

AQ

AUSTRALIAN QUARTERLY



Fortress Australia and the History of Protest

INCLUDING: PROF JUDITH BESSANT | PROF FRANK BONGIORNO | PROF JUDE MCCULLOCH | PROF GEORGE WILLIAMS & MORE



COVID, CAPITAL
& THE FUTURE
OF WORK

FORTRESS AUSTRALIA
AND POLICE
MILITARISATION

THE HISTORY
OF PROTEST IN
AUSTRALIA



Politics Science
AQ

Available Now At:
PocketMags.com

For only \$14.99 receive a year's subscription to AQ: Australian Quarterly on all your favourite mobile devices, Mac and PC.

Interrogating Politics, Science and the spheres in which they overlap, AQ is the only magazine devoted to Australia's scientific future.

pocketmags.com
Discover Read Enjoy

To take advantage of our print subscriptions (1 year for \$28) visit <https://aq.magazine.com.au/>

How to subscribe

Subscribe and pay online at www.aips.net.au/aq-magazine/subscribe



The subscription period is based on the calendar year: January to December – 4 issues per annum. Back copies will be forwarded.

Subscription Rates

Rates include GST. *GST does not apply on overseas subscriptions. Postage included in rate. Airmail used for overseas distribution.

AQ Individual and schools subscription	\$28	Organisations (Australia)	\$132
AQ Individuals (Overseas)	\$38*	Organisations (Overseas – Asia & Oceania)	\$145*
Individual Digital Subscription (through www.pocketmags.com.au)	\$14.99	Organisations (Overseas – Other than Asia)	\$165*
AIPS Membership includes AQ subscription	\$88	AIPS Membership Overseas includes AQ subscription	\$110*

Australian Institute of Policy and Science Publisher of AQ – Australian Quarterly

The Australian Institute of Policy and Science is an independent not-for-profit organisation first established in 1932 to further informed public debate on political issues.

Science, technology and innovation have an important contribution to make to contemporary social, economic, political, security and also ethical and cultural issues. Whether it is about climate change, water, renewable energy, nanotechnology, health advancement or food security, over the coming decades many of the challenges facing us will require scientific and

creative input into policy making, a scientifically literate community and greater public engagement with science and technology.

Today, the Australian Institute of Policy and Science is dedicated to responding to these challenges and to partnering with others to:

- Increase public engagement in science and ensure people have a voice in decisions that affect them
- Promote excellence in research, innovation and the promotion and communication of science

- Inform and influence policy and policy-making through expert comment and input
- Invest in a scientifically inspired, literate and skilled Australia that contributes to local and global challenges

AQ: Australian Quarterly is an important public and independent platform to increase public participation towards these objectives.

AIPS Australian Institute of Policy & Science

CONTENTS

AQ

VOL 92 ISSUE 1 JAN-MAR 2021



IMAGE CREDITS: Please see article placements

3
Welfare to warfare:
Police militarisation and
Fortress Australia

EMERITUS PROF JUDE
MCCULLOCH

12
**The changing nature of
protest in Australia:**
Historical reflections
PROF FRANK BONGIORNO

20
**COVID, capital, and
the future of work in
Australia**
PROF JUDITH BESSANT AM AND
PROF ROB WATTS

29
**Science in the
spotlight**
Tall Poppy Awards 2020
STEPHEN BURKE

32
**Some rights, some of
the time**
The state of human rights
across Australia
DR SOPHIE RIGNEY AND
PROF GEORGE WILLIAMS

40
References

COVID, capital, and the future of work in Australia

When COVID struck in March 2020, several million Australians were retrenched or had their working hours reduced. At the same time 4.3 million people or 32% of working Australians began 'working from home' digitally.¹

Yet what happened was not simply the consequence of a rare epidemic that damaged a healthy economy. Rather, COVID impacted on a society already experiencing a decades-old process of major social, financial and technological disruption that is far from over.

ARTICLE BY: **PROF JUDITH BESSANT AM AND
PROF ROB WATTS**

The official view in early 2020 was that Australia's economy was in good shape having enjoyed decades of unbroken growth since the early 1980s. This was evident when the Australian Trade



IMAGE: © Ryoji Iwata-Unsplash

We are now experiencing an equivalent but different ‘techno-axial age’ reliant on novel cognitive technologies that enhance human analytic and processing capacities.

and Investment Commission, boasted how Australia held the world record for ‘27 years of uninterrupted annual economic growth’ based on an average GDP growth rate of 3.2% per annum. The Morrison government argued Australia was ‘heading into 2020 with growing domestic and international momentum out of last year’. Morrison claimed the economy was ‘in good health, employment growth was strong, there were billions of dollars going into infrastructure spending, not to mention low interest rates, strong trade, rising house prices and a pick-up in growth from 1.8% to 2.2%.²

This was a high stakes game: any acknowledgment that the past four decades were anything but a triumph raised a terrifying prospect for the government. This began with the need to acknowledge the scale of the disruption already under way. It also raised the even scarier prospect of needing to change policy direction.

We are going through a fundamental transformation that is changing every aspect of how we have lived over the past few millennia. The long-term perspective of the historical sociology pioneered by Braudel and Wallerstein, help reveal that what is now taking place is akin to the great transformation known as the Axial Age 800-200 BCE.³ This was when the great intellectual, philosophical, scientific, mathematical and religious systems that shaped

subsequent human culture emerged simultaneously in China, India, the Middle-East and Greece. This marked the beginning of human theoretical consciousness, evident in cognitive technologies like writing, books and libraries which externalised and outsourced memory, knowledge and creativity.

We are now experiencing an equivalent but different ‘techno-axial age’ reliant on novel cognitive technologies that enhance human analytic and processing capacities, while enlarging our embodied capacities through new and powerful robotic and biological interventions.

These are dramatically changing how we work and organise our social relations. There are predictions that between a third and a half of existing jobs will disappear by 2030.⁴ Over 36 million jobs or 25% of jobs in the US are already experiencing major disruption due to automation while over 70% are likely to be replaced by technology.

Financial services face major threats from advanced algorithms that outperform humans in data analysis. Industries like manufacturing could see the loss of 20



million manufacturing jobs by 2030 as robotics are embraced, while transportation and storage face significant job losses courtesy of AI processing and robotic augmentation.⁵

This is not to suggest our future has already been determined by these new technologies. It is up to us to make choices about the kind of society we want. To make those choices we need to understand better what the COVID

crisis has revealed about what has been happening over the past four decades.

The COVID economy

COVID and the policies intended to contain it, targeted already vulnerable groups. The virus

has been especially dangerous to older people, particularly those in residential care. By October 2020, of

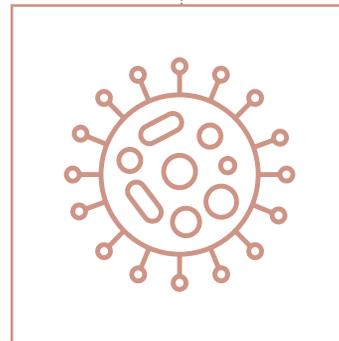
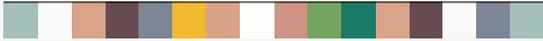


IMAGE: © Science in HD - Unsplash



Business taxes fell 111.9% reflecting a large rise in subsidies on production and imports worth an additional \$49.7 billion or an increase of 859.7 %...COVID delivered a windfall profit to Australian business with minimal benefit to ordinary Australians.

the 900+ deaths, 676 had been in aged care facilities. This was not simply bad luck or due to risks associated with ageing.⁶ Well before COVID, the Royal Commission on Aged Care reported that handing aged-care to 'market forces' had contributed to deteriorating levels and skills of staffing and care.⁷

By 2020 the understaffing of aged care facilities *and* underpayment of low-skilled workers across multiple facilities was also directly contributing to the high infection and mortality rates among aged-care residents.

COVID also targeted vulnerable workers. By September 2020, nearly 1 million people were unemployed while 1.5 million were on JobKeeper benefits. Another 1.3 million were underemployed.

The virus and lockdowns hit workers hard in industries requiring close physical proximity to customers or co-workers, like hospitality, health and aged care, private security, tourism, retail, education – all jobs not easily done from home.⁸ COVID-related unemployment affected large numbers of vulnerable low-paid, young, casual workers, highlighting and exacerbating the major disruptions to Australia's labour market underway since the 1980s.⁸ In turn, this exacerbated the trend of increasing inequality.

COVID slashed working hours by 9.8% – with serious consequences for wage incomes. Especially telling, in mid-2020

IMAGE: © Andreas Klassen-Unsplash



growth in profits coupled with falls in wage income resulted in the share of total income going to employees falling below 50% for the first time since September 1959.⁹ This is a major structural shift.

Until the early 1970s the share of total income paid to Australian workers in wages and salaries (the 'labour share') had steadily increased due to full employment: in the late 1960s the wage share of GDP was around 62%. Courtesy of major shifts in economic policy, by 1991 the wage share had declined to 56.6% while the profit share was up to 22.2%. By June 2019, the wage share fell to 51.7% and the profit share was around 29.4%. In 2020, COVID policies pushed that wage share off the cliff.

At the same time *business profits increased*, the result of COVID business subsidies and effective tax cuts. JobKeeper subsidies worth \$31 billion were paid to employers, while another program 'Boosting Cash Flow for Employers' worth \$16 billion, added an additional \$3.6 billion to business income.⁹

As the ABS noted:

Federal government support to business made in the form of subsidies to JobKeeper resulted in *a strong rise in profits*. JobKeeper and boosting cash flow for employers are the largest and second largest subsidies ever recorded in the national accounts (Authors' italics).

Additionally, business taxes *fell*

111.9% reflecting a large rise in subsidies on production and imports worth an additional \$49.7 billion or an increase of 859.7%. While the Morrison government argued that JobKeeper was designed to support businesses by enabling them to keep their workers on, the increasing unemployment and underemployment levels indicate this did not happen. COVID delivered a windfall profit to Australian business with minimal benefit to ordinary Australians.

The virus has exposed the precariousness of contemporary capitalism. Australia is being transformed by fundamental socio-economic change and technological disruption, fostered by the policies of successive neoliberal governments that began with the Hawke-Keating governments in 1983.

Ending the Fair Go: ramping-up inequality

Australians now live in a society that has become more unequal. Since the 1980s, inequality increased as the richest Australians grabbed a larger share of income and wealth. There was progressive growth in the income share going to the top 1%, top 0.5% and the top 0.1% of Australians.

In 2007, Atkinson and Leigh observed: ... At the start of the twenty-first century, the income share of the richest 1 per cent of Australians was higher

than it had been at any point since 1951, while the share of the richest 10 per cent was higher than it had been since 1949.¹¹

Over this period, the share of income held by the top one percent of earners increased from 5% to 9%.¹²

In terms of wealth, by 2013, the richest three people in Australia had more wealth than the poorest one million.¹² Oxfam estimated the top 1% of Australians have more than double the wealth of the entire bottom 50%. Just 250,000 people now own nearly \$US1.6 trillion or 22.2% of the nation's wealth.¹³

Simultaneously the proportion of people living under the 'poverty line', on less than half the median household income, increased.¹⁴ Using 2017-18 data researchers showed that Australia's poverty rate rose from 11.5% of all people in 2003 to 13.1% in 2017. Why has this happened?

A changing labour market

While the numbers of jobs increased, giving the *appearance of economic growth*, this never translated into increasing new, stable, *full-time jobs*. In 2018, 7.8 million or 62.6% of Australians were permanently employed. Yet full-time work was declining as a proportion of all jobs. Between December 2008 and December 2018, the share of people in fulltime work fell 4.2%, from



COVID delivered a windfall profit to Australian business with **minimal benefit to ordinary Australians.**

IMAGE: © Amanda Slater - Flickr



Since 2008, young workers aged 15-34 have been working fewer hours and getting **reduced real wage income**.



IMAGE: © Joey Lee-Unsplash

72% to 68% of the overall employment share.

We now have a major *underemployment* problem. (Underemployment mostly counts those wanting more hours of work than they have). From the early 2000s, the underemployment rate hovered around the 6-7% range: after 2008 it has stayed above 7% hitting 9% in 2016. In 2020 it accounts for 13.7% of the workforce.¹⁵

Part-time work also increased. In the late 1960s only 10% of workers were part-time (fewer than 35 hours a week). Between 2008 and 2018, the share of people working part-time increased from 28% to 34% of overall employment. Australia now has one of the highest shares of part-time employment in the OECD.¹⁶

Finally, and mindful of the distinction between *part time* and *casual work*, in 2019 there were 2.6 million casual workers in Australia making-up 24.4% of all employees.

Casual employment also signals the rise of a service economy. Retail, accommodation, hospitality and food services employ the largest proportion of casual and/or part-time workers. Many casual workers are also employed in construction, health, education, road transport and other service industries.

The destruction of the fulltime labour market affected young people especially. By the mid-1990s, Australia's youth labour market had collapsed

with disproportionate levels of youth unemployment and part-time employment.¹⁷ As a result, the average income of people *under 25*, fell by 14% and 11% for 25-34 year olds. More significantly the average hours worked declined, meaning wage growth remained weak.

Since 2008, young workers aged 15-34 have been working fewer hours *and* getting reduced real wage income. Equally, people aged 35-64 continued working the same number of hours but at least enjoyed a miserable 1.4% increase in wages. Those over 55 increased their hours of work enjoying modest increases in real income.¹⁸

All this points to the destruction of a labour market, which between 1945-1975, favoured permanent full-time (male) employment.

The explanation for this is that employers in small to medium enterprises and corporations stopped investing in full time jobs, preferring casual, short-term positions and a smaller wages bill. This disinvestment in fulltime jobs accompanied a flight from capital investment. In December 1968 capital investment as a share of Australia's nominal GDP was 35.7% of GDP, an all-time high. Between 1959 to 2000 it averaged 27.4%. Since the 2008 Global Recession it fell steadily: in September 2019 it was just 17.8% of GDP.

One result of all this is entrenched

IMAGE: © Austrian National Library-Unsplash



underemployment, while the increasing casualisation of the workforce suppressed real wage increases and contributed to increased inequality.¹⁹

While this describes what has been happening, the question remains: why is this happening?

What we see is a combination of new strategies for wealth creation *and* technological innovation producing a major transformation. Some call it 'the death of capitalism.'²⁰ The World Economic Forum calls it the 'Fourth Industrial Revolution' where data is – apparently – 'the new oil'. Financialisation, new technologies and neoliberal policies are propelling basic change.

Financialisation

Australia's financial services sector became the largest industry in Australia in 2006 when it bypassed manufacturing. In 2019 financial services were worth \$161bn or 10.3 per cent of all industries. Australia's four major banks are among the world's largest banks by market capitalisation and are among the most profitable in the world.

Financialisation represents a decisive shift towards a shareholder value-orientation. While managers may aim for long-run growth of the firm, shareholders prefer a short-term orientation with respect to a firm's profits because they are interested in higher dividend payments and higher stock prices.

Zuboff highlights how 'financial carrots and sticks persuaded executives to dismember and shrink their companies' while capitalism shifted from the profitable production of good and services to 'increasing forms of market speculation.'²¹

That market speculation promoted a massive growth in household debt and the creation of new 'wealth assets' designed to protect investors from risky debt.

Financialisation drove dramatic increases in private debt. Australia experienced a doubling of household debt between 2003 and 2019. In 2019, total household debt was \$AU2.46 trillion. The rise in the ratio of Australian household debt to income has been more pronounced than most other countries, rising to nearly 200% by

2019 behind countries like Netherlands (270%) and Denmark (290%).

Contrary to expectations, most of this debt involves mortgages for owner-occupier housing. This accounts for 56.3% of all personal debt in Australia, followed by debt associated with investing in rental properties or shares which constitutes 36.5% of our household debt. Credit card debt makes up only 1.9% of household debt.

Dramatic increases in giving people access to credit is one way that income is stripped from low and middle-income earners and transferred to top income earners. The banking sector also imposed multiple charges and fees on banking and credit card payments. This generates \$48 billion or around 25% of all revenue in the Australian financial system (not surprising given that every

Financialisation represents a decisive shift towards a shareholder value-orientation. While managers may aim for long-run growth of the firm, **shareholders prefer a short-term orientation.**



The market in derivatives installed speculation as the basic dynamic in the modern economy...2008 the global derivatives market was worth €471 trillion, five times larger than the global equity and bond markets combined.

Australian woman, man and child uses 2.5 debit-credit cards).

Financialisation encouraged the invention of new classes of wealth assets exemplified by the market in derivatives. Derivatives are used to insure against price movements (hedging), increasing exposure to price movements for speculation, or protection from bad debt.

The market in derivatives installed speculation as the basic dynamic in the modern economy. The derivatives market increased by 25% per year between December 1998 and June 2008.²² By December 2008 the global derivatives market was worth €471 trillion, *five times larger* than the global equity and bond markets combined.

The 2008 Global Recession was triggered by a call on \$US 5 trillion worth of derivatives as American house prices and mortgages crashed. Undeterred by that experience, by June 2018 the value of outstanding derivatives increased from \$US532 trillion (2017) to \$US595 trillion. This is 6.7 times larger than the estimated total global GDP (\$US88 trillion). Financialisation also sponsored the use of high speed technologies in the new global financial market.

Fintech

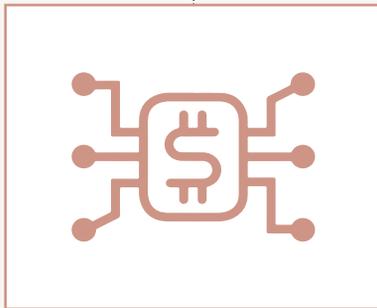
The 'tech' part of fintech highlights the intensity of financial innovation, the increasing volume of trading



In the 1950s, General Motors had a market capitalisation of \$US225 billion and employed 735,000 workers... [When] Facebook headed towards \$US774.37 billion, it was employing just 45,000.

in new classes of financial 'assets' reliant on digital technologies.²³ This confluence of financialisation and digital technologies is transforming contemporary capitalism.

Fintech draws on the speed and intensity of information exchange made possible by digital technologies. One iconic representation of the financialisation



project is high frequency trading which dispenses with financial brokers, using algorithms and powerful computers to place high volume orders in nano-seconds across the globe.

By 2018 over half of all equities traded in the US were performed by super computers capable of placing millions of orders each day and gaining advantage by buying or selling milliseconds before their competition.²⁴ There is also the evolution of a new kind of capital.

Surveillance capital

New technologies enabled a new form of capital sitting alongside finance capital. Shoshana Zuboff refers to this as 'Surveillance Capital'. This capital starts with the tracking of social media

users' behaviour on platforms like Facebook, Google, Instagram or people using Amazon or Alibaba. If access to these platforms is free, why are they among the highest net worth companies in the world?

In 2020 Facebook's market capitalisation was \$US1 trillion, a value exceeded only by Apple Inc (\$US1.38 trillion),

and Microsoft (US\$1.27 trillion). Yet companies like Google and Facebook have no real or productive assets. Nor do they have market relations with 'customers' in any traditional sense. All they have is their users' on-line behaviour.

The short answer is that companies like Facebook or Google have created a new kind of capital. They provide real-time surveillance of social and 'consumer' behaviour. The company then sell that data to advertisers who use it to target consumers.²⁵ This 'data mining' generates a lot of revenue: in 2019 Facebook generated \$US70 billion of advertising revenue.

Social media users are not the primary customers. Facebook creates 'surplus raw materials for the fabrication of products aimed at market

transactions with its real customers, ie., advertisers'. Facebook like Google, 'created out of thin air and at zero marginal cost a new asset class' i.e. its users' on-line behaviours.²⁶ These 'surveillance assets' are the crucial raw material that generate 'surveillance revenues' and become 'surveillance capital'.²⁷

We also see here the displacement of labour. Digital capital now generates vast wealth with small workforces because it uses algorithms and robotics. In the 1950s, General Motors, which dominated the old industrial order, had a market capitalisation of \$US225 billion and employed 735,000 workers.²⁸ When the market capitalisation of Facebook headed towards \$US774.37 billion, it had just 45,000 employees.

YouTube's market capitalisation was estimated be around \$US200 billion yet it employed just 1,200 employees. Amazon, one of the world's largest companies with a market value of \$1.14 trillion, actually sells commodities: globally it had 876,000 permanent employees at the start of 2020, mostly unskilled warehouse labour. More telling is that Amazon also used over 200,000 mobile robots in its warehouses.

The disruption under way is reshaping the historical labour-capital relationship and posing the question: does work have a future?



IMAGE: © TruthOut.org- Flickr

Antipodean neoliberalism

This disruption is neither inevitable nor technologically pre-determined. It is not a product of some 'iron law' of capitalism. The same 'free market economy' and its alleged laws produce hugely diverse patterns of income and wealth inequality, gender inequality, levels of capital investment or healthcare and education systems.²⁹ What we are now experiencing is the product of human choice and especially of what governments and policy-makers do – and don't do.

In Australia, a succession of neoliberal governments promoted this process of disruption. In March 1983 the Hawke-Keating Labor government adopted an 'economic rationalist' policy framework, similar to Thatcher (Britain), Reagan (USA), Lange (New Zealand) and Mulroney (Canada). So began a neoliberal experiment that tore up the Keynesian policy rule book, unleashing Australia's neoliberal policy experiment. This included floating the dollar, deregulating the financial sector, phased reductions in tariffs and

other industry assistance, the sale of government business enterprises, the contracting out of these services, and the deregulation of the labour market.

The Hawke Labor government used the 1983 Accord to impose 'wage restraint', inflicting real wage cuts and using deregulation to encourage economic growth.³⁰ The claim was that 'wage restraint' (wage cuts that reduced wages to 1960s levels), would restore share of national income to capital.

Later labour market deregulation was meant to increase labour 'market flexibility'. The actual result was the removal of *protective regulation* facilitating the growth of part-time and casual labour. The deregulation of the financial system kick-started the financialisation process enabling the dramatic process of de-industrialisation.

The hope was that business would 'do the right thing' and invest in new jobs. The expected explosion in productivity

would mean that wealth would 'trickle down' to everyone. This however never happened.

Instead the financial sector grew and grew while increased speculation and technological disruption producing the modern 'productivity paradox'. The adoption of new information technology has actually reduced demand for labour, lowered labour productivity leading to the stagnant wage growth we have experienced since 2010.

Conclusion

The COVID crisis reveals how we are at a crossroads needing to decide which path to take. One path involves 'getting to the other side' and returning 'to business as usual'. The other involves rejecting neoliberal nostrums while building new partnerships between the Australian state and communities, based on commitments maximising the benefits of the new technologies while decarbonising the economy and investing in new high-quality jobs.

We can do this if we want to. [AQ](#)



AUTHOR:

Judith Bessant is a Member of the Order of Australia (AM) and a Professor at RMIT University, Australia
More info: <https://bit.ly/Bessant>

You can follow her on Twitter @BessantJudith



AUTHOR:

Rob Watts is Professor of Social Policy at RMIT University and is a Fellow of the Academy of the Social Sciences in Australia.

More info: <https://bit.ly/WattsRob>

Science in the spotlight

Tall Poppy Awards 2020

In 2020 science found itself thrust into the spotlight. Around the world there was a collective call for scientists to save lives and to save our *way* of life. Politicians ceded podiums to their scientific advisors, scientists sat at the decision-making tables of nations, they were invoked as heroes and reviled as economic saboteurs.

ARTICLE BY: **STEPHEN BURKE**
GENERAL MANAGER OF THE AUSTRALIAN INSTITUTE OF POLICY AND SCIENCE

The Australian Institute of Policy and Science would like to take a moment to congratulate all of those scientists – in Australia and around the world – that worked through adversity to not only support COVID research but to keep the wheels of the global science system moving.

One thing has become clear, that effective communication of science has been the bedrock of successful responses to the virus, showing the world what a critical and nuanced skill SciComm is.

For over 20 years, the Tall Poppy Awards have been recognising science and science communication excellence here in Australia.

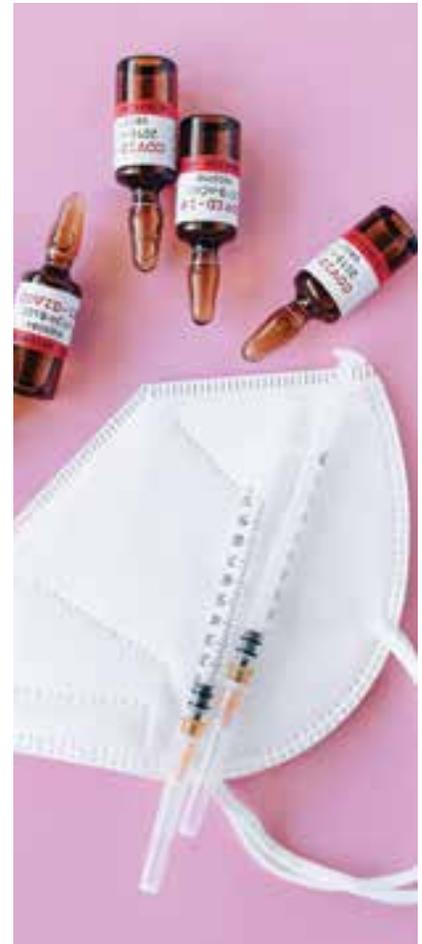
In 2020 we received 260 applications, across each state and territory, and 60 Young Tall Poppy Awards were presented. Research interests ranged across climate science, astronomy, cancer therapy, the health impacts of bushfire smoke, sewage surveillance for COVID-19, and emerging problems of antibiotic resistance.

Of the 60 winners in 2020, 35% of the Young Tall Poppies were male and 65% female. We were also very pleased to be able to make an award this year in the Northern Territory after a two-year absence.

Running award events in every state and territory this year proved challenging and several of our award ceremonies were conducted online and most others were slightly reduced in scale. However, the interest, passion and commitment of all the awardees continues to surprise and impress the selection panels and every ceremony was an exciting opportunity to showcase these current and future science leaders.

None of this would be possible without the continuing support of our university and corporate partners, and particular acknowledgement is made of the continuing support across the country of University research departments.

Once again, congratulations to all of the 2020 Young Tall Poppies! 



FOR MORE INFORMATION
ON ANY OF THE WINNERS
PLEASE SEE THE AIPS
WEBSITE:
WWW.AIPS.NET.AU

QUEENSLAND

Tall Poppy Awards 2020 Winners

WESTERN AUSTRALIA

WINNER
Dr Hayley Christian
Health
UWA



Dr Zoe Richards
Biology
Curtin/WA Museum

Dr Paola Magni
Biomedical
Murdoch University

A/Prof Nina Tirmitz-Parker
Biomedical
Curtin University

Dr Raffaella Demichelis
Chemistry, Physics
Curtin University

Dr Adrian Gleiss
Biology
Murdoch University

Dr Adam Cross
Biology, Conservation
Curtin University

WINNER
A/Prof Celine Frere
Biology
University Sunshine Coast



Dr April Reside
Biology
University of Queensland

Dr Laura Bray
Biomedical
QUT

A/Prof Sumaira Hasnain
Biomedical
Mater/University of Queensland

Dr Johanna Nalau
Climate Science, Maths, Physics
Griffith University

Dr Michele Barnes
Environmental Science, Sociology & Psychology
James Cook University

Dr Susanna Cramb
Health
QUT

Dr Peter Cowman
Biology
James Cook University

Dr Andreas Kupz
Biology, Biomedical
James Cook University

Dr Fernando Guimaraes
Biomedical
University of Queensland

NORTHERN TERRITORY

WINNER
Dr Carla Eiseberg
Biology
Charles Darwin University



SOUTH AUSTRALIA

WINNER
Dr Kylie Dunning
Biomedical
University of Adelaide



Dr Rhiannon Schilling
Agricultural Science
University of Adelaide & SARDI

Dr Alice Clement
Biology
Flinders University

A/Prof Maria Inacio
Biomedical
UniSA and SAHMRI

Dr Janet Sluggett
Biomedical
UniSA

Dr Yan Jiao
Chemistry, Engineering
University of Adelaide

Dr Margaret Shanfield
Geology, Engineering
Flinders University

Dr Grace Vincent
Health
CQU

Dr Ian Moffat
Geology
Flinders University

Dr Yuval Yarom
Technology
University of Adelaide

NEW SOUTH WALES

WINNER

Dr Laura McCaughey
Biomedical
UTS, University of Oxford



Dr Tayyaba Zafar
Astronomy, Space Science
Macquarie University

Dr Katie Sizeland
Biomedical, Chemistry
ANSTO

A/Prof Jill Newby
Mental Health
University of New South Wales

Dr Celia Harris
Psychology, Mental Health
Western Sydney University

Dr Caroline Moul
Psychology, Mental Health
University of Sydney

A/Prof Alice Motion
Science Communication
University of Sydney

Dr Matthew Dun
Biomedical
University of Newcastle

Dr Lining Ju
Biomedical
University of Sydney

Dr Sabin Zahirovic
Geology, Climate Science
University of Sydney

Dr Alex Russell
Mental Health
CQ University

Dr James Shine
Neuroscience, Biomedical
University of Sydney

ACT

WINNER

Dr Aparna Lal
Public Health
Australian National University



Dr Larissa Schneider
Chemistry
Australian National University

Dr Anna Olsen
Health
Australian National University

Dr Sambasivam Periyannan
Biology, Agricultural Science
CSIRO

Dr Tristan Reekie
Chemistry
Australian National University

VICTORIA

WINNER

A/Prof Yuming Guo
Climate Science, Maths, Physics
Monash University



Dr Rachel Climie
Biomedical
Baker Institute

A/Prof Francine Marques
Biomedical
Monash University

Dr Anna Ugalde
Biomedical
Deakin University

Dr Ayse Zengin
Biomedical
Monash University

Dr Bei Bei
Mental Health
Monash University

Dr Katherine Livingstone
Nutrition, Medical
Deakin University

Dr Paul Beavis
Biomedical
Peter MacCallum

A/Prof Nir Eynon
Biomedical
Victoria University

Dr Benjamin Henley
Climate Science, Maths, Physics
Monash University

A/Prof Gary Sacks
Nutrition, Medical
Deakin University

Prof Aniruddha Desai
Technology
La Trobe University

TASMANIA

WINNER

Dr Andrew Flies
Biomedical
University Of Tasmania



Dr Beth Penrose
Agricultural Science
University Of Tasmania

A/Prof Dawn Aitken
Health
University Of Tasmania