

# AJASN Newsletter

Aug-Sep 2020

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## Next Meeting

12 November 2020

Thanks to Dr. Stuart Pearson for contributions to this newsletter.

## Public Sector

The Australian Public Service Commission [directed public servants back to the office](#) where it's safe to do so (Sep 30.) The decision seems to be a trade-off between boosting CBD businesses and employee welfare and productivity (and a related [article](#).) Overwhelmingly, Australia's leading economists want the budget to [boost social housing and the JobSeeker unemployment benefit](#) rather than bring forward personal income tax cuts.

The coronavirus (economic) downturn shows public policy needs a gender lens, according to this [article](#).

A [discussion paper](#) makes the case for the creation of a public bank in Australia by providing Australia Post with an Authorised Deposit-taking Institution (ADI) licence, and moving in time to establishing 'Post-Bank' as a full national savings and loan bank.

This [opinion column](#) argues for a 'Royal Commission into Robodebt' because it could shed light on future policy and administration issues, some going beyond social security.

This short [article](#) outlines three simple rules to help regulators gain the greatest benefit from new and applied research in behavioural science (i.e. ways to drive compliance.) [Related hyperlinks: 'Whether it's the Dutch [incentives framework](#), the Department of Agriculture, Water and the Environment's [compliance posture](#) or new models to predict compliance with COVID-19 rules (see [here](#) for an example), there are many ways of identifying drivers of compliance.'] This [report](#) explores the regulatory framework in New South Wales, the challenges regulators face in ensuring regulation is fit-for-purpose, and identifies opportunities for the development of a roadmap for regulatory reform to enhance the State's productivity.

A [column](#) flagging possible Parliamentary question time reform notes that the 'procedure committee of the House of Representatives is in the process of [questioning](#) question time.' This [article](#) explores some dimensions of the 'national cabinet' arrangements introduced during the pandemic.

An old issue in Canberra that is fast becoming a much bigger issue is contractor employment. [Why are government agencies 'buying' public servants](#) like goods or services, rather than employing them as staff? And is this use of labour hire legal? Example: Defence employs about 17,400 public servants. However, its outsourced civilian workforce is far larger than that — documents published under freedom of information (FOI) law show it has about 28,600 contractors.

Singapore's Innovation Lab published an [article](#) on 'The paradoxes of public sector innovation.'

The Science for Policy Handbook has a downloadable [chapter](#) - Communicating Science in a Policy Context to a Broader Audience.

The failure of the Murray Darling Basin Plan is linked to poor political decisions but also to [poor market design](#).

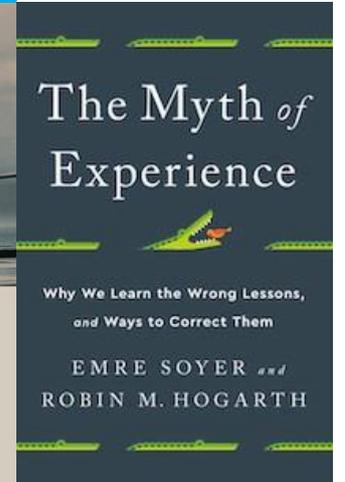
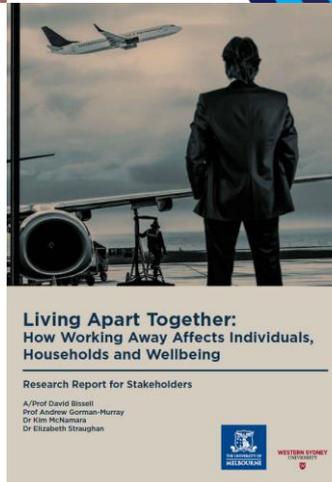
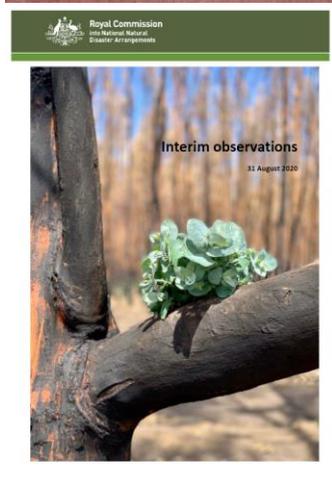
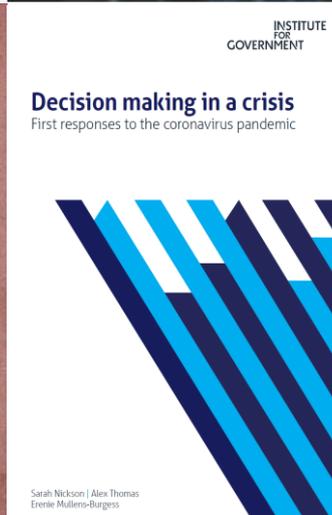
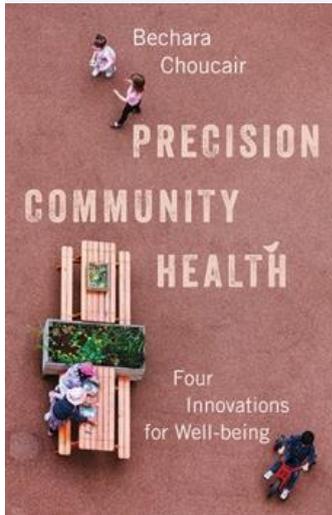
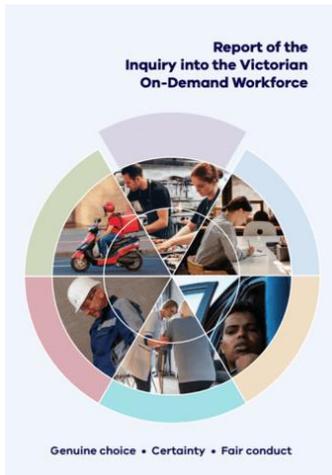
A Pew Research Center [survey](#), conducted June 10 to Aug. 3, 2020, among 14,276 adults in 14 countries: the United States, Canada, Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain, Sweden, the United Kingdom, Australia, Japan and South Korea. The survey also finds that public attitudes toward their own country's dealing with the coronavirus epidemic and national unity are linked to feelings of trust in others and economic confidence in their nation. The COVID-19 Global Response Index has been published by Foreign Policy ([paywall](#).)

Read



Click on the image to be taken to the actual document or to access a related link.

- Explanation of 'Ending Homelessness' book – [here](#)
- In the book, Ridley's case studies dissect some of the classic innovations of the Industrial Revolution, the Digital Revolution, and the Biotech Revolution, and he details how regulatory controls and political cronyism can inhibit new ideas.



Click on the image to be taken to the actual document or to access a related link.



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### Agriculture, food ...

In the United States, the pandemic has rapidly sped up [automation](#) efforts in meat processing, fast-food preparation, food delivery and more. An AI (artificial intelligence)-powered fish [species recognition software](#) is being used to automate fishery monitoring, ensure environmental sustainability & guarantee the origin of the food on your plate.

This article comments on increased likelihood of insect-eating birds' starvation under climate change: "Considerable attention has been given to potential widespread decline of insect populations & this might be hitting insectivorous birds particularly hard. But we show a mechanism that doesn't require change in insect abundance [just availability over short time, like a few days.](#)"

Editing the genes of plants and animals could help mitigate greenhouse gas emissions from agriculture and other sectors, according to a new [report](#) highlighting the possible uses of the technology called *Gene Editing for the Climate: Biological Solutions for Curbing Greenhouse Emissions*.

This [research](#) showed more than half of all landfill waste in metropolitan Adelaide could have been recycled simply by using the correct recycling or green organics bin. Much of it was food waste, 75 percent of which was still edible when thrown out.

There's an association between putting nutrition data on ['front of package' food product labels](#) and improved nutritional content in those foods, according to a new study.

The Economic Research Service (ERS)(a sub-agency of the Department of Agriculture (USDA)) has been hollowed out since its forced move to Kansas City – [story](#).

## Corona virus (not exhaustive)

New research points to the role of job loss and the media in a [worsening mental health landscape](#) during the pandemic. New [research](#) into the mental health crisis caused by Covid-19 (Care International) - polled 10,000 people in 40 countries about the repercussions of the public health crisis, found 27 per cent of women reported an increase in problems linked to mental illness, in comparison to ten per cent of men. Researchers used Google Trends to analyse an [extensive list of mental health-related](#) terms that people searched for before and after the World Health Organization issued a pandemic declaration on March 11, 2020. They found a major jump in searches related to anxiety, panic attacks, and treatments for panic attacks, especially remote and self-care techniques, in the weeks following the pandemic declaration

SARS-CoV-2 infection seems to block pain, opening up unexpected new possibilities for research into [pain relief medication](#). COVID-19 may damage [bone marrow immune cells](#); another reinfection reported

A committee of the U.S. National Academies of Sciences, Engineering, and Medicine recently recommended prioritizing older adults after giving the vaccine to first responders and health care workers. However (two) health economics and epidemiology scholars argue this pandemic 'requires a different model' – one that [prioritizes the young after essential workers](#). Two research papers published online in *Science* have confirmed that type I interferon is absent in severe cases of COVID-19. A new report in *Science* explores the troubling implications of these findings. In cases where the type I interferon is attacked by rogue antibodies, those same rogue antibodies might be passed on through convalescent plasma treatments.

The magnitude, severity and duration of Covid-19 suggests we will see [a wave of longer-term health consequences emerge in survivors](#), and these will be many and varied; immunological, haematological, gastrointestinal and neurological. [Key questions](#) that researchers are trying to answer about Corona virus reinfections: How common is reinfection? Are second infections more or less severe than the first? What implications do reinfections have for vaccine prospects? A systematic review and meta-analysis of published research data on [COVID-19 infection-fatality rates](#) was published in the International Journal of Infectious Diseases.

New Zealand's coronavirus outbreak may have arrived [via freight](#). Officials are testing surfaces at an Auckland cool store where a man who became infected worked. A shipment of [chicken wings](#) tested positive for Covid-19 in a Chinese port. China now routinely tests food imports, after an outbreak in Beijing was linked to a wholesale market. The U.S. Department of Agriculture (USDA) confirmed the SARS-CoV-2 virus had infected [mink farms](#) (note: mink are raised for their fur. Infections of mink have already been documented in other countries, including Denmark, the Netherlands, and Spain.

New [research](#) shows Māori are at least 50% more likely to die from COVID-19 than other New Zealanders.

According to this [blogpost](#), a citizen science group is working on its own inoculation using a DIY approach.

## Defence, National Security, Geopolitics, Emergency Management, etc.

The Morrison government is [accelerating and repurposing defence spending](#) in a A\$1 billion boost – on Reserve force jobs, slowing or delaying the transition of personnel out of the force for medical reasons, subject to medical advice, supporting for ADF partners to find work, a 'defence estate' program will speed up work scheduled for defence facilities around the country, etc. Are military efforts to clean up and replace [toxic 'forever chemicals'](#) cutting it?

Multiple analysts are accelerating their projections of when oil demand will stop growing. Oil major Total, in a new [analysis](#), sees demand growth ending in a decade and then declining in their 'momentum' scenario i.e. a world with some action on climate change, but not nearly enough to meet the targets of the Paris Agreement. In their 'rupture' scenario [i.e. aggressive policies coupled with tech breakthroughs] oil demand peaks by 2030 and then falls to less than half of today's levels by 2050.

The Quad – a partnership comprising Australia, India, Japan, and the United States – is poised to become [openly anti-China](#), according to this article. There is a [case](#) for bringing Japan into the 'Five Eyes.' New [research](#) by The Australia Institute shows that parliamentary oversight of Australia's intelligence agencies is weak compared to others in the 'Five Eyes.' The Australian Strategic Policy Institute (ASPI) report [Hunting the Phoenix](#) asserts that the CCP has at least 600 stations around the world that identify and recruit scientists and technologists valuable to China's quest for technological dominance. (Related [reporting](#).)

A [review](#) was conducted to identify possible applications of artificial intelligence and related technologies in the perpetration of crime. An [article](#) argues that 'A growing political science literature suggests the activity of today's [police](#) is already oriented around securing particular spaces for particular classes of people – controlling the spatial and social distribution of crime rather than its incidence.' This might be the case when climate change accelerates.

The 'Unraveling of America' an [article](#) by Anthropologist Wade Davis on how COVID-19 signals the end of the American era. U.S. Army, Estonia sign historic agreement for [collaborative research in cyber defence](#). Americans are [renouncing U.S. citizenship](#) in record numbers – people say they're dropping their U.S. citizenship because American anti-money laundering and counter-terrorism regulations make it too onerous and expensive to keep. A new [13-nation poll](#) by Pew Research Center finds that America's image has hit record lows in a number of countries, including key allies in Europe and Asia.

Brazil is shifting [responsibility for deforestation and fire monitoring](#) from a civil authority, where it has always rested, to the military.

The [citizenship and residence by investment](#) (CRBI) 'industry' is showing client preferences are shifting towards countries with good healthcare systems.

This study says fewer international students will lead to a discretionary income shortfall. That means a decline in funds for research over the next five year to 2024 of between \$6.4 billion to \$7.6 billion. The shortfall will result in [a reduction in the research force of between 5,100 to 6,100 research student and staff](#) researcher positions, approximating some 11% of the current research workforce.

An [odddity](#): this twitter feed highlights Australian supporters of 'General Flynn.'

## Economy

This [opinion](#) piece argues 'we need to invest in human services like health (mental and physical), education and childcare, and in information platforms that break the monopoly power of the tech giants. These are the investments that will allow Australia to flourish in an economy dominated by information and services rather than industrial production.' The goods economy is dead.

During the first half of 2020, the world's coal-generated power capacity shrank for the first time since at least the 1950s, [according to the non-profit Global Energy Monitor](#). New plants haven't entirely stopped coming online: The world added 18.3 GW of new coal-fired generation. But it retired plants capable of generating 21.2 GW, mostly in the US and Europe, cutting about 1% of total global capacity. The world's first [fossil-free steelmaking](#) started in northern Sweden. A major Australian insurer Suncorp will [end any financing or insuring of the oil and gas](#) industry by 2025. BP poised to sell '[stranded assets](#)' even if oil prices rally.

McKinsey identified six change drivers in this [article](#) on 'The next normal for Australian industries and workforces.' This [research](#) shows that Australia's economy is now regressing in its use of new technology, with negative implications for productivity, incomes, and job quality. The Commonwealth government plans to change the [insolvency system](#) to improve the chances of saving small businesses hit by the pandemic.

What does it take for a city to jump into the knowledge economy? A new [study](#) found one key factor: a population of at least 1.2 million.

[An analysis](#) provides early evidence on how the nature of work has changed for those working from home during COVID-19. This [column](#) discusses the productivity gains of working from home during the pandemic (and hints at upcoming disputes over distribution of benefits.) A California judge [ordered](#) Uber and Lyft to reclassify their drivers from independent contractors to employees with benefits, a ruling that could be consequential for gig economy workers. This article talks about the [death of Uber and Lyft](#) because of their flawed business models based on 'exploiting workers' and arguing that labour laws should not apply to them because they are 'technology platforms.' In a [working paper](#) published by the University of Sydney and the University College London Institute for Innovation and Public Purpose, authors argue 'rentierization' best describes the increasing use of housing to extract land rents, in the form of capital gains on property and rents from tenants. (Related [article](#))

A new [analysis](#) of preprints of papers in medRxiv and bioRxiv (two databases that curate preprints of medical scientific papers and biological scientific papers, respectively) found that the proportion of papers with female authors had declined in both during the pandemic.

'[Flexible discipline](#)' has become prevalent in retail work (i.e. where managers discipline workers by altering their schedule.)

## Environment

David Attenborough gained 1 million followers on Instagram in [record time](#).

A new [report](#) by the World Meteorological Organization warns that the target of limiting global warming to 1.5°C may be exceeded by 2024 and the risk is growing. Young activists from Portugal have filed the first [climate change case](#) at the European court of human rights in Strasbourg, demanding 33 countries make more ambitious emissions cuts to safeguard their future physical & mental wellbeing. By [2100, extreme heatwaves](#) could kill roughly as many people as all infectious diseases combined. These findings take into account climate adaptations that richer nations are likely to make, but some of the poorest parts of the world won't have that luxury. This article says we are in an [age of mega-fires](#) after reaching a climate tipping point and that we need to fight them differently. A study looked at the [health burden of bushfire smoke](#) for the 2019-20 fires in Australia. A second study looked at how [bushfires can re-release pollutants](#) which have been 'locked up for decades' in forests (in this case pollutants associated with leaded petrol.) Here is post estimating [increases in mortality](#) from the 2020 California wildfires. There is a growing body of [evidence](#) that suggests that carbon produced by wildfires is making a significant contribution to the volume of greenhouse gas in the atmosphere, where it contributes to climate change.

Conservationists have long sought to reduce consumer demand for overexploited wildlife products. More recently, health practitioners and others have begun calling for reductions in the wildlife trade to reduce the risk of pandemics. This [paper](#) (pre-print) – a systematic review – discusses 'what works' to reduce demand. A new [plan](#) – *A Global Deal for Nature* – targets areas around the world that can store carbon and protect large numbers of species. It calls for preserving lands, working with Indigenous peoples and connecting wild areas.

A systematic review of 46 research projects has assessed the toxicity of pristine plastics on fish, finding that [the smallest plastics have the biggest impact](#) particularly when it comes to behaviour and neurological functions. This [article](#) argues bioplastics are not the solution to the plastics problem. A just-released two-year study called [Breaking the Plastic Wave](#) found that despite the efforts of industry, governments, and NGOs, the plastic problem is getting much worse. Researchers say that more [microplastic pollution is getting into farm soil](#) than oceans and these tiny bits are showing up in our fruits, veggies, and bodies. This McKinsey article talks about '[Plastics recycling: Using an economic-feasibility lens to select the next moves.](#)' A super-enzyme that [degrades plastic bottles](#) six times faster than before has been created by scientists and could be used for recycling within a year or two.

Here is an [article](#) about plastics recycling in Europe. Here is an [article](#) on plastics production in the United States. Makers of cigarettes, takeaway coffee cups and other sources of litter will [pay for future garbage sweeps](#), Germany's environment minister has said. [Apparently, a study puts Germany's clean-up bill at €700 million yearly.]

Marine food webs under increasing stress according to this [study](#). A new [study](#) concludes that coastal urbanisation and lack of sewage treatment increases contamination in seafood and can cause potential health risks to humans, even large distances from pollution sources. [Researchers found widespread presence of human bacterial pathogens and human-derived micro-debris materials, including plastics, kerosene, paint, talc, and milk supplement powders in oysters in Myanmar.]

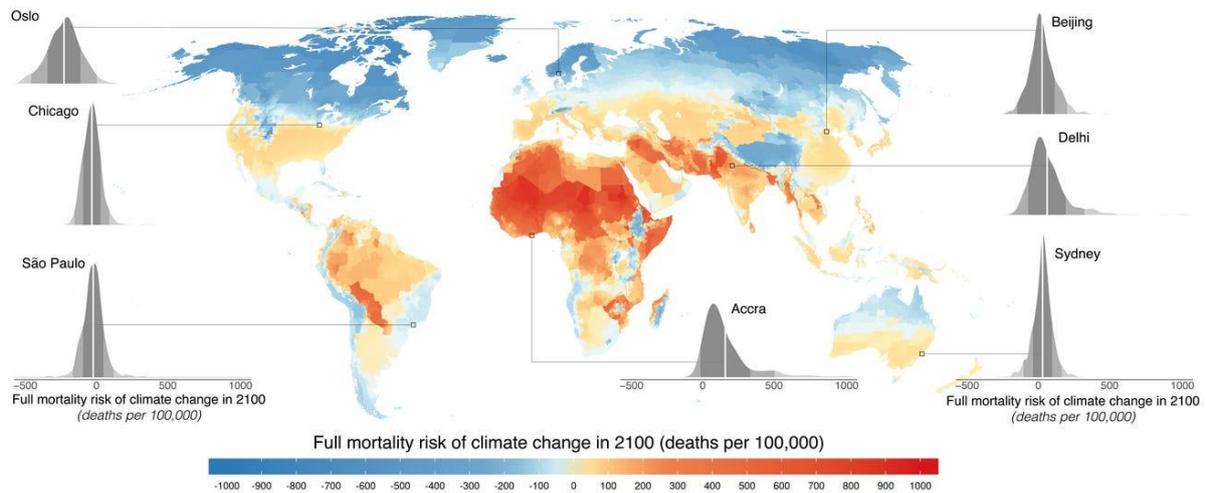
[More than 500 dams](#) are planned or under construction within protected areas around the world, according to a study. More than 1,200 large dams are already located within protected areas, many of them built before the reserves were established.

A new [study](#) presents some of the earliest research showing that pollution is bad news for our pollinators, too. Scientists in India studying the Giant Asian honey bee, a wild species native to Southeast Asia, found that bees in heavily polluted areas did not visit flowers as frequently, had negative circulatory responses, and died more quickly in captivity than those found in less polluted or rural areas.

An article mentions [solastalgia](#) — a neologism that combines the words nostalgia, solace and desolation — to describe a person's profound sense of loss and isolation, and the overwhelming feelings of powerlessness that came with it (about climate change.)

Flinders University archaeologist and space researcher Alice Gorman [argues](#) that we should make the Moon a person in the eyes of the law.

An NBER study shows (click on image for hyperlink)



## Foresight

This [page](#) – share your hunch – is interesting approach to gathering ideas from the Robert Wood Johnson Foundation.

[Imagining transformative biodiversity futures](#) includes some scenario vignettes.

These articles [Humanitarian Innovation Needs Systems Thinking — Part 1](#) and [When and How Do You Use Systems Thinking?Part 2](#) look at how complicated issues, like how to best protect refugees, can be supported using systems thinking, and why not all problems may need a systems approach.

In a [recent report](#), L'Atelier, a foresight company that is part of the French banking giant BNP Paribas, mapped the development of more than 80 current technologies in an effort to predict how they'll change life by the next decade.

A [magazine article](#) 'A Memo from the Year 2050' says 'In 2032, regular citizens looked at supermarket meat aisles and fast-food value meals as pandemic lottery tickets. Eating those foods carried a social stigma, not unlike how westerners a decade earlier had regarded bat-eating.'

When survival over generations is the end game, it makes sense to undervalue long shots that could be profitable and overestimate the likelihood of rare bad outcomes, [paper](#).

An EY article on '[How boards can use megatrends to chart a new course.](#)'

John Wilshire has been working on a new 'foresight' [idea](#) called assemblage space (to build on the futures cone idea.) [Video](#).

Here is a [critique](#) of the article: [From data analysis to storytelling in scenario building. A semiotic approach to purpose-dependent writing of stories](#) by Javier Carbonell, Antonio Sánchez-Esguevillas, and Belén Carro. Futures 88 (April 2017).

The [future of the high-rise](#) is examined through interviews with experts.

**ICYMI:** A 2019 [horizon scan](#) of priorities for coastal marine microbiome research.

## Health

This [story](#) has several links to health dangers for wildfire fighters.

A [new framework for pathogen evolution](#) exposes a world much more vulnerable to disease outbreaks than previously believed.

University of Queensland researchers discovered how bacteria share [antibiotic-resistance](#) genes. This discovery might help in the fight against superbugs. Some antibiotic resistance cases could be due to pollution – a new [study](#). This [study](#) shows malaria parasites in Africa have developed resistance to arguably the best antimalarial drug ever developed, artemisinin, for which the 2015 Nobel Prize was awarded to Youyou Tu. This is alarming to say the least.

New data has found an association between increased body weight and decreased cerebral blood flow. The research offers insight into the [links between Alzheimer's and obesity](#), suggesting maintaining a healthy weight can reduce one's risk of dementia. This new [study](#) finds that the physical and cognitive ability of older people has improved meaningfully over the past 30 years.

A longitudinal [study](#) examining BPA and the widely used substitute bisphenol S (BPS) found positive associations between incidence of diabetes and exposure to both BPA and BPS independent of traditional risk factors.

[In a study](#) in *Proceedings of the Royal Academy B* researchers reviewed studies from across the animal kingdom — including ones involving human beings — to see how members of a species behaved toward each other in the face of novel diseases.

U.S.-based activist group Avaaz [released a report](#) highlighting the extent of health misinformation on Facebook.

Zoonotic host diversity [increases](#) in human-dominated ecosystems. ([Related](#))

## Science and Technology

Portland is the [first jurisdiction](#) to pass a ban on corporate face surveillance in places of public accommodation. Your next biometric authentication technology might be [your walk](#). A US-based company believes that gait-based authentication can rival or complement other biometrics.

The ease of finding information on the internet is hurting students' long-term retention and resulting in lower grades on exams, according to a new 11-year [study](#).

New Zealand's second-largest electricity distributor has signed a deal with start-up Emrod to trial long-range [wireless power transmission](#).

A paper surveyed opportunities and challenges in measuring AI systems and their impact identifying [six key challenges that can help AI policymaking](#). A new [computational method](#) could help predict unprecedented, extreme 'black swan' events, researchers report. A black swan event is a highly unlikely but massively consequential incident, the loss of one-third of the world's saiga antelope in a matter of days in 2018.

The Great North Air Ambulance Service, a UK registered charity dedicated to providing helicopter emergency services, is testing a jetpack made by Gravity Industries to one day allow [paramedics](#) to fly up a mountain to provide first aid.

AGL plans to shift its [entire 400 car corporate fleet to EVs](#) (i.e. first big Australian company to sign to EV100 program.)

## Society

Under a [severe scenario](#), Australia's population will be 4% smaller than if the pandemic hadn't occurred largely driven by a massive reduction in international migration. Older women have been the fastest-growing group of [homeless people](#) in recent years. New research shows about 240,000 women aged 55 or older and another 165,000 women aged 45-54 are at risk. New interactive heat maps have been released showing how [widespread homelessness](#) is across all parts of Australia, prompting renewed calls for more social housing (by

Homelessness Australia and the Everybody's Home campaign.) The 11<sup>th</sup> Longitudinal Surveys of Australian Youth ([LSAY](#)) was released. The need for [emergency food relief](#) in Australia has jumped 46 per cent since January.

The World Health Organisation describes an [infodemic](#) as the 'over-abundance of information – some accurate and some not – that makes it hard for people to find trustworthy sources and reliable guidance when they need it.' In New Zealand [The Disinformation Project](#) is trying to understand if and how Covid-19 disinformation is contributing to the prevalence of exclusionary or polarising rhetoric, and how this is seeping into conversations and stories in the mainstream media, and in political and civil society.

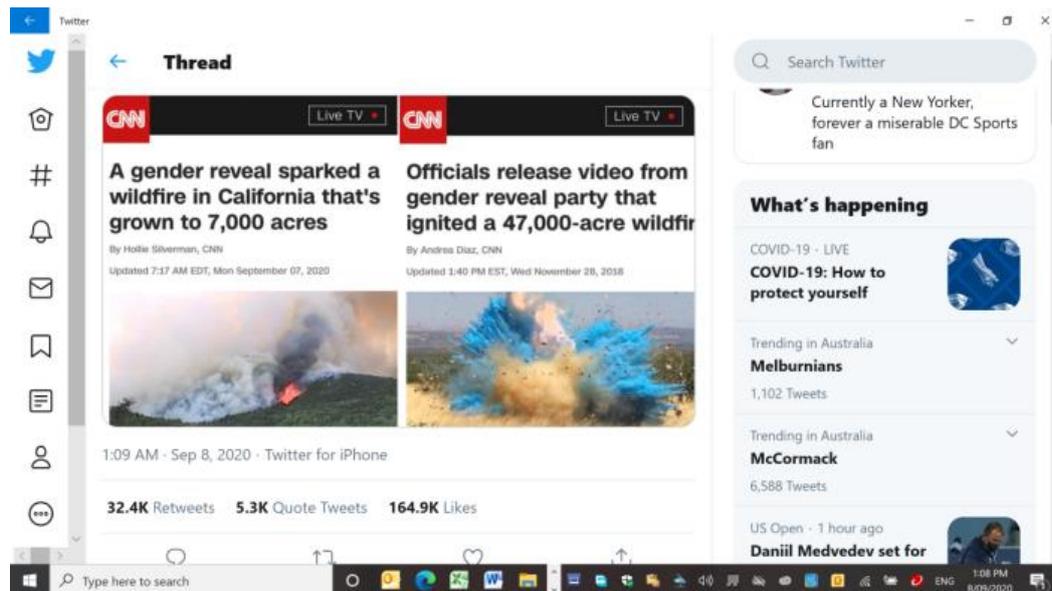
This article looks at what happens after [Facebook](#) – What happens to cultural memory and heritage when one private company holds all of it? What opportunities do people not yet living lose as a result? What happens to whole fields of human endeavour like history and sociology? There is a [paper](#) on this! (P.S. British authorities hit [Airbnb UK with an extra tax bill](#) of 1.8 million pounds last year, the home rental company's accounts showed on Tuesday, following an investigation into the firm.)

A start-up in Washington state turns [dead people into soil](#). It's a cheaper and more environmentally friendly option than the usual burial. A gig economy 'Civvl' company has started up – it's job? [evicting people](#) who can't pay the rent.

Millions of American [homes could become unsellable](#) - or could be sold at significant losses to their senior-citizen owners - between now and 2040, according to new research.

Here is a story about Nigel Richards, the man from New Zealand who memorized every French word in the French scrabble dictionary and won the [French Scrabble Championship](#) without speaking any French.

From twitter (hyperlinked) ...



## Resources

### Tools

[@preprintsifter](#) finds authoritative tweets from leading epidemiologists and other experts who are discussing and vetting COVID19-related preprint papers on Twitter.