinary team — medical geographers, epidemiologists, and computer programmers — at the Université de Montréal in 2002. They created the Megaphone GIS, which integrated extensive numbers of spatial databases by which they could represent and analyse different dimensions of social and built environmental factors.

Today, the Megaphone GIS prototype has been integrated into the Montreal Health Department; a second-generation version lives on as the national Australian Epidemiological GIS (AEGIS), developed by the AGeoH-L in partnership with ESRI Australia.





The new platform incorporates advances in geospatial database construction, analytic applications, and visualisations.

"Our physical geospatial laboratory at UC has large, wall-mounted touch screens with streamlined automations that allow researchers to interact with the virtual environment, to visually express and analyse the data," says AGeoH-L Manager Marcus Blake, formerly of the Australian Bureau of Statistics (ABS).

"The virtual servers process tens of millions of records in mere minutes — and our data holdings are in the terrabytes. It's incredibly exciting work."

WORLD FIRST: STANDARDISED DATA INDICATORS

One of the AGeoH-L's most unique features is its standardised classification system for spatial indicators, a world first.

"This innovative system — which Mark developed — allows researchers to compare cross-jurisdictional studies and datasets, for instance with the work we're doing here and partnering with

the Kuwaiti Geospatial Health Hub and Diabetes Registry Initiative," says Rachel.

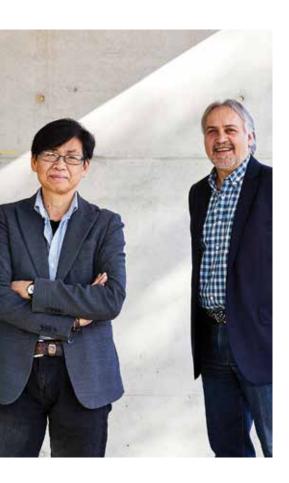
This makes the research uniquely portable and flexible internationally, while enabling greater collaboration with government and research groups.

"The standardisation really helps to tell a coherent story through the research," says Assistant Professor of Public Health Suzanne Carroll. "And greater collaboration, in turn, helps with further fine-tuning of the standardisation itself."

"Basically, we take a broad construct — like the physical environment — break it down into various components, and then further sub-divide them. These are then categorised and assigned to indicators, with measures provided to each indicator," says Mark.

"It's a sophisticated way to characterise the complexity of environments in a scientific coding schema that allows us to develop measures to represent these different aspects of environment."

The AGeoH-L is currently working with the University of Wollongong to use advanced machine learning technologies to build a more comprehensive GIS which



can express the multitude dimensions of an environment, and then coherently organise those dimensions.

"This will reduce the burden to manually code each measure to an indicator, and each indicator to an indicator group, with the system learning to do that itself over time," Mark says.

PRIVACY AND CONFIDENTIALITY

Working within defence industry level standards, the AGeoH-L has strict protocols around data protection.

"One of the main aims of the lab has been to create a safe space in which confidential data can be used, so we have multiple protection layers in place — including end-to-end encryption," says Marcus.

The AGeoH-L uses private cloudand web-based technologies, which allow the secure sharing of information with government and health-based organisations.

"New software developments are all about data being held in the cloud, leveraging on the scalability of cloud processing, and being able to share info across the world," Marcus says.

"Also, we work with datasets rather than individuals' data. In addition, the ethical constraints applied are considerable for example, with our multi-state project in the United States analysing spatial factors shaping Medicaid recipients' costs and claims, we work within the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule, the national standards that protect individuals medical records."

RESEARCH RIGOUR: TEMPORALITY AND BIOLOGICAL PLAUSIBILITY

The AGeoH-L team is also one of the few globally to consistently target two key issues across all its research — temporality (observing the effects of time) and biological plausibility.

According to the team's approach, temporality indicates that the exposure to environmental factors needs to precede the outcome in time, to link particular spatial exposures to the evolution of patterns of health and disease developing in space over time.

The AGeoH-L team evaluates observed place-based associations with health outcomes in terms of biological plausibility, measuring biological outcomes rather than just behaviour, establishing cause-andeffect relationships that extend beyond simple correlations.

"We want to show that environments shape clinical changes like blood pressure, glucose and lipid levels, etc., that account for 'hard' outcomes like cardiac events, or death," Mark says. "When you use observational epidemiological methods, it's important to consider criteria for causality, including biological outcomes and the temporality of effects in order to implicate causal effects.

"This circumvents the biases inherent in self-reporting in a huge amount of population and public health research, because people often tell you what they think you want to hear."

An overarching emphasis on causal criteria and causal frameworks also helps to avoid biases inherent with poor study designs, measurement development and analytic procedures.

THE WAY FORWARD

With the lab firmly ensconced in the research realm, Mark hopes to now grow it in terms of meaningful integration and engagement with policymakers.

The AGeoH-L is looking to strengthen its relationships with entities like the ABS. It has already collaborated with the ABS on a project to improve spatial data linkages, and researchers have included questions to add more built environment and health behaviour components into the 2020–2021 National Health Survey.

"We hope to work with health portfolios which can introduce structured, novel health interventions and with different levels of government, especially sectors that relate to population health outcomes, like transport, zoning and food supply etc.," Mark says.

"Dealing with environmental and spatial factors will reduce the health deficit — it will be more cost-effective than constantly treating the outcome of diseases that could have been prevented.

"[Treatment of complex chronic disease] is overwhelming the hospital system. Most of these things can be prevented before they are even detected, or detected early and dealt with before progressing to require expensive acute care intervention."

Aetiological research aside, the team can also effectively contribute in intervention planning, intervention and evaluation.

"We have health evaluation and intervention experts like Rachel and Professor Margaret Cargo on the team, which positions us to work on interventions," says Mark.

The AGeoH-L holds immense potential for growth and change.

Powered by cutting-edge digital health and geomatics technology, underscored by scientifically rigorous approaches and driven by a progressive, insightful team dedicated to life-changing research, the AGeoH-L is poised to be a digital health cartographer with the power to shape a more healthful future.

To explore a snapshot of past, present and present-future projects from the AGeoH-L team.

visit www.canberra.edu.au/uncover

THE ENDEARMENT OF OLD THINGS



STORY: SUZANNE LAZAROO PHOTOGRAPHY: SUPPLIED

Alumna Jane Crowley enrolled at UC 30 years ago, soon after it became a university. Today, she is revisiting her beloved Canberra by making it the home of her second Dirty Janes outlet — a treasure trove celebrating the beauty, rich stories and resilience of all things vintage.



▲ Jane and Bob Crowley, relaxing among the treasures at Dirty Janes.

wind is still blowing a steady stream of treasure-seekers through the doors of Dirty Janes in Fyshwick.

They're here for delicious antiques, delectable vintage pieces and positively mouth-watering handmade objects — the Art Deco bracelet set with marcasite and solid onvx blocks. a toy train home-made circa the Depression, perhaps a wingback chair, refurbished in emerald green corduroy. Certainly, a steaming cup of Jasper + Myrtle hot chocolate.

Welcoming everyone in from the cold: Dirty Janes co-owner Jane Crowley, whose infectious smile lends the morning some much-needed warmth.

recognise the treasure in what some might dismiss as trash.

The Fyshwick store is the second Dirty Janes; the first was opened in 2009 in Bowral, NSW.

Housed in the former geological survey building, the cavernous vintage goods market is home to 90 vendors of the preloved and handmade.

Its opening this year is a homecoming for Jane herself.

"I moved to Canberra when I was eight months old, and lived here till I was 15," Jane says. She recalls with fondness many picnics in many parks, cycling rings around Lake Burley Griffin

"Antiques are threaded through with an innate resilience – the antithesis to today's throwaway culture, and more relevant than ever in a time hallmarked by uncertainty."

with her family, and visits to the National Art Gallery and the National Botanical Gardens.

"It was wonderful how accessible all these places were," she says — years later and living in England for three years, she celebrated that same spirit of local exploration with her own kids.

"We would mark a 50km radius on the map and say, ok — where shall we explore today?

"Even today, Canberra feels like a great big country town to me, in the best way possible — there's an innate friendliness here, people really care about each other.

"I think that growing up here — with everything so lovely and easy, accessible and possible — made me feel that nothing was actually impossible," Jane says.

Dirty Janes was opened in partnership with Jane's father, Athol Salter. Jane's husband, Bob Crowley, is also actively involved in the running of the business.

Athol founded the iconic Antiques Hall in the 1970s, and Jane credits him with sparking her lifelong passion.

"He is an amazing mentor — and has never looked at me as if I couldn't do something," she says.

She jokingly says that she's been in business with her father since she was about five — antiquing was a way of life for the whole family, and Saturdays were often spent at garage sales and country auctions.

"We'd travel to Bateman's Bay on weekends to see my grandad, and a two-hour journey for everyone else was a six-hour journey for us — because we'd stop at every antique dealer on the way, or there'd be a guy who wanted to sell something and had gotten in touch with my dad."

Jane returned to Canberra to complete a Bachelor of Arts (Organisational Communication) at the University of Canberra in 1993 "It had just become a university, from the Canberra College of Advanced Education," Jane says.

"I remember walking around the campus with some friends, and we all loved the feel of it — I knew that UC was for me," Jane says. "The mix on campus was fantastic — international students, students from rural and regional areas, those who lived the city itself.

"I made the best friends I have ever had. We've kept in touch and gotten together for weddings, Christmas parties and birthdays — and since the pandemic began, all 16 of us have had Zoom meet-ups every Friday night!

"I loved that I could do such practical units to make up my degree and included law, public relations and writing subjects that I feel I use almost every day I'm at work."

Jane also got to do a six-month internship with the Canberra Theatre, which she absolutely loved.

"I think back to all those organisational charts I analysed and realise that I've used the same method of organisation for Dirty Janes," she says.

"I know the course I studied couldn't have prepared me more for what I do today."

After completing her degree, Jane went into business with Athol. Crowley and Grouch was a furniture import business, and the intrepid antiques hunter prowled European markets and stores, building a network of dealers, and shipping laden containers back to Australia.

When she returned to live in Australia, she opened The Shed in Mittagong, before opening Dirty Janes Bowral 20 years later.

Antiques are threaded through with an innate resilience — the antithesis to today's throwaway culture, and more relevant than ever in a time hallmarked by uncertainty.

"Antiques were made to last — they have many more years to their stories," Jane says.



"I have this absolute love of finding something old and just reviving it. "You stand back and look at these pieces of furniture that you've spent two days sanding and waxing and washing, and they're just transformed!"

And 'Dirty Janes' is absolutely a nod to that process.

"Restoring antiques is not something that you can do and remain clean — I was always absolutely filthy when younger," Jane says. The name was also inspired by Jane Dumphrey, a young convict who arrived in Australia in 1840 and who reinvented herself as a trader in Gundagai, NSW.

"She was very quirky, resourceful and didn't take any nonsense — good principles for the business!" Jane says.

Jane often finds the way forward by looking at what came before.

"Retaining the essence of a place or thing is what is important, holding on to all that is good about it — letting it speak to you rather than trying to turn it into something it isn't," she says.

At its heart, Jane's life and work is about people and their stories.

The stories underlying each beautiful item at Dirty Janes, and the ones she enthusiastically listens to on the shop floor.

"Dirty Janes attracts an amazing array of people, from students buying the latest vinyl for their collection to people searching for vintage jewels," Jane says.

"What they all have in common is an appreciation for things made with love — holding on to the good things that last."

EVERYDAY PEOPLE SHAPING GLOBAL ISSUES

Meet the team bringing people together from around the world to talk about gene editing.



STORY: **TARA CORCORAN**PHOTOGRAPHY: **LIGHTBULB STUDIO**, **SOURCED**





Some issues are worthy of worldwide deliberation. Gene editing has the capacity to improve health and wellbeing, to alter the way we live however, it also raises ethical dilemmas and carries potential but significant risks.



rise of gene editing technology has led to great public scrutiny.

There is currently no global governance or regulation for these technologies, even though the implications are worldwide. For technology that could alter what it means to be human, we should seek to reach an international consensus on how we apply this technology in the future.

So how do countries navigate these issues in a consistent way? It begins with a global conversation.

A team from the University of Canberra will be bringing together people from

assembly', it is an opportunity for a range of 'ordinary' people from different cultures and backgrounds to hear from experts in the topic, engage with the information and then discuss and reflect on the issue (via translators) — placing the public at the centre of the conversation.

The notion of a global assembly originated with UC's Professor John Dryzek.

"The original idea for a global citizens" assembly was set out in an article by myself, André Bächtiger and Karolina Milewicz in 2011," he says. "We saw no reason why citizens' assemblies that operated at the national level could not also be applied globally."

A Professor John Dryzek, Professor Simon Niemeyer and Associate Professor Nicole Curato

Helping citizens to understand their thoughts on a topic is particularly valuable for future issues, or problems.

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"A global citizens' assembly is a key democratic innovation, given that global elections are hard to envisage any time soon."

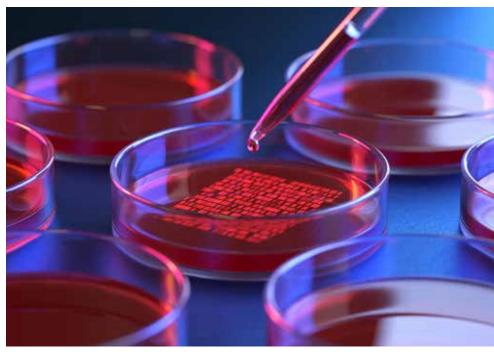
To this end, Professor Dryzek and 24 leading researchers from around the planet recently published Global Citizen Deliberation on Genome Editing in the journal Science, to call for everyday people to come together in conversation around gene editing.

Professor Simon Niemeyer, from UC's Centre for Deliberative Democracy and Global Governance, explains why it is critical for people to get involved in democratic issues.

"If the public isn't engaged and involved, you might not get good decisions, and you don't have accountability for those decisions. If you have that disconnect between the public and policy decisions, this can spark trust issues, so there are all sorts of knock-on effects."

The active involvement of the public in processes of governance is important to build public confidence. As Simon says, if there is a disconnect between public and governance at the national level, then it is even worse at the global level.

"The global citizens' assembly is very much front and centre in this space. It exemplifies the sort of innovations that we need to improve trust in governance and in government.



▲ Gene editing could alter what it means to be human — and we need to talk about that.

"The current lack of engagement is not because the public is inherently incapable of understanding issues — it's because the way we approach engagement with the public partly treats them that way — that's part of the assumption.

"It's a matter of finding mechanisms to bridge the gap with the public, engage them at their best and connect them to decisions on issues that are important to them."

Dr Nicole Curato, an Associate Professor at the Centre for Deliberative Democracy and Global Governance, says that people are looking for different ways to participate in democracy and the decline in trust in democracy points at more traditional institutions.

"I think we have to recognise that there is a generational shift here," she says.
"What worked for the previous generation—joining a party, campaigning for politicians—might no longer work for a generation which is all about having a voice and being directly involved.

"There is a lot of enthusiasm for consultative deliberative processes such as global citizens' assemblies — we are only just starting to witness the explosion of these kinds of forums around the world. I think there is something trailblazing about this process, and it can restore trust in democracy — but a different kind of democracy than what we're used to."

One strength of a global citizens' assembly, and a factor that may play a key part in rebuilding trust in governance processes, is the lack of bias or pre-conceived outcomes.

The Global Citizens' Assembly on Genome Editing is led by two Australian academic institutions (the University of Canberra and the University of Tasmania), partly funded by the Australian Research Council, and organised in collaboration with practitioners like Missions Publiques who run citizens' assemblies and dozens of other organisations around the world.

"One of the criticisms against deliberative processes is that they can be easily hijacked. For example, if you are a politician and you want to convene a citizens' assembly on climate change, but you're already known to have a position on the issue, then it will be seen as suspicious — like are you just using this process as a deodoriser for whatever stinky policy you're already thinking about?" says Nicole.

"With such a high-level, high-profile citizens' assembly, whoever convenes it should not have a clear position on the topic prior. There has to be sincerity on their part to find out what the people actually think," says Nicole.

"The citizens' assembly outcomes genuinely reflect what citizens are interested in, their aspirations, ideas for



the future — but they help to develop an understanding of those thoughts as well," adds Simon.

Helping citizens to understand their thoughts on a topic is particularly valuable for future issues, or problems.

"I call it anticipatory — like you anticipate a technology or a problem that could happen in the future because that way, the people that come to the forum also don't have hardened opinions about the topic," says Nicole.

"I think this is the beauty of it. We are all allowed to not know much and we can learn about it together. This is how issues should be selected — issues where preferences aren't hardened yet.

"On certain issues — those which have longer-term, future, global implications, and for which the public conversation doesn't currently exist — it's really important to bring the public in at that global level, and to find innovative ways to bring them in," says Simon.

In this way, gene editing is the perfect topic for a global citizens' assembly, as it is an important issue with global dimensions.

"It's almost the emblematic issue in terms of its importance, global implications and the complexity around it. It's important because it brings into play public values and aspirations in terms of how we think of what it means to be humans," says Simon.

"Gene editing brings into play the interface between technical and scientific considerations, and ethics and values. What is our relationship with plants and animals? Are they instruments for our benefit — what does that even mean?"

The topic of gene editing was chosen by an award-winning team of science documentary makers, Genepool. They will be filming the assembly from beginning to end to share the process with a wider audience.

"Some of the high-profile citizens' assemblies have a documentary. However, no one has really told the story in its full drama and complexity, so I think that's what separates this process from others. The documentary is built into the design of the process," says Nicole.

Her role will be to observe how the documentary is used as a link between the broader public and the deliberative process.

"I feel like there's not enough connection between these deliberative processes, which can be very opaque — people outside it often don't know what's happening," Nicole says.

"Democracy needs good storytellers. This is the problem when we talk about something so abstract that's not made relevant in the lives of everyday people.

"The documentary makes democratic practice real. You see the faces of people who are part of it. For audiences to see that the people who are deliberating — the very complex, technical, ethical issue of gene editing — are people who actually talk and look like them. There is something very powerful about it.

"I think we are sick of equating democracy with scenes from Parliament, that is not very appealing anymore. We see very moving images of democracy in the streets via protests, but we don't see deliberation in action with ordinary citizens involved, and I think that what's important here is telling the story in a creative and engaging way."

Before the documentary is released, engagement-building with the topic and process will begin in the assembly room.

Simon explains how it starts with developing a common interest in each other and the issue, and building trust within the process. People can then start to engage with the topic of gene editing.

"We have to first create conditions of trust and a sense of identity that we're all in this together — rather than a 'us and them' mentality — so it's a shared identity," he explains. "That's partly about functional language.

"It's not simply a lecture, it's a process where participants get to consider what they've heard and interact with each other and the experts. What we find with it is not only participants learn, but the experts do as well.

"Expert knowledge is often narrow and specific and doesn't have an understanding of how public values can be important in how we consider the science. So there is learning in both directions."

It is this aspect of open-mindedness that is the cornerstone of the global citizens' assembly.

"The way we communicate now doesn't reward open-mindedness it rewards clickbait. Quick reactions. Sometimes, being open-minded is interpreted as a lack of conviction or principles," says Nicole.

"But I think, especially at a time when information is produced at a dizzying speed, when scientific breakthroughs are changing all the time, we can't just rely on what we previously knew. We have to be ready to change what we know, given the complexity of the knowledge that is evolving."

The Global Citizens' Assembly on Genome Editing will look to affect decision-making in relation to genomic technologies, including for the World Health Organisation and national bodies. As well as these more formal outcomes, the team is also looking to make an impact on the public. This is where the documentary will come in, to see if it is possible to simulate the experience for viewers and engage them in the process.

Another impact of the project will be to demonstrate the global citizens' assembly approach to governance. As Simon explains: "It's actually reconceptualised the way we even think about the democratic process and governance. We have a chance to create a governance structure that can meet complex issues for the future."

Nicole adds that, "Some people make the argument that citizens' assemblies should be empowered to determine policies. I think our work in the centre takes a perspective sceptical of that, because we also don't want to be accused of being dictatorial and letting this randomly-selected group of people from all over the world determine policies. For me, the best-case scenario is for this citizens' assembly to shape global conversations.

"It may sound fluffy, but it's important. Shaping global conversations means having a debate in Parliament or legislating gene editing in Australia and being able to demonstrate what the public thinks — when they are given a chance to think about it properly."

Simon believes that providing this chance to deliberate on global topics will be exciting for people, as they realise that their input matters.

"It is possible to make those connections with citizens, if you create the conditions for it. It's about time, careful attention to language, levels of understanding and also taking into account the backgrounds of participants — we want to be as inclusive as we possibly can.

"We don't pretend that it is going to be an easy task but we are not shying away from the challenge either."

John sums it up simply: "Any democracy ought to rest on the participation of ordinary people".

For more information on the Global Citizens' Assembly on Genome Editing, go to www.globalca.org/

"Any democracy ought to rest on the participation of ordinary people."

KIM RUBENSTEIN: A CHAMPION FOR **DIVERSITY IN LEADERSHIP**

STORY: TARA CORCORAN PHOTOGRAPHY: MADELEINE WOOD, SOURCED

Kim Rubenstein has had an impressive career so far, and the role of Co-Director of the 50/50 by 2030 Foundation is the natural next fit.



As the new Co-Director of the 50/50 by 2030 Foundation, Professor Kim Rubenstein wants to enact real change

With over 20 years of experience researching and teaching law, and leading the Australian National University's Gender Institute as its inaugural convenor, Kim is bringing her experience, innovation and enthusiasm to the 50/50 by 2030 Foundation, a gender equity initiative housed in the Institute for Governance and Policy Analysis (IGPA) in the Faculty of Business Government and Law at the University of Canberra.

Kim says that her lived experience has greatly influenced her choices and led her on this path to UC.

"Being Australian as well as being a woman — those things have been fundamental to the way I engage with the world, and why I chose to do what I do.

"I've come to the foundation now at a time that I think is quite critical in terms of gender equality and wanting to move the dial on real action around it."

The logistics of Kim's position as Co-Director — a job she shares with the Foundation's other Co-Director Trish Bergin (former head of the Office for Women in the Department of Prime $\label{eq:minister} \mbox{Minister and Cabinet)} - \mbox{is indicative of}$ a public policy area of particular personal interest, and one Kim would like to see more of in Parliament.

"Part of the attraction is that it gives me the opportunity to test out what job sharing is like in a leadership position, and for that to feed in to a broader discussion in Australia about job sharing, which is not only a positive for women but for a healthier society, in terms of flexibility in the workplace and shared notions of leadership."

"I've come to the foundation now at a time that I think is quite critical in terms of gender equality and wanting to move the dial on real action around it."

"It's about encouraging discussion about part-time work in our representative democracy, and even about thinking about job-sharing in Parliament, where two people become 'the representative' for an electorate and they job-share that role. The statistics at the moment do show that more women do part-time work. However, this is not only about gender, but a diversity of experiences and life experience itself. I think it would be positive for gender, but also more broadly, diversity."

For Kim, another attraction of the role is something she has always sought - the capacity to link research and public policy. She had already done this in the citizenship law space, so the ability to amplify her work in the citizenship and gender spaces, with the support and investment from the University, appealed to Kim as being impactful.



Gender equality and diversity, in leadership and the workplace, are powerful policy-shaping factors.

"Publicising the data and research on a range of different factors that impact on gender equality is fundamental for making the case, and making positive and valuable contributions to decision-making in the public sphere," she explains.

"But the other side of it — which is also interesting from a gender perspective - is who normally makes the decisions? You might have the information out there, but if the decision makers aren't listening to it, or don't hear it because it doesn't necessarily fit with their lived experience, then it may not have the impact that you want.

"It comes down to questions of power and decision-making in public policy. In that sense, the 50/50 by 2030 Foundation is key, because its message is that we actually need to mandate equal numbers, and a diverse range of men and women who are decision-makers, and who are open to listening to the contributions of researchers and a range of different life experiences."

For her own research, Kim is keeping busy with a few projects underway, including continuing to work on outputs from an Australian Research Council (ARC) grant exploring women as 'active citizens' (someone who is actively involved in public life and the community). The first

"History is fundamental to informing the way we move forward, and the more we can learn from those past experiences, obviously the more informed we are in going forward in terms of decision-making."

part of that project involved collecting the life stories of 50 Australian women lawyers and placing their oral histories in the National Library of Australia (NLA). Part of Kim's research is investigating how being lawyers enabled those women to become active citizens in their community.

While the data continues to be analysed, an online exhibition already makes some of the outputs of the project accessible to the public (www.womenaustralia.info/ lawyers). The project is reflective of an important aspect of law and society learning from history.

And as Kim continues to research Australia's history, the value of looking back to look forward becomes clearer for a more diverse future in leadership.

"History is fundamental to informing the way we move forward, and the more we can learn from those past

experiences, obviously the more informed we are in going forward in terms of decision-making. The other aspect of this is to just really be sure that we are aware of the diversity of those historical experiences.

"You can only know the history that is recorded, so it is important to make sure that we're looking for, and recording, a diversity of those experiences and that history isn't just one story.

"That works with gender, but it is also more broadly about diversity within society. That's really important in terms of whether we are looking at a diverse enough range of what has happened when we look into the past. But more importantly — when we are recording and making decisions for the future, how open are we to a diversity of experiences?"

NEWS CONSUMPTION IN A YEAR OF CHANGE

How do Australians 'choose to news' in unprecedented times?



STORY: **ELLY MACKAY**PHOTOGRAPHY: **MADELEINE WOOD, SOURCED**



The year 2020 has been one of large-scale news events. January began with the worst bushfires in Australia's history, which started at the end of 2019. They were spread far and wide, on a never-before-seen scale, and they were destructive.

Just as the bushfires started to ease, the COVID-19 pandemic reached Australia and moved the country (and world) into lockdown.

And while these two year-defining events were distinctive on the disaster scale, they had one thing in common: they forced Australians to turn to news to keep up-to-date.

The News and Media Research Centre (N&MRC) at the University of Canberra is a specialist research centre that explores news consumption, social and digital media networks, and the legal, ethical, and social impacts of communication technologies.

Comprising 12 specialist communications researchers, the team releases several annual research reports outlining their news consumption research.

In 2020, that research has been heavily influenced by the devastating effects of the summer bushfires and the COVID-19 health crisis. Professor of Communication Dr Sora Park and Associate Professor of Journalism Dr Caroline Fisher were the research leads on several news consumption research publications in 2020 including the *Digital News Report: Australia 2020 (DNR Australia 2020)* and *COVID-19: Australian news and misinformation.* Combined, the two reports highlight the news preferences of Australians and the challenges faced by the Australian media.

"There were a number of surprising or unusual results this year, because the way Australians behave changed during the bushfire disaster, and then again because of the COVID-19 crisis," Caroline says.

"We conducted the main survey for the DNR Australia 2020 towards the end of the bushfire season, which influenced how people responded to the survey."

So how did Aussies consume their news in order to stay safe and informed?

▼ Associate Professor Dr Caroline Fisher and Professor Dr Sora Park.



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NEWS CONSUMPTION IS ON THE RISE

Following the bushfire crisis, the percentage of heavy news users rose to 56 per cent — up four per cent from the 2019 figure. Then, during the early months of the COVID-19 pandemic, that figure rose again this time to 70 per cent.

In previous years, Australians held the regrettable title of being the lightest news consumers in the world — with only a global pandemic and natural disaster needed to change that.

Sora believes the increase is due to a number of factors — including the fear of missing important safety information.

"In times of great uncertainty, news consumers seek more reliable, accurate, and up-to-date news, as the unfolding events directly influence their safety and wellbeing," she says.

And as news consumption increased, so did a changing trend in the sources people turned to.

In the case of the bushfires, residents of fire-affected areas were forced to tune in to traditional media channels — like local radio — to receive timely updates about evacuations, when Internet and phone signal was down.

THE DRIVER BEHIND THE INCREASE IN **CONSUMPTION: CONCERN ABOUT** COVID-19

It's quite normal to be worried about all that is going on in the world, and that concern was reflected in survey results, which showed that 78 per cent of those who are worried about the coronavirus increased their news consumption during the beginning of the COVID-19 pandemic.

There was also a correlation between those consuming more news and panic-buying, with 41 per cent of those consuming more news than usual also saying they were more likely to stock up on essentials.

"Those who increased their news consumption during the pandemic were almost twice as likely to stock



▲ This year, more Australians are tuning in to the news than ever before.

up on essentials than those whose news consumption didn't change," Dr Park says.

"The majority of those who consumed more news during the pandemic also reported that they felt anxious. Being exposed to a lot of news about the virus probably triggers anxiety and leads to stockpiling behaviour."

OUR WELLBEING IS AFFECTED BY THE VOLUME OF NEWS WE CONSUME

We've known for a while that COVID-19 is making an impact on mental health and wellbeing around the world, but it seems the news we watch is playing a big part in that.

Respondents to the COVID-19: Australian news and misinformation survey indicated that 'news fatigue' is common, and many people feel overwhelmed when exposed to high volumes of news.

Dr Park says that during the beginning of the COVID-19 crisis, Australians were becoming fatigued and anxious as a result of excessive news consumption.

"One of the ways people deal with that is to avoid the news," Dr Park says.

Almost three-quarters of people said they have been avoiding news to protect themselves from the bombardment of negative news about the coronavirus.

THE MEDIA HAS FINALLY **EARNED OUR TRUST** - BUT WILL IT STAY THAT WAY?

Australians are fickle when it comes to our feelings about the news. There has been a trend of declining trust over several years — however, the COVID-19 crisis flipped that pattern nationally.

In the early months of the pandemic, trust in news about COVID-19 was at a high of 53 per cent — as opposed to 38 per cent for general news reporting during the bushfires. Even higher was trust in local news reporting about the pandemic, at 61 per cent.

"Trust is something that fluctuates, and typically, large-scale news events influence those changes," Dr Park says.

While fluctuation in trust in the media isn't uncommon, such a drastic increase in a short period is certainly an interesting change, proving that external circumstances and context can make a huge impact on consumers' opinions.

"During the pandemic, the media has been a source for health and safety information for the public, and trust went up as a result," Dr Park says.

"At a time of crisis, people turn to news media for reliable and fast information because it directly impacts on their lives." "While fluctuation in trust in the media isn't uncommon, such a drastic increase in a short period is certainly an interesting change, proving that external circumstances and context can make a huge impact on consumers' opinions."

WE'RE SCEPTICAL ... AND THAT'S A GOOD THING

We all have that one friend that shares clearly untrue information on social media — in fact, 66 per cent of people who encountered false information during the pandemic say that they came across it on social media. Luckily, we're wising up to what's true and what's not.

Although trust in news increased during the pandemic, Australians are careful not to fall for fake news, and with such crucial information being shared in times of disaster, it's smart to be sceptical.

Of those who come across fake news, 62 per cent say they engaged with a least one type of news verification behaviour, and a quarter say they have stopped paying attention to information shared on social media by people they don't trust.

Dr Park says that Australians — especially the younger generations — are doing a good job of verifying news they think might be untrue.

"It is quite reassuring that those who encounter this information on social media actually do something about it — they fact-check or they look for other sources to confirm the information they're seeing," she says.

"However, more than one-third actually do nothing when they encounter fake news. We should pay attention to how we can become more educated in media literacy so that we are guarded against misinformation."

THE CALAMITOUS BUSHFIRES REVEAL THAT NEWS CONSUMPTION ON CLIMATE CHANGE IS POLARISED

We've seen first-hand what can happen when dry conditions and rising temperatures come together. The 2020 bushfires highlighted Australians' views on climate change.

The DNR Australia 2020 found that for many of us, climate change is front of mind. A significant 79 per cent of respondents say they consider climate change to be serious.

Dr Fisher says the level of concern held varies considerably depending on age, gender, education, place of residence, political orientation and the type of news consumed.

Unsurprisingly, Gen Z are far more concerned than their older relatives about climate change.

"Younger people are much more concerned than older generations, women are more concerned than men, and despite the drought, bushfires and floods, regional and rural news consumers are less likely to think climate change is a serious problem," Dr Fisher says.

One-fifth of regional news consumers say they aren't interested in climate change information. Considering the extreme weather events that rural and regional communities have faced in recent years, that statistic is unexpected.

"Given this survey was in the field during the bushfire season that hit regional and rural Australia hardest, at first glance these findings appear surprising," Dr Fisher says.

"The data clearly reflects the polarised nature of the debate around climate change not only based on political orientation but also generations. The ageing nature of regional and rural communities, and tendency toward more conservative politics help explain some of the difference here".

WE'RE IFFY ON POLITICIANS, BUT HAVE **FAITH IN THE EXPERTS**

When it comes to receiving information about COVID-19, Australians trust scientists and health experts the most (85 per cent), followed closely by health organisations at 78 per cent. When it comes to the government, 66 per cent say they have faith, and slightly more than half trust news organisations' reporting about the coronavirus.

After a rough start to the year during the bushfires, the federal government won the trust of Australians as a source of information during the coronavirus crisis. Three-quarters of those surveyed believe that the federal government has done a good job of informing them about the pandemic.

Despite this, DNR Australia 2020 shows news consumers are more concerned about the federal government being a source of misinformation than foreign powers. It also discovered that 54 per cent of Australian news consumers think that false and misleading statements from politicians should be reported by the media and

"Those in favour of reporting the statements contend the public needs to know what their elected representatives are saying, regardless of its accuracy, and therefore it should be reported prominently," Dr Fisher says.

Overall, it seems that 2020 has been a defining year in shaping news consumption habits. We've learned that Australians do change their habits quickly when there is a major crisis or disaster. With the coronavirus pandemic far from over, it will be fascinating to see what impact the health crisis continues to have on our consumption of news and perceptions of journalism.

The survey results from DNR Australia 2020 and COVID-19: Australian news and misinformation highlight the need for a more media-aware and educated society, which can ascertain between real and fake news, prioritise wellbeing over news consumption, and take what politicians are saying with a grain of salt.

Learn more about the DNR: Australia 2020 from Dr Caroline Fisher on UnCover Canberra — a Canberra Metro podcast on www.canberra.edu.au/uncover

Trust in news increased during the COVID-19 pandemic.



BIRTHING ON COUNTRY: CREATING CULTURALLY SAFE SPACES

STORY: ELLY MACKAY PHOTOGRAPHY: LIGHTBULB STUDIO, SUPPLIED

In an increasingly medicalised society, midwife Karel Williams hopes to provide a more culturally appropriate approach to birthing for Aboriginal and Torres Strait Islander women.



"Birthing on Country is a concept that enables Aboriginal women to give birth in safe, culturally appropriate spaces."

Giving birth is a life-changing moment. For some, you're growing your family, and for others — becoming a mother for the first time.

Now imagine going through that while being hundreds of miles away from home, in an unfamiliar environment, and with no support system.

Sadly, that is the reality for many Aboriginal and Torres Strait Islander women. Often, they are coerced to leave their communities to travel to hospitals in far-away cities four weeks before giving birth, alone, and without any remnant of their culture to accompany them.

To get there, they often travel many hours on buses and sometimes elect not to eat or drink during the journey because they can't fit into the toilet space.

For many Aboriginal and Torres Strait Islander women, the process is a chilling reminder that their own mothers and grandmothers followed in the same footsteps — but often returned home without their babies, who became part of the Stolen Generations.

Birthing on Country is a concept that enables Aboriginal women to give birth in safe, culturally appropriate spaces. University of Canberra alumna Karel Williams is a passionate advocate of the concept and works to establish Birthing on Country models of care nationwide.

"The situation that some Aboriginal and Torres Strait Islander women are put in can cause a lot of anxiety, which is not helpful in having a safe, uncomplicated birth," Karel says.

Birthing on Country models of care improve maternal and infant health outcomes, as well as longer-term outcomes, because of the integral connection between birthing, land, place of belonging and culturally safe continuity of care. The model aims to provide an integrated and holistic form of care, and culturally-appropriate maternity services.

"Many Aboriginal people believe that a baby born on country will thrive mentally and physically," Karel says.

"This is about having models that are Aboriginal-governed, incorporating both Western and Aboriginal ways of knowing."

And despite the inference of the term, the Birthing on Country model of care isn't exclusively for women in remote and rural areas. In fact, most Aboriginal and Torres Strait Islander women live in urban areas and give birth in modern hospitals.

"I think some people hear the term 'Birthing on Country' and picture someone giving birth out in the bush under a tree. The fact is that we want to introduce this model across Australia," Karel says.

"Even in urban hospitals, culture and country can be bought into that space to make it culturally safe."

The model also aims to educate healthcare providers about culturally safe practices.

"We want people who are caring for Aboriginal women in maternity settings to consider and be mindful of the way they view us based on their own norms," Karel says.

It seems that much of Karel's life has led to her work in the field. She has family roots in the Palawa and Western Arrernte nations, and four children of her own. She speaks of the experiences of her own aunties, grandmothers, and mother as part of her motivation to work in the midwifery space.

On completion of her Bachelor of Midwifery in 2014, she received the Tom Calma Medal — an award presented to a graduating Aboriginal or Torres Strait Islander student considered to have achieved outstanding academic results. Karel has continued to be recognised for her outstanding work, and in 2019 received a Distinguished Alumni Award for Excellence in Health.

Prior to beginning her degree, Karel worked on Indigenous policy for the Australian Public Service (APS). She knew she had to do more with her community and decided to further her education in order to do so.

"Education has been accessible to me in a lot of ways, and I always had my mother to look up to — she was studying towards her degree when I was in primary school," Karel says.

"My daughter, on the other hand, is the first of her father's side of the family to go to university — so as Aboriginal people, we're still experiencing a lot of education firsts."

As the University of Canberra's second-ever Aboriginal midwifery graduate, Karel hopes that the future for aspiring Indigenous midwives is bright.

"I hope that more Aboriginal people are able to undertake the Bachelor of



A Karel Williams supervising a UC Midwifery student at an antenatal visit.

The opportunity for an education — particularly higher education is something that Karel is passionate about. She was inspired by her mother. who completed a Bachelor of Education, a Masters and a PhD.

It was during her time at UC that Karel became more aware of the shortcomings that Aboriginal and Torres Strait Islander women face when it comes to maternity care.

Midwifery — it's a course that appeals to many of us, because in our cultures, family is central to everything," Karel says.

"It all comes back to the Birthing on Country health framework and how that can be intertwined into the birth experiences of all Aboriginal and Torres Strait Islander women. The more Aboriginal midwives we have, the more that method of care can be normalised."

EATING FOR A BETTER FUTURE

Supporting mindful and meaningful ways of eating to build better, more resilient and equitable food systems.



STORY: **SUZANNE LAZAROO**PHOTOGRAPHY: **MADELEINE WOOD. SOURCED**





The growing global population has set the topic of food security firmly in the sights of researchers, governments and the public for a while now. Nationally, 2020 has crystallised that focus, as Australia's bushfire crisis saw the destruction of farmland and major disruptions to local distribution systems — in an agricultural landscape already challenged by severe drought in some parts.

Then came the COVID-19 pandemic, and the subsequent panic-buying, hoarding and empty supermarket shelves.

"The events of the past year have exposed the fact that our food production and distribution systems are vulnerable under pressure," says Professor Shawn Somerset, Discipline Lead in Public Health and Nutrition and Dietetics at the University of Canberra.

Over the course of human history, we've consistently developed innovations to help us have enough food — in spite of inequitable distribution — but are these enough to contend with the stressors on our food systems, and can we eat our way towards a better future?

Shawn and his fellow researchers at UC feel that we are far from helpless when it comes to shaping sustainable food systems that benefit both humans and the planet — but it will take education and understanding, a concerted will and community spirit, and choices made with open eyes and hearts.

To this end, they have come together to spark dialogue and encourage networking, a common heart for the intersectionality of subjects like food, health, environment, biodiversity and sustainability.

"As a civic university, integrated with the local community and mindful of local systems, UC has the capacity to be a hub for information, innovation and education, shaping sustainable food systems," Shawn says.

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The events of the past year have exposed the fact that our food production and distribution systems are vulnerable under pressure.

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➤ Professor Shawn Somerset, Associate Professor Dr Bethaney Turner, Assistant Professor Dr Ro McFarlane and Associate Professor Dr Nenad Naumovski.



STRENGTHENING LOCAL **FOOD SYSTEMS**

The issue of achieving greater food security is a global one, Shawn says. In a 2015 study, he looked at food acquisition experiences during the Iraqi military occupation of Kuwait.

"We found that many people turned to local food systems as a result of the occupation," he says. This involved food networks linked to local cooperatives, and a significant increase of people both growing their own vegetables (23 per cent) and raising their own livestock (39 per cent).

In spite of this increased domestic production however, the local population continued to rely heavily on imported food — and reported significant weight loss.

The conclusion, says Shawn, is that systems which exceed the ecological carrying capacity for the local environment, and rely too heavily on imports, are vulnerable. While it was conducted halfway across the world, his study strongly resonates with our here and now.

According to Assistant Professor in Public Health Dr Ro McFarlane, the first step is to develop the identity of local food systems, in order to develop customised solutions.

"Our local ACT [Australian Capital Territory] area has a unique population, culture, landscape," she says. "Purchasing power, education and health levels are different here too. Because of all these factors, there is no one-size-fits-all answer in issues of sustainability.

"I'm interested in developing a sense of place in our food culture — that is beautifully illustrated by exploring the history of food in the ACT," says Ro, also a veterinarian and local farmer.

"For example, in the 1820s, early European settlers marvelled at the productivity of the land along the Molonglo and the diverse, abundant diet of the Aboriginal landowners they displaced. One thing I like people to reflect on is the importance of insects — like the Bogong Moth in traditional diets. Insects are being explored again now as future foods.



▲ Knowledge of local food history helps feed conversation about what is produced locally

"Ultimately, strong local systems feed into a more resilient global system."

"European settlers became self-sufficient in terms of food production, with one of the most-produced crops being wheat at the time, there were more granaries and mills in towns like Yass and Queanbeyan, than there were pubs!

"A tutor at Duntroon sheep station, William Farrer, invented the drought- and disease-resistant 'Federation' wheat strain at Tharwa. That trebled the national production of wheat in a few years.

"We had dairies, and amazing market gardens at Oaks Estate and Pialligo. Much of this incredibly productive land was lost in the early 60s, but there was a huge amount of local food production within Canberra in the past."

With the knowledge of local food history comes understanding of the present, grounding a more in-depth conversation about what is, can and should be produced locally.

"The Canberra region boasts fantastic food producers who champion regenerative agriculture — which restores the land and improves its potential — and produce food with lower energy inputs," Ro says.

"Our support of local systems — whether it's buying food grown or manufactured locally, or eating at the local café which sources from local farmers — is what makes these systems vibrant and resilient." says Shawn.

Ultimately, strong local systems feed into a more resilient global system.

"The EAT-Lancet Commission on Food, Planet and Health report is a fantastic resource on a planetary diet," Ro says. "The Commission brought together sustainability, health and food scientists to look at a diet that people could eat sustainably, which would support health, not degrade the environment and be fairly distributed across the global population.

"There are no surprises there — a good-for-the-planet diet incorporates less red meat, less dairy, more vegetables and more fruit. But it's important to take this knowledge back to a local level, use it to unravel the many issues around food, and build better local systems."

GROWING YOUR OWN FOOD

Armed with the knowledge to discuss production and provenance, as well as making informed purchasing decisions, another valuable way for the public to buoy local food systems is by growing their own produce.

"The COVID-19 pandemic has provided a perfect opportunity, as we spend more time at home," says Dr Nenad Naumovski, Associate Professor in Food Science and Human Nutrition. "Areas in which we commonly have gardens, grass or non-utilised soil can be used to grow vegetables, to raise chickens for meat and eggs."

He advocates a consumer perspective which supplements home-grown food with locally-grown produce.

"The opportunity is here to do more than just grow our own food — to also get out of our houses and work the land," he says. "This then becomes a great teaching moment for the younger generation, spanning lessons from maths, history, science, biology

and chemistry, as we look at where food comes from."

Shawn's research on the role and impacts of school and community gardens has also revealed their substantial benefits not just in dietary behaviour (with some studies indicating increased preference or consumption of vegetables by the children who grew them), but in community-building, social development and environmental sustainability.

Associate Professor in Arts and Communication Dr Bethaney Turner has been working alongside local gardening not-for-profits in Canberra since 2010, looking at how community food production helps diverse communities — including refugees and migrants — understand and adapt to local ecological conditions and adopt broader sustainable behaviours.

"The benefits of community gardens are tangible and significant — we now need to look at issues of their longevity and recruitment to work in the gardens," Shawn says.

lacksquare Growing your own food at home and in community gardens has substantial benefits.



PLANT-BASED DIETS

Australians don't consume enough fruit and vegetables, Nenad says — and the health implications of this stretch into the future, especially with the issue of an ageing population to consider.

In studies based in the Mediterranean region (Athens and the Greek islands) published this year, Nenad and international colleagues led by Professor Demosthenes Panagiotakos from Harokopio University in Athens, analysed how consumption of animal and plant proteins affected successful ageing in people over 50.

"We evaluated successful ageing using the validated Successful Aging Index (SAI) composed of 10 health-related social, lifestyle and clinical characteristics," he says.

They found that participants with high consumption of plant proteins were more likely to have higher SAI levels; in comparison, low plant protein consumption was negatively associated with SAI.

"The consumption of a plant-based, protein-rich diet seems to be a beneficial nutritional choice that may benefit individual health and prolong successful ageing," says Nenad.

There are persuasive arguments for a plant-based diet from an environmental viewpoint as well.

"Red meat is an incredible driver in terms of land use and the production of greenhouse gasses, so we need to also think about our meat consumption in those terms," Ro says. "I think we just need to be having conversations about how we can do things better."

It's about balance and consideration, rather than extremes.

"Red meat is an incredible driver in terms of land use and the production of greenhouse gasses ..."

FOOD PATHS LESS TRAVELLED: PRICKLY PEAR **AND KANGAROOS**

"Ten years ago, people treated rocket and fennel like weeds," says Nenad. Today, both are commonly found on both supermarket shelves and restaurant menus, both upscale and casual.

Widening our food horizons is a great way to support sustainable eating, and Nenad and fellow researchers at UC are investigating the nutritional components and health benefits of the prickly pear cacti.

A collaboration with research scientist Dr Natalie Alexopoulos in Victoria. the project includes a number of aligned studies into the Opuntia genus — a spiny, drought-resistant succulent that is more commonly known as an invasive species than a food source.

"The prickly pear does not require much agricultural attention or water, and finds its perfect growing environment on very arid land," says Nenad. "Our future research is orientated in the use of cladodes (leaves) as a food source, therefore minimising wastage."

"Ten years ago, people treated rocket and fennel like weeds."

This research is about looking at plants that can proliferate and thrive in marginal climactic conditions, with minimal human intervention, and developing strategies for these to enter the mainstream as food sources, says Shawn.

Ro cites the Eastern Grey Kangaroo as another potential food source which should be viewed through a different lens.

"Driven by concern for overgrazing of conservation reserves, thousands of kangaroos are culled annually in Canberra," she says. "Kangaroo is still considered an unusual meat to consume by the mainstream, and it can be a sensitive issue — but it's an important one to explore."



The drought-resistant prickly pear is a potential food source currently being explored by researchers.

CLOSING THE LOOP — WASTE

Food wastage can be considered according to several tiers, the first occurring at the level of farms and primary producers.

"From an agricultural perspective, we see up to 35 per cent of farm yield wasted," says Nenad.

The second tier is at the processing level and is primarily concerned with leftover components of produce.

Ongoing research is focused on turning by-products into food additives, nutriceuticals and supplements, medical remedies, fertilisers, animal fodder, antimicrobial components, cosmetics and biomass for biofuels.

Considering how much we consume affects how much wastage we produce, says Senior Lecturer in Nutrition and Dietetics Dr Michelle Minehan.

"There is a disconnect between how much we should and do consume, and also how much we discard," she says.

"I think we have, in many cases, lost touch with how much is reasonable to eat, in favour of value for money. We need to rethink our ways and improve our food literacy — the understanding of how we use food."

While much of the research on food wastage is done at a generic level, Bethaney is interested in looking at the whole cycle of waste, framed at a household level.

"People have a personal, sensorial and emotional attachment to food, which influences how it comes into the home. is used and repurposed, or becomes waste," she says. "When we tell people to stop wasting food, it goes beyond just saying 'change your behaviour' — it's about factoring in those deep connections to childhood, culture and emotion etc.

"The future is going to taste very different — punctuated by much more extreme climatic events, we're likely to not be able to grow some foods, and current means of transporting food won't always be available — so access to food will change, and notions of making do and engaging with seasonality and local ecological conditions will become very important."

The narratives and contexts within which we frame all issues of food and food systems are powerful building blocks of eating for the future.

It's all about mindfulness and meaning, integration and interconnectedness, innovation and perspective shift — and always, the resilience and adaptability built into mature systems able to meet future demand.

"It's about what's good for the person, the community, and the planet," says Shawn. "That's the only way we will really move forward."

THE PRIVILEGE OF **REACHING OUT**



STORY: TIM GAVEL PHOTOGRAPHY: ROHAN THOMSON, SUPPLIED

UnCover chats to alumna Christina Richards, who was instrumental in establishing the Student Empowerment Fund (SEF) an outreach program that underscores UC's 30-year tradition as a civic, community-centric university.

In the late 1980s, Christina Richards traversed the path experienced by many students as she contended with the pressures of study, single parenting and work, coupled with bringing up a family on minimum funds.

It's not an easy road. Nonetheless, the majority of students make it through while enjoying a beneficial university experience.

The COVID-19 pandemic has seen the journey for many students become tougher than anybody

Those students, relying on part-time employment to cover basic living expenses while studying, have been particularly impacted, their jobs disappearing as restrictions necessitated by the COVID-19 pandemic took hold.

In such times, a sense of community is required to establish a support network, and this is how Christina became involved in helping provide the impetus to set up the Student Empowerment Fund (SEF).

Christina came to Australia from

▼ The Student Empowerment Fund creates a sense of community, and provides financial aid to support UC students in need.



She's still here today — but it wasn't always an easy path.

As Christina recalls: "When my twins turned six, I realised that I couldn't support us on my then-wage. So I ended up doing a Graduate Diploma in Community Counselling at UC. I remember in particular, Dr Sally Guggenheimer, my lecturer who was empathetic, warm and went the extra mile for students."

Christina says that despite having many competing priorities, she enjoyed the university experience and meeting like-minded people doing postgraduate studies who were going to make a difference in people's lives.

And it is this enjoyment of the university experience that Christine believes has been taken away from many students because of financial pressures, further exacerbated by COVID-19.

She says she wanted to do something to support students facing such hardship.

"A friend of ours, a single mum, has a son at university who is doing a double degree. He was working 28 hours a week to make ends meet," she says. "We wanted to help him financially if he would reduce his work hours and spend more time with university friends, taking time out to be a young person, with time to discuss and think about the things that do or don't matter in life. To have some 'down time' and not be burdened by the responsibility of an almost full-time job plus a study workload. I had been privileged to have this time during my undergraduate degree although I did work in a bar for a few evenings a week to supplement my meagre income! My conversations with him got me thinking about supporting more students."

As a UC alumna with a desire to contribute to the community and a background in teaching and international development, Christina contacted UC's Director of Advancement, Eoghan O'Byrne, and the concept of the UC Student Empowerment Fund was born.

"I told him I wanted to help," she says. "My personal experience in supporting a refugee family in Canberra meant that I knew a little help can go a long way.

"It could simply involve being able to give somebody a food or travel voucher, or stepping in with some emergency funds

where necessary. It needed to be accessed by staff who could identify students with immediate short-term needs that could be met quickly. We discussed whether such a fund could be made available without the usual red tape, that can result in it taking a long time to ensure funds get to the student. Eoghan assured me that he could work this out."

Christina says that with the fund up and running, she has been incredibly heartened by positive stories filtering through from students who have benefited.

These students who were on the threshold of abandoning their studies before being given access to funds for basic living expenses or resources to help them study, such as the provision of a computer.

"I couldn't imagine a better use for the money. Those students now feel even more a part of the UC community, and that's incredibly important to their mental health and sense of wellbeing."

The SEF has also resonated with the community, which has helped it grow.

"Computers have been donated, and people are sending money, food and other useful goods like warm jumpers," Christina says. "With this network at UC the community is able to help when someone in need shows up - and that's a result of the establishment of the fund."

Christina — who is now an online counsellor, NLP practitioner and hypnotherapist in Canberra — says that while she is not wealthy, she considers herself in the privileged position of being able to donate — and is happy to be able to do so.

This sense of building community and care as well as the ability to contribute to better the lives of others have been the underscoring principles for the establishment of the Student Empowerment Fund, the need for which is unlikely to dissipate any time soon.

Hopefully, it has established a legacy for years to come that others will contribute to.

To make a contribution to the SEF, go to www.canberra.edu.au/giving/funds/ student-empowerment-fund



Christina Richards is happy to be in a position to be able to reach out and help others.

"Christina says that with the fund up and running, she has been incredibly heartened by positive stories filtering through from students who have benefited."

THE FUTURE IS ...

STORY: KATARINA SLAVICH
PHOTOGRAPHY: MADELEINE WOOD. SUPPLIED

In a world that has seemingly shifted on its axis numerous times in 2020, we find ourselves asking — just where are we headed? As we celebrate the past 30 years of being a university, some of our UC community weigh in with their thoughts on the future.



KIRSTEN TAPINE

Business Manager, Office of Aboriginal and Torres Strait Islander Leadership and Strategy (OATSILS)



The future is precious

Recently, I took a trip home to Goodooga, Gamilaroi Country. During my time there, in the presence of family, I reflected upon just how precious our lives are. I'm a proud Aboriginal woman and entrenched in our culture is a deep connection to not only the land but our people and bloodlines.

To the vast majority, black lives only seem to matter when it is trending — but for me, our lives matter every second of every day. It's not only my life that my heart aches and worries for, but also the ones I love dearly.

Moving forward, I want everyone to see every life as valuable. I do not want another life lost because of the colour of one's skin.



Student, Design and Built Environment



The future is accessible

My ideal future is being immersed in projects in the Built Environment realm, leading the way for other women in the industry.

I believe the role of an architect is to make the built environment not only beautiful but fundamentally more functional, accessible and inclusive; I look forward to a time where I can improve the lives of others by creating buildings that accomplish this.

PROFESSOR JASON BAINBRIDGE

Executive Dean, Faculty of Arts and Design



CINDY MITCHELL

Chief Executive Officer, The Mill House Ventures Limited



The future is creative

Creativity is going to be the future's greatest resource.

It has always been a defining characteristic of being human and a cornerstone of our civilization.

Massive disruption has been the defining characteristic of 2020. A series of unprecedented challenges around inequality, the environment and health have forced us to connect, adapt and live differently, more so than we ever have before. But each crisis also reminds us just how important creativity is, and how important it is going to be in the future. For individuals who are looking for jobs. For nations managing health concerns while rebuilding industries and economies. For institutions searching for new ways to engage.

Creativity remains the very best resource we have to bring about the future we imagine.

The future is Indigenous

An Indigenous future is one where the sacred duty to country is ahead of everything else — profit, ego and political affiliation.

The epic upheaval of 2020 has created an opportunity to shift consciousness to the resilience of oppressed and colonised people.

Our resilience is not ephemeral — it is embodied by our languages, cultural and artistic practices and management of land and relationship to others.

This shift will see more people choosing to live in a way that would not shame traditional custodians or fail in our responsibility to equip the next generation for their role as quardians.

DRJOHN WILLIAMS

Assistant Professor of Health and **Physical Education**



PROFESSOR GEORGE CHO AM

Professor, Faculty of Science and Technology



The future is active

For me, a vision of the future would be one where all children are taught quality physical education and teachers, particularly primary school teachers, are confident and equipped to teach to such a standard.

Schools are the only guaranteed place where children can be taught movement education. While it is unrealistic for physical education to be solely responsible for solving many lifestyle diseases, it can nonetheless play an important role.

I believe that the UC Faculty of Education is in a good position to make a value-added difference in this regard, and our current and recent research is paving the way for a 'sea change' in this area. As we all know, physical health is inextricably linked to mental health. In uncertain times, it is important that we take as much responsibility as we can for our health and wellbeing to best prepare for the future.

The future is society, science and the economy

In the short- to medium-term of the next few years or so, the socio-economic environment we operate in will be vastly different from whence we came.

Using the rear-view mirror to drive forward may be one way to appreciate history and to avoid repeating it.

Humanity and society are guided in large part by our children and by what science brings.

Today, Gen Z and the Millennials are showing us the way forward, with their aptitude and facility with information technology in learning remotely, with only occasional face-to-face meetings.

Future society and generations will be guided by science, informed by quality data for modelling, intelligence (artificial and otherwise) and common sense.

PARENTING IN THE DIGITAL AGE

Highlighting some of the challenges faced by contemporary parents in a digital era.



STORY: **ELLY MACKAY**PHOTOGRAPHY: **LIGHTBULB STUDIO, SOURCED**





Remember those childhood days running around outside until the streetlights came on? Back when our parents didn't know where we were ... but it didn't matter because they knew the smell of dinner would lure us back to the house each night?



Childhood — and indeed, parenting — looks slightly different these days.

Parents are expected to navigate a world of ever-changing technology and are told that they must find the perfect balance of screen time with other activities.

With many school-aged children required to have their own devices as part of the curriculum, it can be difficult for parents to simultaneously maximise the various opportunities of digital media, while minimising the risks posed by digital media to their children.

Dr Catherine Page Jeffery is a Lecturer in Communication and Media at the University of Canberra's Faculty of Arts and Design and has published several research papers detailing the various challenges of contemporary parenting in the digital age, and how parents are navigating this environment.

With two children of her own, Catherine knows as well as anyone that mediating children's digital media use isn't easy.

She believes that there is no easy answer or solution to regulating media use in the home. But she also believes that ongoing dialogue with children, including early discussion of the risks that come with technology use, helps provide children with the skills that they will need to safely navigate this terrain.

Her published papers are based on interviews and focus groups with parents of teenagers. Throughout the course of the study, the parents expressed serious concerns and even anxiety about how their children are using technology.

"I went into the research thinking that the biggest worries for parents would be online predators, sexting, pornography and questionable self-representation practices online," Catherine says.

"Those issues did come up — for example, parents were worried about their children sending nude images or being approached online by a paedophile — but their main concerns were about

▲ Dr Catherine Page Jeffery says there is no easy answer when it comes to kids' technology use.

66

Parents are expected to navigate a world of ever-changing technology ...

"

evolving technology, screen time, and simply trying to manage day-to-day media use in the home."

Negotiating a level of trust and privacy for children was raised as an issue that parents found difficult to navigate.

"The problems related to the fact that teenagers in particular want autonomy and privacy, and that digital media is important for their connections, given the fact that so much of their life is lived online," Catherine says.

"Parents want to know how to manage that and be aware of the risks of overexposure. They want to know how to get them off their devices sometimes."

It can be confusing and difficult to know how much screen time is too much.

In 1999, the American Academy of Pediatrics (AAP) released guidelines that over time, came to be known as the 'two by two' rule. The guidelines indicated that children under the age of two shouldn't be exposed to screens and devices at all, while children older than two should have a maximum exposure of two hours a day.

The guidelines became the bedrock of advice that parents around the world followed.

In 2016, the AAP shifted their stance and began to provide guidance on how parents could introduce and use technology responsibly for children of all ages — even toddlers. For parents worldwide, the pivot should have come as a relief — finally, they could plant their kids in front of the TV while they cleaned the kitchen or hung the laundry out.

Unfortunately, this change only created more confusion around what is right and wrong in the digital age. Catherine says the opinion that 'a good parent limits screen time' isn't helpful.

"The parents I spoke to indicated that they felt they should be restricting screen time, but that they couldn't because their children were often using the devices to complete their schoolwork," she says.

While it can be hard for parents to differentiate social and educational technology use, Catherine says that using devices to aid children's education is part of a larger narrative that depicts technology as the way of the future.





▲ Catherine has two children of her own, and believes in ongoing dialogue about technology use with them.



▲ Technology is revolutionising the way children learn.

"This increasing reliance on devices for school sits within a broader discursive context of technology equalling progress and opportunities for our kids," she says.

"The narrative says that digital media technologies are going to revolutionise the way children learn and that by using those technologies from a young age they will be prepared for the jobs of the future; some of which haven't even been invented yet."

Catherine says that while we need to be critical of these utopian narratives, they do point towards the increasing ubiquity of devices across all aspects of young children's lives, and highlight that 'opting out' of technology entirely is no longer a realistic option for most families. The simplistic advice to just 'take the device away' or 'turn off the modem' isn't exactly helpful either, especially when children are completing their homework online. Some of those interviewed said that such advice made them feel like failures as parents.

They also agreed that there isn't an easy answer as to how parents should mediate their children's device use and that there is no one-size-fits-all approach.

"This increasing reliance on devices for school sits within a broader discursive context of technology equalling progress and opportunities for our kids."

Overall, the wellbeing of children and ensuring they had time to 'switch off' is a priority for most. Even for adults, spending copious amounts of time on a device can affect sleep patterns and sleep quality.

Most electronic devices emit short-wavelength light which affects the production of melatonin (the sleep hormone), and Catherine says that according to parents in her study, it wasn't uncommon for their children to be glued to devices into the early hours of the morning.

"A lot of parents admitted to busting their children on a device at one or two o'clock in the morning when they're supposed to be in bed, or reported discovering text messages between their child and friends in the middle of the night," Catherine says.

"Parents are understandably concerned about the wellbeing of their children and a need for them to not be on call to their friends 24 hours a day."

The other issue concerning parents was that the social lives of their children would be impacted if they enforced a reduction of the screen-time or device usage. Many felt that much of their teenagers' social lives existed online, and by removing access to those applications they would be causing more harm than good.

"Most of us — including teenagers — live much of our lives online, with very little distinction between that and real life," Catherine says.

"There are plenty of arguments that children socialising online is no different to when we would talk to our friends on landline phones for hours on end in the 80s and 90s."

The parents involved indicated that they weren't sure if their level of discipline over

technology was in line with other parents. Their children often used the old adage 'but everyone else's parents let them!'.

"The parents were worried that if their kids' friends were organising social gatherings at times when their own kids weren't allowed to be on devices that they would suffer," Catherine says.

And in spite of concerns about friendships suffering and children experiencing Fear of Missing Out (FOMO), it's always advisable to be aware of what children are using their devices for. The constant progression of technology, apps and games are commonly seen as a barrier for parents who are trying to stay aware of their child's technology use.

There is often a perceived lack of knowledge among parents when it comes to the latest trends in the tech world.

Much of the cyber safety advice in circulation suggests that parents should research and get to know what their children are doing online and learn about their favourite games.

Unfortunately, the time and resources involved with this can be off-putting for parents.

"Most of the parents I spoke to said they simply don't have the time or patience to be constantly on top of evolving trends, and I don't think it's realistic or reasonable to expect them to." Catherine says.

When it comes to mediating digital media use, there are two commonly-used mediation techniques that parents utilise.

The first is known as restrictive mediation and involves imposing rules, restrictions and utilising technical tools such as filters.

The second, more commonly-used approach, is known as enabling, or active, mediation — where parents engage in dialogue with their children and aim to educate them to self-monitor their digital device use.

"With enabling mediation, parents are able to participate in online activities with their child and talk about what they're doing, as well as talk about the risks and opportunities the online world brings," Catherine says.

Most of the parents she spoke to said they were more likely to use this approach, even if they had initially used



▲ Catherine feels that parents should have a broad knowledge of their children's tech use.

the restrictive approach when their children were younger.

"The default position of many parents was that they had started out with rules and some forms of restrictive mediation — like having devices go off at 9pm, for example — but as time went on they relaxed their rules and moved towards a more enabling approach," Catherine says.

"This shift was usually as a result of conflict and arguments."

So which of the two techniques is more beneficial?

"I think the best advice I can give is for parents to have a broad knowledge of what their children are doing, keeping in mind that older teenagers are entitled to privacy and autonomy," Catherine says.

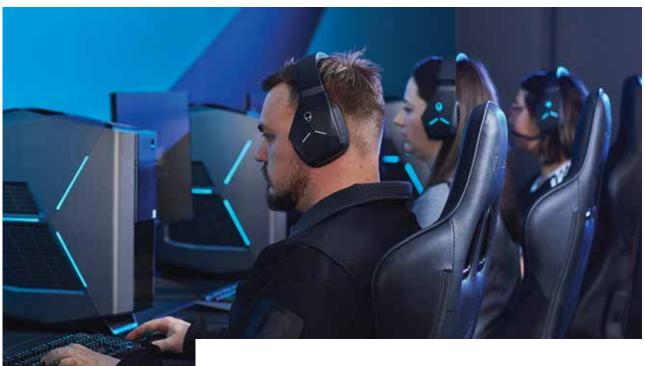
"Educating and talking to children and hoping they'll come to you with any worries or concerns is probably the best that anyone can do."

"Educating and talking to children and hoping they'll come to you with any worries or concerns is probably the best that anyone can do."

THE RISE OF ESPORTS

STORY: ELLY MACKAY PHOTOGRAPHY: LIGHTBULB STUDIO

In an age where much of our lives is lived online, the commodification of gaming seems inevitable. Now, people are quitting their day jobs to become professional gamers and global organisations are getting on board.



▲ The esports arena is highly-competitive, with a large global spectator base.

Gone are the days when computer gaming was considered a hobby for the lazy. With video games growing in both technological terms and prestige, esports' upward trajectory has seen more gamers and organisations investing their time and money into a different kind of competition sport.

Now officially recognised as a UniSports category, esports enjoys a passionate and growing community of gamers, investors and fans around the world.

It's considered by many to be an inclusive and social way of spending time with friends and fellow gamers, and an accessible, educational, and relatively inexpensive way to be involved in sports in a less traditional sense.

Although pretty much anyone can play for fun, industry experts are seeing a rise in the commodification of the sport, with many more players training to become paid esports professionals, complete with corporate sponsorships — Coca-Cola, Mobil 1 and Mercedes-Benz are among some of the big-name companies involved in running tournaments and sponsoring players.

It's not just big companies that want a piece of the esports action.

American artiste Drake and music producer Scooter Braun have recently joined forces to invest in a Los Angeles-based esports company.

Esports has a fast-growing participant base, and it's also one of the most-watched spectator sports in the world. The leading esports streaming platform, Twitch, hosts up to 15 million unique daily visitors who watch a cumulative average of 46 billion minutes a month.

Professional esports players take their job as seriously as any other athlete. Coaches, nutritionists, and personal trainers are part of a team that ensure top-tier players are able to perform at their best.

"Professionals in the realm consider playing their full-time job," says Benjamin Muller, Campus Life Coordinator and Esports Lounge Manager at UCX.

"They train six to eight hours a day and undertake serious fitness regimes to stay on top of their game."

And being on top of that game is important, with prize money, sponsorships and merchandising all contributing to reported career earnings of between three and seven million US dollars for the best players.

So, what exactly can be categorised as an esport? According to Benjamin, it can be any computer-based game.

"By classifying any computer game as an esport, it means that anyone can get involved, regardless of their skill level," he says.

"Of course, as with any sport, there are full-time professional players all the way through to novice players who do it purely for the social aspects."

Interacting from behind a screen may appear to be an unusual way to build friendships, but esports promotes the concept through competitions and events, while lounges — like the one at the University of Canberra — encourage players to come together to play games and train for competitions.

"Often, players come into the lounge, see what others are playing and join in. And a lot of individuals come in and end up forming teams with others who are using the space," Benjamin says.

Lounges also allow for stricter regulation of players during competitions. Staff monitor competitors while they play and ensure they're following competition guidelines.

Because it's relatively new, the regulation of esports can be a difficult issue to manage. There is no international regulatory body, although individual countries often have independent bodies to provide guidance and rules for players.

In Australia and New Zealand, the Esports Games Association (EGAA) is an incorporated entity dedicated to establishing and growing esports in the two countries. It works with players and organisers to set consistent standards for the industry.

As the sport continues to grow, so too does spectator interest.

As a result, competitions are open for gambling and betting. In response, the EGAA is implementing a national framework and working with national sports and gambling regulators to ensure esports maintains its reputation for a friendly and accessible community, particularly for the players who are involved at a professional level.

Like anything involving technology, esports continues to change with the times. While video games have traditionally been played on personal computers (PCs) and consoles like PlayStation or Xbox, they're moving onto mobile phones and tablets.

This accessibility has also created a shift that allows younger, pre-school and school aged children to get involved. Parents needn't feel quilt either many games, like *Prodigy* and *Endless* Alphabet, cater to children and encourage educational gameplay.

Currently, the majority of players are in the 18-34 age group, but technology changes open esports up to a wider demographic.

"Esports has a fast-growing participant base, and it's also one of the most-watched spectator sports in the world."

"The current demographic represents a generation that has grown up with technology and is able to use it easily," Benjamin says.

"By having games available on mobile devices, anyone can get involved. Most people have a smartphone these days.

"Because of this shift, we're seeing both older generations and younger teenagers getting involved in esports, which is fantastic.

"You don't need a base level of fitness which is good for the elderly — you don't need much equipment and it's easy to be able to play anywhere and any time."



UNEXPECTED FIRST YEAR OUT



STORY: KATARINA SLAVICH PHOTOGRAPHY: MADELEINE WOOD, LIGHTBULB STUDIO

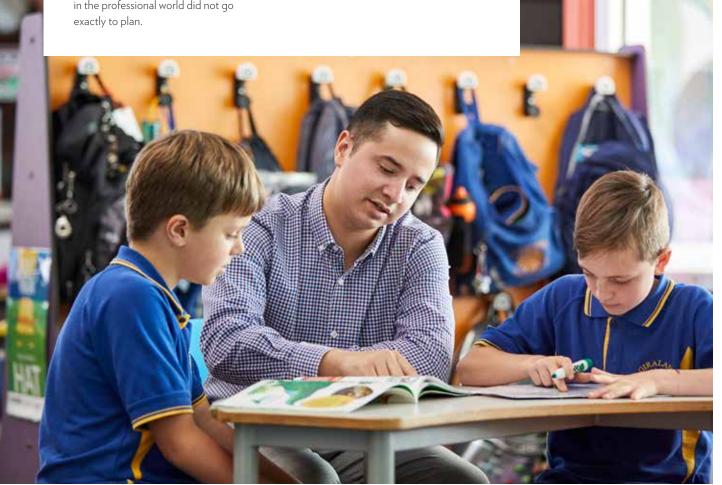
Meet three new University of Canberra alumni who epitomise the courage, resilience and flexibility at the heart of the 30-year-old institution. They share their stories of embracing change and standing strong in a challenging time.

In Australia, 2020 brought bushfires, a damaging hailstorm that lashed the nation's capital and to top it all off, a global pandemic.

Each of us has been impacted in some way, including recent University of Canberra graduates, who faced some unique challenges as they joined the workforce. After spending three years or more studying and preparing for their dream jobs, their first year in the professional world did not go exactly to plan.

Three recent graduates share their stories about how their first year after university played out under challenging circumstances. Each of them had the same message: you need to adapt and be flexible.

As the University of Canberra celebrates its 30th anniversary this year, it also celebrates the resilience, flexibility and fortitude of its community.





JANE GARRAWAY Lawyer, Snedden Hall & Gallop Bachelor of Laws

BEFORE COVID-19

Jane got her first taste of working in the law profession while she was still studying her Bachelor of Laws at UC. She landed a job at Canberra law firm Snedden Hall & Gallop as a Paralegal in November 2018.

Once she completed her undergraduate degree, she was promoted to the graduate position at the law firm, where she worked in the Family Law team, as well as supporting lawyers in other areas of the firm. Jane continued her studies in 2020, completing her Graduate Diploma of Legal Practice (GDLP), to become a practising lawyer.

As well as juggling study and full-time work, Jane is a semi-professional athlete with the Brumbies Super W team. She had a grueling schedule before COVID-19 hit, which saw her days start at 5am for training, a full day of work and an afternoon training session and then studying well into the evening.

DURING THE CANBERRA LOCKDOWN

The COVID-19 pandemic came as an opportunity for Jane to enjoy some down time. Unfortunately, the Super W season was cut short just before the finals, but that meant Jane could wind back her training schedule and focus her energy on other things.

The COVID-19 crisis also saw the court system shut down and move from face-to-face to virtual sessions.

"I don't believe it is something those in the law sector have ever faced before," says Jane. "Having the court buildings shut down meant that everything had to occur via telephone and video conference. Luckily, the courts were able to set it all up quite quickly, but it was definitely something new for lawyers and all the people involved in the system."

Fortunately, Snedden Hall & Gallop had already been operating as an electronicbased firm when the sector had to move their systems online. A lot of the firm's work was already being done by e-files and through servers, and it wasn't reliant on paper files, so the shift to working remotely was an easy one.

Jane ended up working from the office during lockdown as it was more convenient for her, and enough of the other staff opted to work from home to meet social distancing quidelines. But, she says, she still faced challenges from the new conditions.

"That period of time has really shown us all the importance of being adaptable and flexible," says Jane. "Lots of things were thrown at us that were new and out of the norm, and we had to find solutions."

"That period of time has really shown us all the importance of being adaptable and flexible."

LOOKING AHEAD

Jane completed her GDLP and was admitted as a lawyer in August 2020. Her plan for the remainder of the year has been to continue to develop her skills and keep learning.

Her journey to become a lawyer wasn't quite traditional. In fact, Jane was convinced she didn't want to be a practising lawyer when she first commenced her degree.

"I thought studying law was a good idea, as it was quite broad and didn't necessarily mean you had to go down the path of practising in the legal sector,"

"While I was studying, I learned so many valuable skills, and as I progressed through my degree I realised that I did want to become a practising lawyer and fine-tune my skills further.

"I found that UC prepared me for real-life situations and scenarios that I have come across while working at Snedden Hall & Gallop. The further along I got in my degree, the more confident I got."





TIM WALSHE

Teacher, Arawang Primary SchoolBachelor of Primary Education
(Creative Arts)

BEFORE COVID-19

Tim's first year as a graduate teacher ended up being very different to what he expected, and COVID-19 wasn't entirely to blame.

In fact, it all started in Hong Kong.

In mid-2019, Tim received the Department of Foreign Affairs and Trade's New Colombo Plan Scholarship where he was offered a year-long exchange at the Education University of Hong Kong to complete his Bachelor of Primary Education (Creative Arts). However, political unrest and violent protests in the city meant that Tim had to cut his exchange short and head home early.



Instead of spending the first half of 2020 in Hong Kong as originally planned, Tim landed a job as a Year Three teacher at Arawang Primary School in Waramanga, Canberra, and completed his teacher induction paperwork in time for the start of the school year.

DURING THE CANBERRA LOCKDOWN

The period between March and June 2020 proved to be a very challenging time for Tim and his fellow teachers, as they shifted everything they knew about teaching online for the first time.

In the early stages, they planned week by week, as health advice was changing every day. Then came the decision to go pupil-free, so teachers could shift to remote learning.

"Everything moved very quickly once we went pupil-free," says Tim. "All of a sudden, kids were having their last day of Term One which brought about a lot of anxiety. There were a lot of questions about our role as teachers, the role of parents, were they going to be homeschooling or was it remote learning, which are two different things."

Tim's school used Google Classroom to deliver its remote learning. It was a smooth transition, as most kids had access to Chromebooks.

The ACT Education Directorate stepped in and helped to provide students who didn't have Chromebooks or Internet access with the tools necessary to continue their learning online.

Lessons were pre-recorded and posted in each class's virtual classroom, where students could easily access the work. Teachers would check in with the class once a day, and they would play games to encourage engagement. The rest of the day was spent planning future lessons and checking in with individual students and their families.

"We weren't just teachers anymore," says Tim. "We were tech support, therapists — anything the kids needed to ensure their wellbeing in a challenging time."

"We had a lot of support from the ACT Education Directorate. We followed their advice and the big focus was on wellbeing for everyone — for the teachers and staff, but mostly for the kids and their families."

Teachers, students and families settled into the routine of remote learning, but then came the message that it was time to head back to the classroom.

"We prepared for Term Two to be delivered online, but at the end of Week Two, were told of the staggered return to face-to-face learning," says Tim.

"I then had two weeks to shift everything from online back to teaching in the classroom. There was another cycle of change — and change is huge for students. They need routine and reassurance, and when we couldn't provide answers to their questions, there was a lot of anxiety."

In the end, students experienced seven weeks of remote learning across Terms One and Two, and with the holidays, the kids were away from school for a total of nine weeks.

LOOKING AHEAD

With students returning to classrooms halfway through Term Two, things went back to relatively normal for Tim and his students. However, he has learnt some valuable lessons from the challenging experience.

"Even though we are flexible and adaptable to a certain degree, we need to be able to continue to adapt even better as teachers, shift things quicker and be even more flexible," he says.

"Our teaching shouldn't just include traditional methods, or just be online, or just using Chromebooks. It needs to include different pedagogies. We can't be set to any given way; we need to be prepared to shift to anything seamlessly."

Tim's message to education students is to always be passionate about being a learner yourself.

"You need to love what you do and be okay with the fact that you might not have it all together, all of the time," he says.

"If you go into this profession thinking that it is just a job and you don't have the passion for it, you won't make it.

"If you just impact one child, that is all that matters."



SARAH BAKER Registered Nurse. **Calvary Emergency Department** Bachelor of Nursing

BEFORE COVID-19

Sarah is working in her dream job in the Emergency Department at Calvary Hospital in Canberra. After completing her Bachelor of Nursing at UC in mid-2019, she didn't hold back to get to where she wanted to be.

"My dream nursing job was always to be at Calvary Emergency, so one day while on placement there, I walked down to the Emergency Department and asked the director for a job," says Sarah.

"I feel so blessed to have this job and I have learnt so many skills in the past 12 months "

Over the last year, Sarah completed the Emergency Nursing program for new emergency nurses at Calvary Hospital. She also did Critical Care Nursing and High Dependency Nursing online courses to further develop her skills to help patients who require higher care in the resuscitation area.

Sarah says that the skills she learnt while undertaking her Bachelor of Nursing at UC made it easy for her to settle in and gain confidence quickly as a Registered Nurse.

"The Nursing staff at UC were always willing to support and guide us through the degree and I learnt a lot from them," says Sarah. "The way I think and care for patients has been moulded on their teaching.

"I am so lucky to have an essential job, in which I see so many different things and learn so much every day."

DURING THE CANBERRA LOCKDOWN

The Calvary Emergency Department was essential during the COVID-19 lockdown. The department underwent numerous changes to cope with the increase in patients, and extra training to up-skill staff to cope with the potential severity of illnesses.

Sarah says all staff were more cautious with patients who had respiratory symptoms.

"We screened patients at triage before they came in, to make sure they went to the right area of Emergency and didn't potentially infect other patients," says Sarah.

"If a person was a potential COVID-19 patient, we put on full personal protective equipment including a mask, gloves, gown, hair cover and face shield.

"We had to prepare everything prior to walking into the room as we were unable to go out, so we required a buddy nurse to assist us from outside of the room if we needed extra equipment."

Sarah says she knew going into the nursing profession that it would be difficult but rewarding, but did not expect to have seen so much in her first 12 months on the job.

"I certainly did not think that I would be doing my graduate year in the middle of a pandemic," says Sarah.

"I am glad that I had a few prior months to settle into the job."

LOOKING AHEAD

Sarah is determined to keep learning and up-skilling throughout her nursing career. She plans to undertake a Masters degree specialising in Emergency Nursing, with her ultimate goal to become a Medical Emergency Team (MET) Nurse.

Sarah says there are some lessons learnt from the pandemic, that she will carry into the future. "We have been working the same as we usually do in Emergency, in regard to how we collect information about the patient, identify and diagnose,

develop a treatment plan and evaluate and alter their treatment," said Sarah.

"I believe the major long-term changes will be around infection control, and how careful we are with patients presenting with potential viruses and contagious diseases."

Incredibly passionate about the work she does, Sarah has a long future in nursing ahead of her.

"I did not expect to see so much in my first year, but I love my job, helping patients and working with my colleagues," she says.

"I am so lucky to have an essential job, in which I see so many different things and learn so much every day."



NGALADJIMA, OUR NGUNNAWAL GARDEN

ILLUSTRATIONS: AVA WANG | BACHELOR OF DESIGN (VISUAL COMMUNICATION)

A beautiful space of cultural connection, learning and meaning, the Ngunnawal Plant Use Education Space is home to a variety of vegetation significant to the Ngunnawal peoples, the Traditional Owners of the land on which the University of Canberra's Bruce campus stands.

Launched in 2019, the garden's Ngunnawal name is Ngaladjima (pronounced "narlad-jeema"), referring to plants of different sizes.

"The Ngunnawal Plant Education Space recognises the cultural history of this

land and values the ongoing rich cultural legacy of the Ngunnawal people," says Professor Peter Radoll, UC's Dean of Aboriginal and Torres Strait Islander Leadership and Strategy.

Here are just some of the varieties found in Ngaladjima.

All plant information is from the *Ngunnawal Plant Use Guide* (ISBN: 9781921117152).





KANGAROO GRASS THEMEDA AUSTRALIS

Uses: Both the leaves and stems of this plant are used to weave baskets and fishing nets. In summer, when the seeds are plentiful and ripe, they can be ground into flour.

Ngunnawal Plant Use Guide, page 45.

SILVER WATTLE ACACIA DEALBATA

Uses: This important plant, known by its Ngunnawal name Nummerak, has a range of uses. The resinous sap can be eaten or used as glue; the seeds are also edible, and are ground and used to make bread. The timber can be used to make everyday articles, like digging sticks.

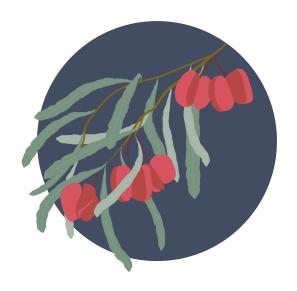
Ngunnawal Plant Use Guide, page 10.



SILVER BANKSIA BANKSIA MARGINATA

Uses: Known in Ngunnawal culture as Dhulwa, this plant has many uses. Fresh flowers are used as paintbrishes or soaked in water to make an energy-boosting drink. Its curved branches are used for boomerangs.

Ngunnawal Plant Use Guide, page 15.



NARROW LEAF HOP BUSH DODONAEA VISCOSA SUBSP. ANGUSTISSIMA

Uses: The wood of this plant is hard and durable and can be used to make digging sticks, throwing sticks and nulla nullas. The leaves can be chewed to relieve toothache.

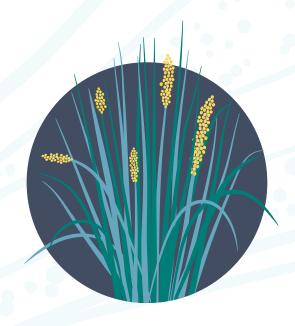
Ngunnawal Plant Use Guide, page 29.



BLUEBELLS WAHLENBERGIA SPP.

Uses: Usually found in sunny, open spaces, these plants have masses of small, edible blue flowers, which appear in spring and summer.

Ngunnawal Plant Use Guide, page 77.



SPINY-HEADED MAT-RUSH LOMANDRA LONGIFOLIA

Uses: This plant has many uses in Ngunnawal culture. As well as being a weaving plant, the white leaf base can be chewed, and the seeds ground and mixed with honey, or used to make flour.

Ngunnawal Plant Use Guide, page 50.



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Bohie Palecek's *Revel in the Wilderness* is on Level C of Building 2, the University of Canberra

The ever-diminishing wild spaces around us reveal a connection to our deep ancestral past, an ecosystem residing in complete harmony and interdependence, that we as humans need to survive, artist Bohie Palecek says.

"Without wild spaces in our natural environment, we would not have clean air to breathe or fresh water to drink. We, too, are connected to this vast and complex ecosystem. To dominate and control it is to fast track our own demise.

"Revel in the Wildness asks us to see, to feel, to connect, to engage with, protect, and honour our wild spaces without, and our wildness within."



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