

EMERITUS

The Australian National University Emeritus Faculty e-magazine

‘Difficult conversations’ as ANU seeks way forward

The challenges facing the Australian National University are an opportunity for the institution ‘to work differently and continue to deliver on our national remit’, the Vice-Chancellor, Professor Genevieve Bell, said in a message to the university community on 20 August.

To do so, however, would mean ‘further evolution’. ‘It will also mean we need to consider what we do, how we do it and in some cases, what we stop doing,’ she said. These ‘difficult and important conversations’ remained the focus of the ANU’s Strategic Leadership Group.

Professor Bell said ANU was facing ‘external headwinds’ of a kind that affect the whole tertiary-education sector. ‘Unlike many of our counterparts, we are still balancing a large cumulative operating deficit, and are considering how we pay down our debt when our growth modelling has not been realised and we spend more money each week than we bring in.’

In her message, Professor Bell said she had met many internal groups since taking office at the beginning of the year. The leadership team had been reviewing, reassessing, and considering how ANU needed to operate — ‘and critically, how we best improve our teaching, research, and administrative functions within our financial means and also in line with being a modern 21st century university’.

‘This period has also been an opportunity to mature our approaches and operating environment, especially focusing on data and information hygiene, governance and documentation and re-setting an organisational culture underpinned by clear expectations, accountabilities and responsibilities,’ she said.

As part of the process of change, Professor Bell noted that the Provost and Senior Vice-President, Professor Rebekah Brown, and Chief Operating Officer, Jonathan Churchill, had recently announced several changes to improve the effectiveness of professional services at the ANU, changes designed ‘to support our academic mission while facing the reality of operating at a deficit in a changing external policy environment’.

Professor Brown and Mr Churchill announced a comprehensive review of several areas to improve professional administrative support across the university, covering research support and research facilities; learning, teaching,

and students; external engagement and communications; and institutional management and governance.

An expenditure taskforce had been set up to focus on cost savings across the university, including existing assets, expenditure on major line items (such as software licences), expenditure on consultants and contractors, improvements to procurement practices and consolidation of expenditure and suppliers, and existing practices around stores and stock management

Professor Brown and Mr Churchill said there would be a structured approach to the review, and noted that no decisions had been made about changes in any of these areas.

Professor Bell said the reviews were designed to support the ANU and its community, and prepare the university 'for our changing world'. She said she and the leadership team would focus on four key areas: culture, finance, operations and engagement.

That would include reshaping the leadership team to provide a wider range of advice in important decisions and setting the strategic direction of the university through a revised Strategic Leadership Group.

There would be increased financial understanding across the University Leadership Group, and standard workplace controls would be used to manage the university's financial position, including a centralised hiring committee.

Operations and systems would be streamlined and provide more clarity on governance and procedures across the university while the engagement initiatives would include a review into academic promotions 'to acknowledge expertise in non-traditional academics'.

Professor Bell's Shaping our Future message can be found at <https://www.anu.edu.au/news/all-news/vcs-update-shaping-our-future>

Cautious welcome for government R&D framework proposals

Peak bodies in tertiary education have generally welcomed the Australian Government's proposals to make research and development the central element of its Future Made in Australia agenda, but have called for a clear implementation plan and greater government funding for science and research.

The government issued its National Science Statement and National Science and Research Priorities on 12 August, documents designed to place science at the forefront of Australia's industrial transformation.

The documents have been shaped by a nationwide consultation led by the Chief Scientist, Dr Cathy Foley.

'I found a remarkable consensus among the Australians I met around the country during the national conversation to develop these priorities,' Dr Foley said.

‘Science is at the heart of almost every aspect of our lives, and is especially important as we tackle today’s challenges.

‘These priorities are a great starting point, and I hope we can come together as a science and research community with industry and government to bring them to life.’

Issuing the two documents, the Minister for Industry and Science, Ed Husic, said science was central to Australia’s capacity to deal with the challenges, disruptions and opportunities facing the nation.

He said it had been almost a decade since the Abbott government released its priorities. The updated framework would, for the first time, draw on Indigenous knowledge systems. ‘It will also better prepare the nation to face future pandemics, adapt to a changing climate, and respond to rapid developments in artificial intelligence and automation,’ he said.

The new framework sets down five National Science and Research Priorities to guide effort by government and the university and private sectors. They are:

- Transitioning to a net zero future: to develop and adopt next-generation technology, particularly in clean energy and storage, advanced materials, artificial intelligence, quantum and robotics;
- Supporting healthy and thriving communities;
- Elevating Aboriginal and Torres Strait Islander knowledge systems to give them a greater say in research that affects them;
- Protecting and restoring Australia’s environment; and
- Building a secure and resilient nation: to strengthen democratic institutions while meeting economic, social and geopolitical challenges.

The new National Science Statement lists five imperatives for Australian science investment over the next decade. They are:

- Australian scientists, science institutions, and infrastructure shaping Australia’s science future;
- Science at the centre of Australian industry;
- A diverse, skilled workforce to underpin the translation of science into new industries;
- Embracing science to drive Australia’s regional and global interests; and
- A science system prepared for future challenges.

The Australian Academy of Science applauded the government for identifying science and research priorities, but said it would be ineffective without a plan to impel action in government, industry and the research sector. Previous science and research priorities had been ineffective because they lacked implementation, monitoring and evaluation.

The President of the Academy, Professor Chennupati Jagadish, said it was essential that the priorities ‘are backed by a robust implementation plan that clarifies how ministers across governments, and the industry and research sectors can use the levers available to them to turn words into action’.

‘Australia needs urgently to transition its economy to make it more complex and resilient to external shocks,’ he said.

‘This requires us to prioritise those activities only Australia can perform and those that we must perform to have a seat at the global decision-making table.’

The Group of Eight said lifting investment in Australian research and development was critical to helping the nation’s researchers to find solutions to pressing challenges.

The priorities were relevant not only to universities and publicly funded research agencies, but provided clear direction to Australian industries and businesses on how to diversify their R&D investments, Go8 Chief Executive Vicki Thomson said.

‘Severe consequences’ from cap on overseas students

‘However, lifting investment in science and innovation is essential for Australia’s future prosperity, to develop new industries, remain internationally competitive and find solutions to our greatest challenges in the areas of energy, environment, health and broader societal issues,’ she said.

To that end, the Go8 called on the government to adopt the group’s Roadmap of policy reforms to lift Australia’s R&D intensity to 3 per cent of GDP by 2035 [see following report]. Adopting the suggested reforms would ensure ‘national effort’ and commitment to transforming the economy, and commercialising the best research.

Ms Thomson also noted that Australia’s university research effort ‘relies on funding from international student fee revenue. The government’s plan to cap international student enrolments will have severe consequences for the nation’s research capability.’

The Group of Eight’s comments were echoed by Universities Australia, whose Chief Executive Officer, Luke Sheehy, said the organisation welcomed the government’s vision but noted that ‘declining government investment’ in research and development would jeopardise universities’ ability to produce the skills, knowledge and ideas that would drive productivity and economic success in future.

‘The Government’s commitment before the last election to boost research and development investment to three per cent of GDP is a step in the right direction, but we must see measures in the near-term to support our research system,’ he said.

‘Science and research, and the talented people driving these efforts, are at the forefront of our industrial transformation.

‘Our universities are delivering the essential research and producing the workforce that will drive the nation forward,’ he said.

Go8 offers ‘roadmap’ to increase research, development investment

Investment in research and development is a key element of successful modern economies yet, according to the Group of Eight, investment in this field from both government and business is in decline, impeding Australia’s capacity to become a more productive and dynamic nation.

To counter this, in late July the Go8 handed the Federal Government an ambitious 10-year Roadmap of policy reforms that would lift R&D intensity to 3 per cent of GDP by 2035.

The report, *Australia’s Research and Development (R&D) Intensity: A Decadal Roadmap to 3% of GDP*, is the culmination of a six-month project with business and industry groups, and government officials.

It sets out 12 recommendations covering the short, medium and long terms, and includes measures to give incentives to small businesses to collaborate with Australian research institutions on R&D, to encourage investment by Australian superannuation funds, and to establish a fund similar to the Medical Research Future Fund (MRFF) but focused on other fields of research.

‘With productivity growth at a 60-year low, and other significant challenges and opportunities such as transitioning to a net zero economy, addressing ageing of the population, and taking full advantage of emerging technologies such as artificial intelligence and quantum computing, now is the time for decisive action to secure our future prosperity,’ the Go8 Chief Executive, Vicki Thomson, said.

Australia’s R&D expenditure as a percentage of GDP has been declining for over a decade, from about 2.25 per cent in 2008–09 to an estimated 1.68 per cent in 2021–22. Australia’s R&D expenditure as a percentage of GDP is around 1 percentage point lower than the OECD average.

Ms Thomson said the Roadmap set an ambitious timeframe but noted that ‘universities are in the “solutions business”.’ ‘This is not a target for government spending, it is a national target requiring all parties to come to the table — government, business, industry and universities — and embrace some innovative thinking.

‘With investment in R&D from both government and business in decline, universities have stepped up and expenditure by the higher education sector on R&D has increased from 0.40 per cent of GDP in 2000, to 0.61 per cent of GDP in 2020,’ she said.

‘Given our reliance on international student fees to fund research and factoring in the current policy mix being imposed on the sector, there’s a limit to how much universities will be able to contribute to R&D in future. We need a whole-of-nation approach.’

The document can be found at <https://go8.edu.au/australias-rampd-intensity-a-decadal-roadmap-to-3-of-gdp>

Revenue from overseas students essential, Bell tells senators

Australia's universities needed the revenue from international student fees 'simply to be universities', the Vice Chancellor, Professor Genevieve Bell, told the Senate Education and Employment Legislation Committee on 6 August.

That message was reiterated in different forms by other representatives of the tertiary-education sector who made statements to the committee, which was inquiring into the Education Services for Overseas Students Amendment (Quality and Integrity) Bill 2024 (Provisions). The committee is due to report on 6 September.

In her statement, Professor Bell told the Senators that government funding to teach domestic students and conduct research 'often does not cover our costs'.

'Like many other universities, ANU has yet to recover financially from the COVID-19 pandemic,' she said. 'Since 2020 we have run cumulative deficits of almost \$400 million. It is a situation that cannot be sustained indefinitely, and we had a plan to get out of deficits — by controlling our costs and seeking modest growth in student enrolments.'

At the moment ANU did not know what international student caps would apply to the university, but it shared the concerns of other universities 'about how we will enact these caps in such a short period of time, how we will maintain strong connections with potential international student populations and how we will retain a world class workforce in the face of this uncertainty'.

The university knew that its role in educating international students helped Australia to engage internationally, particularly in the Indo-Pacific and with countries where Australia had strategic interests.

Professor Bell also discounted the idea that its international students were 'squeezing Canberrans out of housing'. 'At ANU we have spent the past decade investing in student accommodation. We have 6,490 beds, which means 25 per cent of our students make their home on our campus, amongst them many of our international students.'

Vicki Thomson, Chief Executive of the Group of Eight, said the university sector was 'shaping up to be the fall guy' for the political arguments about migration, and criticised the Bill as 'rushed and poorly framed legislation' that was 'a classic example of retrofitting policy to suit dubious politics'.

'The rationale for capping international student numbers chops and changes as each excuse is discredited, whether it's the housing crisis, cost of living, rental availability, rental affordability, redistribution of students to regional areas, or the removal of "shonks", "crooks" and "dodgy providers" from the system,' she said.

'What we do all agree on is an international education system which is grounded in quality and integrity, and the Go8 is absolutely committed to a more nuanced approach to managing growth.'

The Go8 supported Parts 1 to 6 of the Bill but opposed Parts 7 and 8, which, she said, would impose ‘a blunt cap on international students’. They would also give the minister of the day ‘unprecedented’ power to apply caps on international student enrolments. They were, she said, ‘draconian, interventionist and amount to economic vandalism’.

Ms Thomson proposed exempting public education providers from Parts 7 and 8, and revoking Ministerial Direction 107 that applies to student visa applications. She advocated working with universities through existing mechanisms and setting target enrolment levels appropriate to each institution.

‘Rushing through this legislation is a critical mistake,’ she said. ‘Go8 universities have already made over 4,000 unconditional offers and over 50,000 full and conditional offers to international students for 2025.’

‘This reflects the 18-month timeline required to recruit students to Australia. If caps are imposed at the eleventh hour, then many offers or even enrolments will have to be rescinded.’

‘This last-minute decision not only makes managing university budgets impossible for 2025, but the last-minute reversal — withdrawing offers to students we have long courted — burns them in a cavalier and lasting way.’

Luke Sheehy, Chief Executive Officer of Universities Australia, characterised the Bill as ‘for the most part ... rushed policy’.

Bill ‘more a political smokescreen’ than good policy

‘Universities Australia supports the Government’s intention to maintain the integrity and sustainability of the international education sector,’ he said, ‘but we believe the Bill, as drafted, is more a political smokescreen than an instrument for good policy as the government seeks to gain an upper hand in a battle over migration ahead of the next election.’

The amendments that seek to control the number of international students and the courses in which they could enrol was ‘ministerial overreach to an extent we have never seen before’.

Facts did not support the argument that international students were responsible for Australia’s housing shortage, Mr Sheehy said. Data showed that rental vacancy rates near inner-city university campuses were higher than the averages of major cities.

He also told the committee that international students had accounted for more than half of Australia’s GDP growth last year. The sector was Australia’s second biggest export behind mining, worth almost \$50 billion to the economy and supporting around 250,000 jobs.

Even without legislated powers to cap international student numbers, the government had already ‘taken a sledgehammer to the international education sector’, Mr Sheehy said.

‘Department of Home Affairs data shows visa grants in higher education are down 23 per cent in the past year — the equivalent of 59,410 university students. This can be put down, in large part, to Ministerial Direction No.107 which came into effect in December, slowing visa processing to a trickle and leading to a spike in visa cancellations for many universities.’

The Direction had undermined efforts to diversify the international student base, he said. It was creating ‘significant financial anxiety and pain for universities’. Having some 60,000 fewer international students would represent a \$4.3 billion hit to the economy and could cost the university sector some 14,000 jobs, leaving aside other consequences.

Eleven ANU researchers named among 100 ARC Future Fellows

Professor Jane Catford is one of 11 researchers from the Australian National University to be awarded an Australian Research Council Future Fellowship for 2024. The ARC announced \$106.7 million in funding for 100 new projects under the Future Fellowships scheme at the end of July.

Professor Catford, previously at King’s College London, is joining the ANU’s Fenner School of Environment and Society and will use the fellowship to deepen her research into the ecological impacts of non-native plants. She will explore strategies to manage these impacts through the project Predicting Biodiversity Impacts of Plant Invasion in a Changing Environment.

Professor Catford is an acknowledged leader in her field, having published influential studies on ecological resilience and having taken part in numerous international collaborations. Her contributions have shaped conservation strategies and influenced policy.

With the support of the Future Fellowship, funded with \$1.211 million, Professor Catford aims to develop innovative methodologies to forecast the spread of invasive species and assess their ecological impacts. This research will be important in creating effective conservation strategies and mitigating risks to native ecosystems.

Other ANU researchers to receive Future Fellowships are Dr Craig Anderson, Associate Professor Caillan Davenport, Associate Professor Luke Glanville, Dr Jamie Hicks, Associate Professor Lara Malins, Dr S. Saman Razavi, Dr Ben Shaw, Dr Ceri Shipton, Dr Gregory Walter, and Dr Liang Zheng.

The Future Fellowships scheme plays a significant role in supporting research in areas of national and international interest, the ARC’s Acting Chief Executive Officer, Dr Richard Johnson, said.

‘The breadth of topics that will be investigated in this round of the Future Fellowships scheme is a reflection of the ARC’s commitment to supporting outstanding mid-career researchers to undertake high quality research for the benefit of all Australians,’ he said.

International award for mathematics educator

Emeritus Professor Kaye Stacey has been awarded the prestigious international Emma Castelnuovo Award for 2024 in recognition of her more than 40 years of research-based design, development and implementation of innovative, influential work in mathematics education.

Professor Stacey received the award at the 15th International Congress on Mathematical Education in July in Sydney, where 3,000 educators explored current global trends in mathematics education research and mathematics teaching practices at all levels.

She was the Foundation Chair of Mathematics Education at the University of Melbourne for 20 years until her retirement in 2012, and has led numerous research-based projects at various levels. She has a longstanding relationship with the Australian Academy of Science, and was a director of the Academy's reSolve: Mathematics by Inquiry project for its initial three years. Her work with the Academy was a significant contributing factor to her being awarded the prize. She wrote a paper explaining why the Academy should work in mathematics education and what the focus of this work should be.

Professor Stacey began her career in pure mathematics and earned a scholarship to the University of Oxford, where she completed her doctorate in number theory. Her deep passion for mathematics and its practical applications has driven her work, focusing on equipping students to tackle important problems. She enjoys mathematics for both its beauty and usefulness, and this appreciation underpins her work.

Diary dates

Ancient Egyptian exhibition closing soon

Only a few weeks remain to visit Discovering Ancient Egypt, the exhibition from the Dutch National Museum of Antiquities in Leiden, on show at the National Museum of Australia. The exhibition includes objects from Egypt's Predynastic period to the Roman era, and surveys the everyday lives of its people, including their social systems, religious beliefs, and the importance of the afterlife. Entry is: adults \$25, concessions \$20, children 5–16 years \$12.50, families (two adults and two children) \$62.50, Friends \$17.50. Until 8 September.

Gauguin's worlds, from France to the Pacific

The exhibition Gauguin's World: Tōna Iho, Tōna Ao, continues at the National Gallery of Australia until 7 October. The work of the influential French post-impressionist draws on painting, drawing, engraving, sculpture and the decorative arts to trace Paul Gauguin's development, from his impressionist beginnings to his Polynesian visions. During the exhibition season there will also be a display of works by contemporary artists from the Pacific and further afield.

Meet the Author events

September 2, 6pm: Nina Jankowicz will talk about her books *How to Lose the Information War* and *How to Be a Woman Online*, with Van Badham and Andrew Leigh. Molonglo Theatre, Crawford School, ANU.

September 9, 6pm: Darren Rix and Craig Cormick will talk about their new book, *Warra Warra Wai: How Indigenous Australians Discovered Captain Cook, and What They Tell of the Coming of the Ghost People*. The vote of thanks will be given by Kate Fullagar. Harry Hartog bookshop, Kambri Cultural Centre.

September 12, 6pm: Kevin Bell will talk with Kim Rubenstein about his new book, *Housing: The Great Australian Right*. Bell argues that governments have the capacity and the power to resolve the national housing shortage, and that the first step is for Australia to rethink its approach to housing policy and recognise that access to having a home is a fundamental human right. Maiy Azize will give the vote of thanks. RSSS auditorium, ANU.

September 17, 6pm: Don Watson will talk about his Quarterly Essay, *The US Election*, with Mark Kenny. John Warhurst will give the vote of thanks. Harry Hartog bookshop, ANU.

September 24, 6pm: Rebecca Huntley will talk about her new book, *Sassafras*, with Karen Middleton. Jeanne Ryckmans will give the vote of thanks. Harry Hartog bookshop, Kambri Cultural Centre.

September 30, 6pm: Virginia Trioli will talk about her new book, *A Bit on the Side*, with Virginia Haussegger. Vote of thanks by Mark Kenny. Street Theatre, 15 Childers Street.

October 1, 6pm: Dr Karl Kruszelnicki will present his memoir, *A Periodic Tale*. Bobby Cerini will give the vote of thanks. Street Theatre, 15 Childers Street.

October 10, 6pm: Gina Chick will discuss her new book, *We Are the Stars.*, with Kate Grarock. Jeanne Ryckmans will give the vote of thanks. Street Theatre, 15 Childers Street.

October 14, 6pm: Amin Saikal will talk with Virginia Haussegger about his new book, *How to Lose a War: The Story of America's Intervention in Afghanistan*. Frank Bongiorno will give the vote of thanks. Harry Hartog bookshop, Kambri Cultural Centre.

October 15, 6pm: Andrew Leigh will talk with Lin Hatfield Dodds about the new version of his 2013 book *Battlers and Billionaires*. Harry Hartog bookshop, Kambri Cultural Centre.

October 20, 6pm: Tim Winton will talk about his new novel, *Juice*. Presented in association with the Canberra Writers Festival. Llewellyn Hall.

October 29, 6pm: Prizewinning Italian author Paolo Giordano will talk with Marco Lazzarino about his writing and his latest book, *Tasmania*. Brian Schmidt will give the vote of thanks. Harry Hartog bookshop, Kambri Cultural Centre.

November 4, 6pm: Benjamin Stevenson will discuss his new novel, *Everyone this Christmas has a Secret*, with Jack Heath. Karen Viggers will give the vote of thanks. Harry Hartog bookshop, Kambri Cultural Centre.

November 6, 7pm: Shaun Micallef will talk about his new book, *Slivers, Shards and Skerricks*, with Andrew Leigh. Llewellyn Hall, ANU School of Music.

November 12, 6pm: John Saffran will talk about his new book, *Squat*. Harry Hartog bookshop, Kambri Cultural Centre.

November 14, 6pm: Ross Garnaut. Details to be advised.

November 18, 6pm: Sebastian Smee. Details to be advised.

November 21, 6pm: Peter FitzSimons will talk with Matthew Trinca about his new book, *The Legend of Albert Jacka*. Harry Hartog bookshop, Kambri Cultural Centre.

November 27, 6pm: George Megalogenis will talk about his Quarterly Essay, *Minority Report: The New Shape of Australian Politics*, with Mark Kenny. John Warhurst will give the vote of thanks. Harry Hartog bookshop, Kambri Cultural Centre.

November 28, 6pm: David Marr will talk about his updated version of *My Country: Stories, Essays and Speeches*, with Andrew Leigh. Allan Behm will give the vote of thanks. Harry Hartog bookshop, Kambri Cultural Centre.

ANU/*Canberra Times* Meet the Author events are held in association with Harry Hartog Bookshop. Books are available for purchase before and after each event. Pre-event book signings will be available from 5.30pm and again after the event. Registration is required and can be made at Registrations at anu.edu.au/events. In line with ANU's Covid policy, masks are no longer required. Enquiries to the convenor, Colin Steele, at colin.steele@anu.edu.au.

The Symposium by University House wine bar (Shop 13, 152 University Avenue, Acton, next to the Kambri Cultural Centre) will be open for dining after Meet the Author events. No bookings necessary. Food and wine details at <https://unihouse.anu.edu.au/eat/symposium/>.

Creative views of the natural world

The exhibition of works entered for the Waterhouse Natural Science Art Prize will be on show at the National Archives of Australia's Kings Avenue building until 27 October. Since 2002 the South Australian Museum has invited established and emerging artists to enter the prize, named after the South Australian Museum's first curator, Frederick George Waterhouse. The biennial prize recognises the long-running interplay between scientific research and the creative arts. This visiting exhibition offers the only opportunity to view the artworks outside of South Australia.

Perspectives on Australia at the portrait gallery

Contemporary artist Joan Ross examines the consequences of colonialism in the exhibition *Joan Ross: Those Trees Came Back to Me in My Dreams* at the National Portrait Gallery until 2 February next. For the exhibition, Ross was invited to select portraits from the gallery's collection and situate them alongside her own artworks. The show was curated collaboratively by Joan Ross, Coby Edgar and Emma Kindred, reflecting First Nations and other perspectives. Exhibitions covering the Darling Portrait Prize and the National Photographic Portrait Prize 2024 continue until 13 October.

Mahler, Mozart from the CSO

The Canberra Symphony Orchestra will play Mahler's Symphony No.4 under the baton of Jessica Cottis at the Llewellyn Hall on Wednesday and Thursday, 18 and 19 September. Celeste Lazarenko will sing the soprano part in the final movement. The program will begin with Cottis's arrangement of Purcell's 'Celestial Music Did the Gods Inspire', before Jayson Gillham plays Mozart's Piano Concerto No. 21 in C major, K. 467.

Items of note

Curtin team's Stonehenge discovery prompts new thinking about ancient British society

Researchers from Western Australia's Curtin University have begun to rewrite our understanding of ancient British society with the discovery that the six-tonne Altar Stone at Stonehenge in Wiltshire had been brought to southern England from northern Scotland.

The findings point to the existence of unexpectedly advanced transport methods and societal organisation at the time of the stone's arrival at its current location, perhaps about 5000 years ago.

It is believed that Stonehenge was constructed in several phases beginning about 3100 BC and continuing until about 1600 BC. The megalithic monument's circle of large sarsen stones was placed between 2600 BC and 2400 BC.

The Curtin researchers studied the age and chemistry of mineral grains within fragments of the Altar Stone, a 50cm thick sandstone block measuring 5 metres by a metre that sits at the centre of the stone circle.

The lead author of the article in the journal *Nature*, PhD student Anthony Clarke from the Timescales of Mineral Systems Group within Curtin's School of Earth and Planetary Sciences, said analysis of the age and chemical composition of minerals in fragments of the Altar Stone matched rocks from northeast Scotland. It also differentiated them from Welsh bedrock, hitherto the presumed source of the stone.

'Our analysis found specific mineral grains in the Altar Stone are mostly between 1000 to 2000 million years old, while other minerals are around 450 million years old,' Mr Clarke said.

'This provides a distinct chemical fingerprint suggesting the stone came from rocks in the Orcadian Basin, Scotland, at least 750 kilometres away from Stonehenge.

'Given its Scottish origins, the findings raise fascinating questions, considering the technological constraints of the Neolithic era, as to how such a massive stone was transported over vast distances around 2600 BC.'

'This discovery also holds personal significance for me. I grew up in the Mynydd Preseli, Wales, where some of Stonehenge's stones came from. I first visited

Stonehenge when I was one year old and now, at 25, I returned from Australia to help make this scientific discovery. You could say I've come full circle at the stone circle.'

Study co-author Professor Chris Kirkland, also from the Timescales of Mineral Systems Group, said the findings had significant implications for understanding ancient communities, their connections, and their transportation methods.

'Transporting such massive cargo overland from Scotland to southern England would have been extremely challenging, indicating a likely marine shipping route along the coast of Britain,' he said.

Research may improve Alzheimer's drug treatment

Findings by Australian scientists may point the way to improving the effectiveness of drugs now used to manage cognitive decline in patients with Alzheimer's disease.

The collaborative research, led by the Commonwealth Scientific and Industrial Research Organisation and involving the University of Queensland, the Florey Institute and the University of Melbourne, compared data from 475 people with varying levels of cognitive impairment.

The scientists looked at the level of amyloid plaques in the brain, the atrophying or shrinking of the basal forebrain, and cognitive decline (memory and attention).

Dr Ying Xia, a researcher at CSIRO's Australian e-Health Research Centre and lead author of the study published in *Neurology*, said early diagnosis was critical to managing Alzheimer's disease symptoms.

'Our results show how the atrophying of the basal forebrain, a key brain region for learning and memory and part of the cholinergic system, could indicate the presence of the disease well before symptoms occur,' Dr Xia said.

'Our research suggests an important link between brain structure, in this case shrinkage, and the way the brain functions during Alzheimer's disease progression.'

These findings may help to develop drugs to reduce the decline in brain function. This could include work with drugs which clear amyloid plaques from the brain that are now undergoing regulatory approval.

Dr Xia said new drugs to clear amyloid plaques hold promise, but it's not yet known whether targeting these plaques will address the underlying causes of memory and attention decline.

Alzheimer's is the most common form of dementia, which is the second leading cause of death in the country. An estimated 250 Australians are diagnosed with dementia every day.

Blood test may help early detection of dementia

A study has found that a new blood test may provide early detection of Alzheimer's disease, the most common form of dementia. The results were published in the *Journal of the American Medical Association*.

The study, conducted by researchers at Lund University in Sweden, found that a combined blood test for cognitive decline had a 90 per cent accuracy rate in determining whether Alzheimer's was the cause.

The tests had a higher success rate than the 73 per cent accuracy for neurologists and related specialists, and 61 per cent for doctors when determining if the memory loss was because of Alzheimer's disease without the use of PET scans or spinal taps.

The blood test works by measuring the tau protein 217, which scientists have found to be a biomarker for diagnosing early-stage Alzheimer's and cognitive impairment.

Dr Sebastian Palmqvist, an associate professor and senior consultant neurologist at Lund University, told CNN that because the 217 protein increases at the same rate as other damaging proteins in the brains of people with Alzheimer's, it was an excellent indicator of amyloid pathology.

'Increases in p tau-217 concentrations in the blood are quite profound in Alzheimer's disease,' he said. 'At the dementia stage of the disease, levels are more than eight times higher compared with elderly without Alzheimer's.'

The study recorded the results of 1213 people, with an average age of 74, who were undergoing cognitive testing at primary care and specialist clinics.

AI education pilot program launched in WA

The Australian and Western Australian Governments have announced a jointly funded Artificial Intelligence (AI) in Education pilot program to reduce teacher workloads in WA.

The \$4.7 million initiative was announced by the federal Minister for Education, Jason Clare, and Western Australia's Minister for Education, Aboriginal Affairs, Citizenship, and Multicultural Interests, Dr Tony Buti.

The program will run in eight WA schools to reduce lesson planning time so that teachers can spend more time in the classroom and less time on administration.

The state Department of Education will deliver the pilot in partnership with Catholic Education WA, the Association of Independent Schools WA, and the School Curriculum and Standards Authority. Commonwealth funding under the Workload Reduction Fund will be matched by the WA government, while the state's non-government sector will also contribute \$300,000 towards the pilot.

The pilot will be designed to reduce teachers' administrative workloads by supporting things like drafting lesson plans and suggesting learning activities aligned to the national curriculum.

ANU research to explore potential of RNA

The work of scientists at the ANU-based Shine-Dalgarno Centre for RNA Innovation (SDCRI) to explore the therapeutic potential of ribonucleic acid (RNA) has been boosted by a \$4 million commitment through the Australian Government's Medical Research Future Fund National Critical Infrastructure Initiative.

RNA, a relative of DNA, is present in all living organisms and plays an essential role in turning genetic code into proteins. RNA science was crucial in the development of COVID-19 vaccines.

‘mRNA vaccines helped get us out of the pandemic, but there are myriad opportunities to tackle more difficult-to-treat medical problems,’ the Centre Director, Professor Thomas Preiss, said.

‘Developing RNA therapeutics involves meticulous processes to ensure they are both safe and effective. This is why we are setting up the National Platform for Therapeutic mRNA Development.’

The centre’s work will initially focus on three pilot projects addressing inherited bone marrow failure syndromes, macular degeneration and lung cancer, while also using artificial intelligence.

By combining AI and advanced experimental models with years of RNA research experience, the research team would be able fine-tune RNA sequences to maximise their therapeutic potential while minimising adverse effects, Professor Preiss said.

Bookshelf

After Neoliberalism

By John Quiggin

ANU Press, July 2024. ISBN (print) 9781760466510, ISBN (online) 9781760466527, DOI: <http://doi.org/10.22459/AN.2024>

Since the early 1980s Australian economic policy has been dominated by the ideology of neoliberalism (also known as ‘economic rationalism’), which set forth policies advocating privatisation, financial deregulation and microeconomic reform. Over this time John Quiggin has made critical assessments of neoliberal policies and the claims about productivity growth made to support these policies.

Although the credibility of neoliberalism was fatally wounded by the Global Financial Crisis and its aftermath, the author says that market ideology has lumbered on in zombie form, for want of a clear alternative. Only recently has the world begun to reverse the policies of privatisation and deregulation, and consider alternatives such as a shift to a four-day week. This book provides a historical perspective in the form of a series of articles written from the mid-1980s to the present. It concludes with some suggestions for the way forward, after neoliberalism.

Rebellion at Coranderrk

By Diane Barwick

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DOI: <http://doi.org/10.22459/RC.2024>

This book is about the rebellion at Coranderrk Aboriginal Station between 1874 and 1886. First published in 1998, 12 years after the death of its author, Diane Barwick, *Rebellion at Coranderrk* was an attempt to rectify some of the injustices of the past two centuries, and to prevent similar occurrences in the future. Barwick tells readers how, more than a century ago, an Aboriginal community in Victoria campaigned for recognition of their right to occupy and control the small acreage they had farmed for 25 years. Others wanted to develop this tract, and government spokesmen denied that the occupants had inherited any rights to this land and declared that, anyway, they were not really Aborigines. It describes how Coranderrk families fought to keep their land. In the author's words, 'To explain why they fought I must begin with the years before, to show what this "miserable spadeful of ground" meant to them, and how they came to be there. Finally, I sketch what ultimately happened.' The book includes the names and images of people who have died.

Administration

Arrangements for ANUEF room bookings

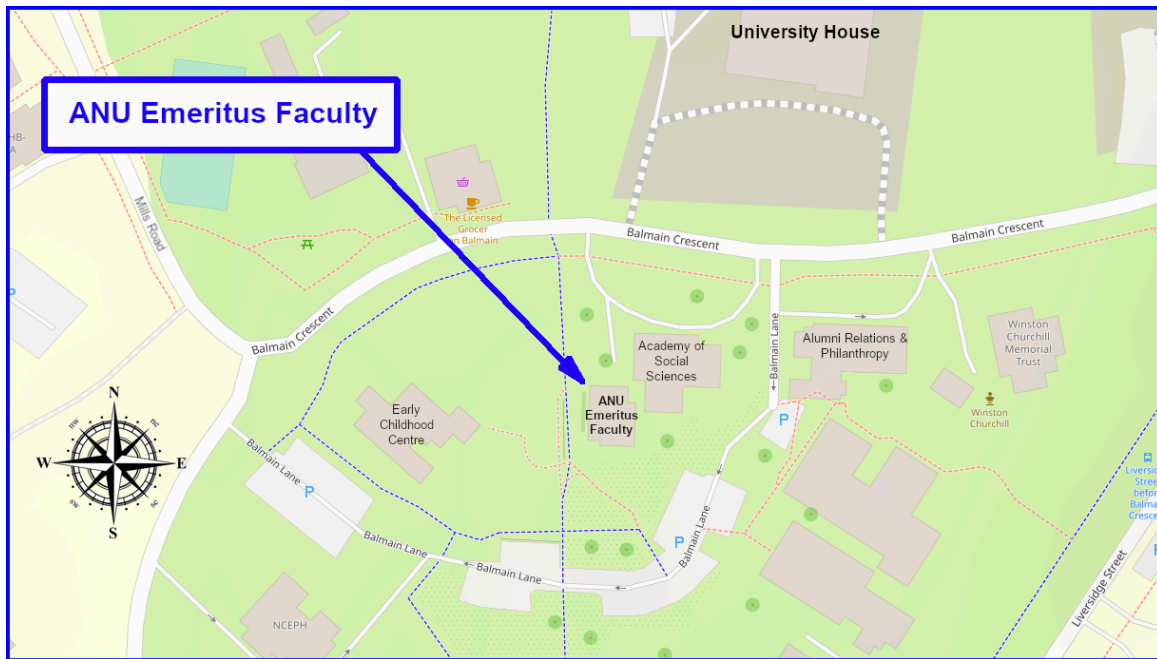
Requests to book the Molony Room should be addressed to the Secretary of the ANU Emeritus Faculty, Jan O'Connor, at jantancess@gmail.com or 6247 3341.

Finding the Molony Room

The Molony Room is at 24 Balmain Crescent, on the south side of Balmain Crescent almost opposite University House.

It is Building 1c on <https://tinyurl.com/yckuknbj>, set back between 22 Balmain Crescent (the Acton Early Childhood Centre) and 26 Balmain Crescent (the Academy of the Social Sciences). Four free car parking spaces reserved for ANUEF members visiting the Molony Room in the Balmain Lane Car Park immediately south of the Molony Room. The room is marked on:

<https://tinyurl.com/y7gsyqgh>



Editorial

Editor: Peter Fuller
Mobile: 0416-02.12.06
Email: wordsnpix@netspeed.com.au

Assistant Editor: Kevin Windle
Email: Kevin.Windle@anu.edu.au

Postal Address:
ANU Emeritus Faculty, PO Box 6050,
O'Connor ACT 2602
Web: emeritus.anu.edu.au
Meetings venue: ANUEF Office,
Molony Room, ANU,
24 Balmain Crescent,
Acton, ACT 2600

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