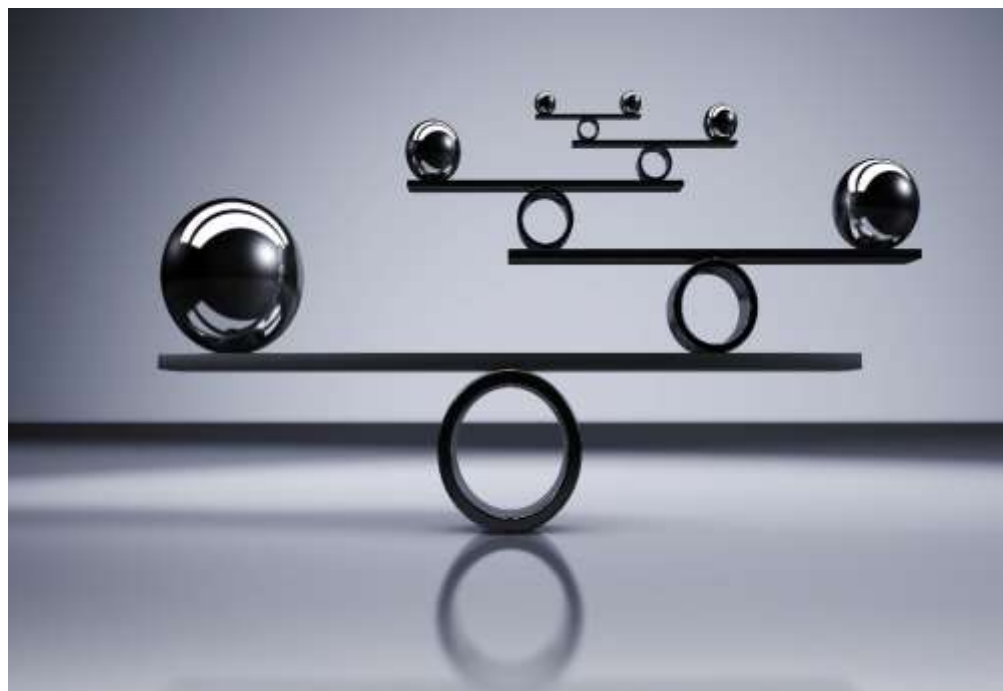


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 August 2023 - Sep 2023


### Public Sector

This [Regulatory capture: defining it, refining it, and mitigating it](#) explores the issue of regulatory capture. Often regulatory staff have difficulty in explaining exactly what it is, what it looks like, and how they might go about reducing it. It is important for regulators to identify early warning signs or indicators. A complex regulatory environment, new efficacy standards, and tighter corporate budgets have converged to make compliance more complicated than ever. This new [MIT SMR Connections Strategy Guide](#) offers expert insights for developing and maintaining a sophisticated, robust approach to compliance.

Behavioural science methods are increasingly used to design and evaluate public policies that better reflect human behaviour and decision-making. This working paper proposes guidelines and a visual roadmap, including five key questions to guide the selection of appropriate methods, and seven different experimental or non-experimental methods to choose. [Link](#)

New [research](#) has found that nearly 20% of all contracts procured by the Big Four since 2012/13 have been amended. None downwards. On average, when a contract has been amended, it has increased by 139%.

A parliamentary committee has called for the Finance department to expedite the creation of a procurement profession to address the significant capability deficit among public officials. [Link](#)

The government's planned regulations aren't tough enough to bring ministerial staff under control. [Link](#)

Lessons learnt from policy only have impact if they can travel through time and space to other organisations. New research summarised by The Bridge looks at the [dynamic process by which lessons travel](#).

### TAKE A LOOK INSIDE

[Public sector](#)

[Agriculture](#)

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[Environment \(incl climate\)](#)

[Foresight](#)

[Health](#)

[Science and Technology \(incl AI\)](#)

[Society](#)

[Resources](#)

Please feel free to send items for the next newsletter to Kate - [kate.delaney@jrca.net.au](mailto:kate.delaney@jrca.net.au)

**THANKS TO** Stuart Pearson, Alex Roberts and Brett Pepler

**Next Issue: Sep- Oct 2023**

[Privatised employment service providers](#) using the force of mutual obligations to funnel more than \$40 million every year into companies they also own, control or have an interest in. Jobseekers / underemployed have no choice but to make them rich. Also, [You need to run it as a public service because that is what it is.](#)

Discussing the literature that has developed in recent years providing evidence on [how industrial policies work.](#)

The aged care regulator has deliberately been ["bulk closing" thousands of serious incident reports](#) without even a standard assessment which staff say has led to preventable death, abuse and neglect as major risks go unnoticed.

A talk from the Creative Bureaucracy Festival in Berlin on [imagination and the future of government](#) - from democracy to finance, AI to future generations, mesh models to social R&D. [How can public servants stay influential](#) when they no longer have a monopoly on advice to governments? Research from The Bridge looks at how they can reconcile different opinions, maintain continuity and stay at the centre of policy design.

Read: When should states be creative, innovative, or entrepreneurial - and when should they not? An article by Geoff [Mulgan.](#)

Read: 2023 [Intergenerational Report.](#) And, [How Useful is the Intergenerational Report over 40 Years?](#) And, [Australia's future to 2063 and debating the world beyond the horizon | Lowy Institute.](#) Read: [Reclaiming fairness:](#) Perspectives on intergenerational equity in public policy in New Zealand. A [Productivity Commission report](#) shows all governments struggling to make the fundamental changes needed to give Indigenous communities their voice.

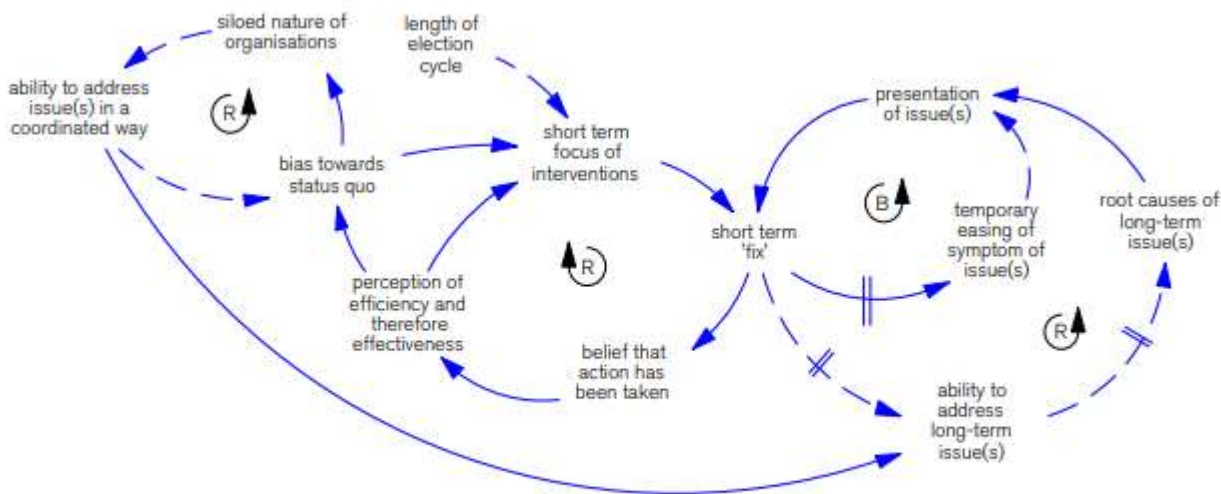


Figure 4. Short-termism, status quo bias and an inability to address long-term issues

## Agriculture

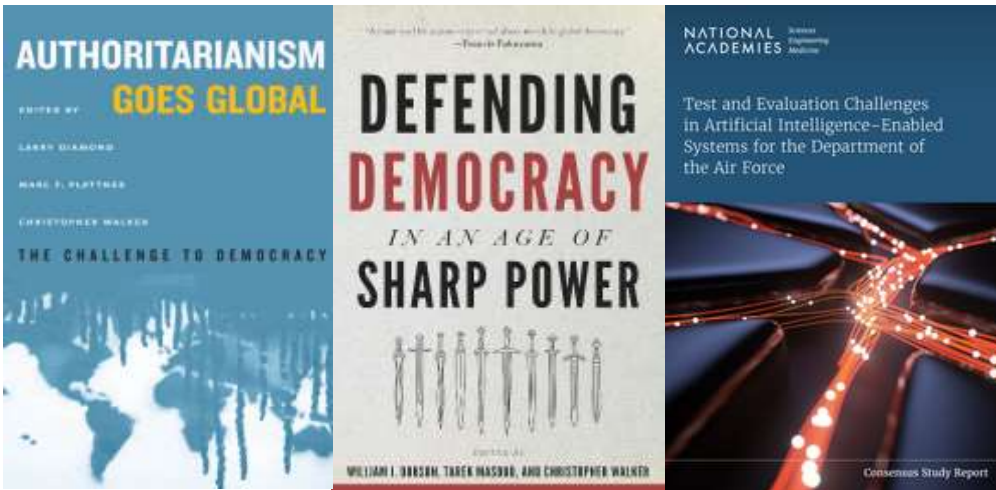
Farmers usually plant cover crops after harvesting their main crop. This prevents erosion of the soil and nutrient leaching. The roots of these crops also stabilize the structure of the soil. It had been assumed that a mixture of different cover crops would result in particularly intensive rooting. However, a [study](#) found only limited evidence that this is the case. Instead, mixed cover crops grow thinner roots than when just one single type of cover crop is planted. This result was unexpected. It documents how little is understood about the interactions between plant roots. The study was published in *Plant and Soil*. Should ag lenders and crop insurers offer ["good soil discounts"](#) to farmers? Land Core develops 'actuarially sound model' to make it possible.

Australian researchers have built a completely self-sustaining system that uses only seawater, [solar energy](#), and soil to grow crops of broccoli, lettuce, and pak choi. The novel invention departs from prior [floating farm](#) designs by building a two-tier structure that harvests freshwater from saltwater and provides it to the crops hovering above. The water that this new system generates is so fresh that it's safe enough to harvest even for humans to drink, the researchers found.

The Environmental Working Group (USA), which has for decades critically scrutinized the Federal Crop Insurance Program, published [research](#) finding that the cost of the program has soared from just under \$3 billion in 2002 to just over \$19 billion last year.

The Earth species project is [using AI to decipher the language of the wild](#), and they're making groundbreaking progress (animal communication).

The world could fall short of food by 2050 due to falling crop yields, insufficient investment in agricultural research and trade shocks, according to the U.S. [special envoy for food security](#). A [recent study](#) used economic models to show that if grocery retailers used dynamic pricing to adjust prices for perishable foods based on how long they've been on the shelves, retailers would likely dramatically curb food waste. [Related – A new [paper](#) proposes a potential way to reduce “fictitious pricing,” which can mislead consumers.] [Norway to spend \\$6 million a year stock-piling grain](#), citing pandemic, war and climate change.



A [study](#) suggests that improvements in farming technology could lead to the yearly elimination of 13 billion tons of carbon emissions by 2050.

Read (USA) [Environmental Conservation in the Farm Bill: A Research Roundup](#). (UN) Unpack key findings from a [landmark report on invasive species](#). And, (New Publication) [Insect declines in the Anthropocene](#). ([teelabntu.wixsite.com](#)). The State of the [Cellular Agriculture](#) Sector.

## Defence+ Defence, National Security, Emergency Management, Geopolitics

The CIA will soon roll out a [generative artificial intelligence tool](#) to help sift through public information for clues on U.S. national security threats. The tool will provide the agency with better open-source intelligence access and faster distribution of information. The tool will become available to the broader U.S. intelligence community after the CIA rollout.

The consequences of Russia's war on Ukraine for climate action, food supply and energy security – [research paper](#). Several dozen representatives of private security companies in camouflage seized the territory of the Dulisima oil company in the [Irkutsk region of Russia](#).

An Oxford Economics [survey](#) discovered that 36% of the companies surveyed identify geopolitical conflicts as their topmost risk.

According to the Bureau of Crime Statistics and Research (BOCSAR), [retail theft](#) in regional areas and Greater Sydney have risen by 34.5 per cent and 54.7 per cent, respectively, in the last two years. Read about [AI in the cybercriminal underground](#) here. A team of researchers from British universities has trained [a deep learning model that can steal data from keyboard keystrokes](#) recorded using a microphone with an accuracy of 95%.

[Losing an F-35](#) because the pilot put it on autopilot before ejecting and then not being able to track it because it's too good of a stealth fighter is probably the funniest possible stuff-up in modern military history. New [research](#) finds predictable patterns in terrorist propaganda that attempt to persuade otherwise morally grounded people to join violent causes.

Australia and France have signed a [pact](#) to work more closely on critical minerals supply chains, as the European Union looks to reduce its dependency on China for lithium and other heavy rare earths.

Two former bureaucrats, including an ex-competition watchdog boss, will lead an [independent review of Australian export control laws](#) that will contemplate the need for greater freedoms to share technology overseas.

The Defence department [reduced spending with Big Four consulting firms](#) by an average 40 per cent in the 2022/23 financial year, the first full 12 month reporting period since the election of the Albanese Government. [Also, [A decline in the big four's auditing quality stokes fears of an Enron-style corporate collapse - ABC News](#)]. New [allegations](#) by whistleblowers of KPMG ripping off the department of defence for \$billions have surfaced. Once the US and UK defence industries get their teeth into AUKUS this will look like small change.

Think tank - USA Claremont represents something new in modern American politics: a group of people, not internet conspiracy freaks but credentialed and influential leaders, who are [openly contemptuous of democracy](#).

[Al Qaeda in the Arab Peninsula](#) has struggled in recent years but is now experimenting with new technology and may have new partners.

[Read](#): First Ever Joint Statement By 13 Presidential Libraries Sounds Alarm About State of U.S.

## Economy

Australia's international ranking in economic complexity has fallen again, with the country now sat at 93 out of 133 countries in an index produced by Harvard University researchers. [The Atlas of Economic Complexity](#), produced by the Growth Lab at Harvard University, shows the country's has fallen two places since last year, [when it was ranked 91](#).

Visualising the \$105 Trillion [World Economy](#). The socioeconomic impact of innovation remains low - the [2023 global innovation index](#) is out. An economist with a different take: [Isabella Weber Has Neoliberal Economists Running Scared](#) (related to neoliberalism's failings.) [Related](#) Australian view.

A new [IBM report](#) estimates 40% of the global workforce will need to 'reskill' in the next three years. [Job services](#) in Australia - likely to change. McKinsey report explores what's next for the [future of work](#) (generative AI) and identifies which occupations are likely to add or shed jobs. The next few years will see more tech advancements, demographic shifts, and changes to labour demand. Read: [Does Generative AI Generate Jobs?](#)

China plans to establish a [Moon-Earth Economic Zone](#) to generate productivity worth USD \$10 trillion annually by 2050.



Insurance companies are pulling out of regions most susceptible to the impacts of climate change, including [California](#), [Florida](#), and [Louisiana](#). So what? insurance is a cornerstone of our modern economy. For example, buying a house, often requires the buyers to obtain homeowners insurance before they can get a mortgage. But as climate change drives increases in risks and insurance companies become unable to charge large enough premiums to cover the risk, insurers are becoming increasingly reluctant to write homeowners policies in vulnerable areas. As insurance gets more expensive and harder to get, property values will begin to decline. This, in turn, erodes the property tax base that local governments rely on to fund essential public services. As services degrade, even more residents may leave, amplifying the decline in property values. Eventually, banks, gas stations, and grocery stores leave and the only residents remaining will be those too poor to leave. [Related](#). [Rising insurance costs](#) could make home values

drop. [Actuaries](#) find median increase in house insurance of \$400 (28%) ... how insurance is being priced out of reach for a growing number of Australians.

Italy just hit [banks with a 40% windfall profits tax](#).

A [proposal](#) to make homes 50% cheaper by copying Singapore. Thousands of Airbnb and other short-term rentals are expected to [disappear from rental platforms as New York City](#) begins enforcing tight restrictions. Regulating Rentals: What Works? [here](#). The [2023 Rental Affordability Snapshot](#) surveyed rental listings across Australia and found that affordability has crashed to record



laws. The "breakdown of coordination" between levels of government has [exacerbated homelessness in New South Wales](#).

The Federal Court has thrown out Woodside Energy's approval to conduct [seismic blasting for its Scarborough Gas Project](#), after a legal challenge by Traditional Custodian Raelene Cooper. This means Woodside no longer has an approval to conduct the seismic blasting.

The Australian government signed a new agreement with the US state of California, the largest sub-national economy in the world, to advance [clean energy technology](#) development and collaboration. A world-first '[atlas' of technology regulation](#) plotting thousands of laws, regulations and government documents for researchers, industry and policymakers has been launched by the Tech Policy Design Centre.

US regulators have launched a long-anticipated [antitrust case against Amazon](#), alleging that the tech giant is illegally maintaining monopoly power by stifling ecommerce competition and exploiting sellers on its platform.

[Six scénarios d'un monde sans travail](#) (French). [Future of Work](#) & Workplaces 2030+.

Read: [The case for investing in public schools: The economic and social benefits of public schooling in Australia](#).

## Environment

For the first time ever, scientists have [quantified all nine planetary boundaries](#). Six of them are already transgressed and we are increasing pressure on the others. Scientists find we are [well outside the safe operating space for humanity](#) in a new study meant to assess the health of our planet. Arctic lakes that once locked up carbon could be turning into [sources of emissions](#). The Thwaites Glacier, capable of raising sea level by several feet, is eroding along its underwater base as the planet warms. In a [study](#) scientists mapped the glacier's historical retreat, hoping to learn from its past what the glacier will likely do in the future. [Antarctica warming](#) much faster than models predicted in 'deeply concerning' sign for sea levels. Two of the world's few [tropical glaciers](#), in Indonesia, are melting and their ice may vanish by 2026 or sooner as an El Niño weather pattern threatens to accelerate their demise, the country's geophysics agency said. Future emergence of [new ecosystems caused by glacial retreat](#).

The dangers of [rising groundwater](#) get little attention compared to those of sea level rise, but they're no less threatening.

A new United Nations report estimates the losses generated by invasive species at [more than US\\$423 billion yearly](#) and shows that these damages have at least quadrupled in every decade since 1970. [Related](#). In February this year a [queen fire ant](#) from Qld was found in Melbourne in a pot plant. Note the species has caused havoc globally, and was [this week discovered in Italy – the first official sighting in Europe](#). This (Kumu) [map](#) charts the emerging community of scholars and practitioners working on 'polycrisis' and closely related topics.

By combining key traits of two bacterial species, researchers have created a bug that have the power to [break down plastics in salty conditions](#) at room temperature. [A sentence](#) in an article: This implies that microplastics may have become an essential component of clouds, contaminating nearly everything we eat and drink via '*plastic rainfall*'. [Research](#) shows that particulate pollution from tires and brakes far exceeds pollution from tailpipes. Tires also release more volatile organic compounds. Related [article](#).

A new report finds [aluminium manufacturing worldwide](#) emits more than a billion tons of carbon dioxide annually, as well as chemicals called perfluorocarbons that warm the planet for 50,000 years. An overview of state of play on [Deep Sea Mining](#) – says there's a fundamental difference between science to understand and science to exploit and the latter is doing only what's needed to satisfy a checklist. Google partnered with American Airlines, used AI to [tweak flight paths to reduce contrails](#). The results are in, and if scaled up this could immediately reduce aviation's global warming impact by almost 20%.



[Article](#): wildfire fighters describe a mental health crisis on the frontlines. And, a [systematic research review](#) finds that, in the long term, wildfires and wildfire smoke are associated with mental health disorders including PTSD, respiratory diseases and COVID-19 complications, death from heart disease, and poorer general health. Places that experienced [more pollution from wildfires and farming had higher rates of dementia](#), the University of Michigan research found. Climate change is boosting those odds.

[Article](#): An integrated process for planning, delivery, and stewardship of urban nature-based solutions: The Connecting Nature Framework.

[Environmental users abandoned Twitter](#) after Musk takeover.

[Read](#): Is green growth happening? An empirical analysis of achieved versus Paris-compliant CO2-GDP decoupling in high-income countries.

## Climate

Shifting to remote work can halve the carbon emissions associated with a person's job. But working from home just one day a week has almost no climate benefit. The findings are from the most comprehensive U.S. study yet to investigate the environmental impact of trends toward [remote work and hybrid schedules](#) prompted by the COVID-19 pandemic and subsequent back-to-the-office efforts of some employers.

The British government has [backtracked on climate initiatives](#) to try to drive a wedge into Labour (for the next election). Related [story](#). And, another [related](#) commentary.

The world's [infrastructure](#) was built for a climate that no longer exists. More than half of European ski resorts facing 'very high risk' from climate change, [study](#) finds.

New study: using EPA's \$190/ton cost of carbon, a new study estimates how much it would cost businesses to pay for their pollution. Answer: it would consume [44% of corporate profits](#). [Carbon credit speculators](#) could lose billions as scientific evidence shows many offsets they have bought have no environmental worth and have become stranded assets. [Australia's most popular carbon credit scheme](#), Human Induced Regeneration, questioned by experts.

Read: Carter M. Powis et al, Observational and model evidence together support wide-spread exposure to non-compensable heat under continued global warming, Science Advances (2023). [DOI: 10.1126/sciadv.adg9297](#)

[Report](#): Assessing the Global Climate in August 2023

[Mapped](#): The impacts of carbon-offset projects around the world

[Guide](#): Public Engagement on Climate

## Futures

An [AI toolkit for futures studies](#).

This [working paper](#) discusses strategic foresight initiatives and methodologies that support decision-making and process design. It highlights case studies, international benchmarks, and best practices, as well as methodological recommendations and options for promoting the adoption and use of strategic foresight in government. Psychology researchers have found that [only 16% of people are truly future-focused](#) meaning they see how things are changing and act on it.

The [Remaking Global Trade for a Sustainable Future](#) Project aims to rethink the foundations for international commerce and develop a WTO reform agenda to better position this critical international organization to meet the needs of the current moment and better align the trading system with the world community's commitment to a sustainable future.

Report - [The End of School as You Know It: Education in 2050](#). The [Ecological Intelligence Agency](#) - a speculative, commons-owned initiative that advocates for the ecological health of our more-than-human companions.

A quick lesson in foresight - [Picturing the Future through the Sci-fi lens](#). Also things to consider in foresight - [Is the past, present, and future fixed?](#)

An excellent piece on what [Canada will be like in 2060](#). It omits to mention Canadians will have nothing to eat, and 100m Americans will have fled into Canada.

Di Berardo, M, Di Zio, S., Fontanella, L. (2023), World Futures Day 2022: A mixed method approach to identify topics of a global futures agenda. Futures. Volume 154, 2023, 103244. The paper can be accessed for **free** until Nov. 17, 2023: <https://authors.elsevier.com/a/1hr083jdJk-2H>

## Health

An analysis is the first to show how air pollution affects antibiotic resistance globally - findings are [published in the Lancet Planetary Health journal](#). The global study suggests the connection has strengthened over time across every country and continent. [Exposure to air pollution](#) increases the risk of contracting COVID-19 and results in more severe disease, according to two new studies comparing medical outcomes and pollution levels in Belgium and Denmark.

The University of Arizona (UA) will receive \$3.6 million in state funding annually until 2025 to grow its [One Health](#) model which considers the correlation of human health to environment and animal health and promote its development in the workforce. In a groundbreaking development, Arizonans can now [apply for worker's compensation if they contract COVID-19](#) while on the job.

Babies born during the early months of the COVID-19 pandemic have a [different composition of gut microbes](#) compared with those born before the introduction of lockdowns in March 2020. US regulators will consider clinical trials of [a system that mimics the womb](#), which could reduce deaths and disability for babies born extremely preterm.

In what researchers suggest is the [first ever reported case](#), a 61-year-old Indian contracted a serious case of silver leaf (fungal) disease in his own throat, providing a rare example of a pathogen making a huge leap across kingdoms.

The [health benefits of reduced air pollution](#) would pay for the clean-energy transition on their own, even if climate change didn't exist.

Covid variants: [A new COVID variant nicknamed "Pirola" is raising global alarm but don't freak out yet](#). Related [article](#).

About half of the world's population can expect to develop [at least one type of mental disorder](#) by the time they are 75 years old, according to a recent study published in The Lancet Psychiatry.

[Ozempic & Wegovy are tilting scales of Denmark's economy](#). Danish drugmaker's US sales have been so strong it's had to convert \$ into kroner in unusually large quantities, raising krone's value relative to euro, requiring rate cuts to maintain krone-euro peg. Instead of bulky metal plates and screws, [bone fractures](#) might someday be healed via targeted, controlled delivery of a specialized bone-growth protein, researchers report.

## Science & Technology (includes AI)

An [EIG paper](#) explores the relationship between the [decades-long decline in U.S. economic dynamism](#) and the slowing diffusion of new ideas and knowledge—as represented by registered patents—across the economy. It finds that an increasingly dysfunctional patent system, including the steep rise of IP litigation and the growing dominance of large incumbent firms, may be contributing to a slowdown in knowledge diffusion and the erosion of economic dynamism across the U.S. economy.

Core assumptions about [patents](#) are being subject to empirical testing, and they often come up short.

In some areas of [social science](#), around half of studies can't be replicated. A new test-fast, fail-fast initiative aims to show what research is hot – and what's not. Psychologists have posited hundreds of [cognitive biases](#) over the years. A fascinating new paper argues that they all boil down to one of a handful of fundamental beliefs coupled with confirmation bias.

Understand [how science policy works](#): Researchers and policymakers often exist in different worlds and speak different languages. Here are three ways to bridge the divide. [Patterns](#) of international collaboration in research.

Police in China do [re-parking to the nearest legal parking space](#), instead of towing the vehicle illegally parked. *Read: [Journal](#) - Special Issue: Technology in Policing*

## Artificial Intelligence

The [future of AI](#). Copyright and AI? – a summary of the arguments - [link](#). AI recap (August): The rise of the prompt engineer and biased driverless cars. In the USA, a judge has ruled that AI generated art [is not able to be protected by copyright](#).

A new [survey](#) finds that a majority of computer science experts at top US research universities want to see the creation of a new federal agency or global organization to govern artificial intelligence.

AI and the [disintermediation angle](#) courtesy of *Alex Roberts*.

In this [AI special](#), Chatham House experts explore how we can leverage technology's potential to both disrupt society and help address some of humanity's biggest challenges.

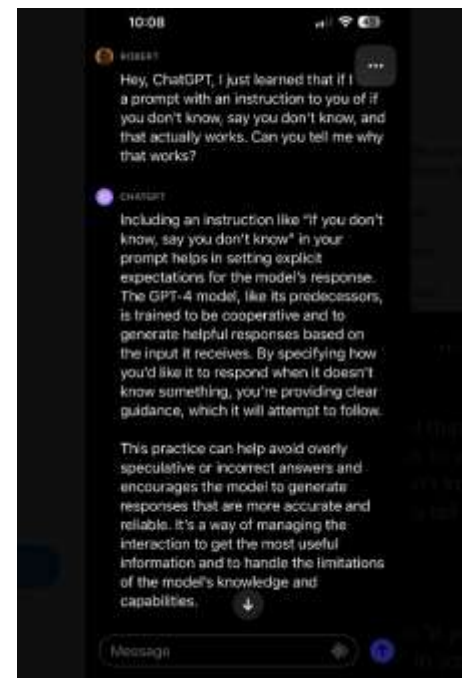
Read the complete briefing on '[Artificial intelligence, democracy and elections](#)' in the Think Tank pages of the European Parliament.

This video showcases an array of (majority) free AI tools, many I hadn't heard of before: <https://youtu.be/0QAa27eFSEA>. A channel for AI news, and the host aggregates all the newest tools, sites, and apps over at <https://www.futuretools.io>. And, [HARPA AI | GPT Chrome Automation Copilot](#), A new [podcast](#) on the opportunities and the dangers of artificial intelligence in scientific research.

Netflix [posted](#) an AI position – a machine learning platform product manager – with a salary range up to \$900k. A [pharma company](#) said it's planning on integrating AI throughout all its research and development. A Doctor of Medicine degree and a Master of Science in Artificial Intelligence from UTSA will form [a five-year MD/MS](#) program enabling physicians trained in San Antonio to advance the use of #AI to improve diagnostic and treatment outcomes.

People trust humans more than artificial intelligence, but when they think about God they are more likely to embrace AI recommendations over those from their peers - new research published in the [Proceedings of the National Academy of Sciences](#). Here's an essay on how the new [customisable AI girlfriends](#), marketed to men, will affect women. It's not just the customisable bodies and faces; it's also the emotions and personalities that will warp real relationships.

Harvard published a multipart guide to [assigning prompts for students](#). There are four different use cases: AI as tutor, AI as a way of getting feedback, AI as team coach, & having students teach AI.



## Society

[South Australia](#) is viewed as a precursor to the nation's population ageing prospects. Latest population projections for the state reveal something quite sobering: increasingly marked structural ageing (impacting workforce) and a potential for natural growth to become negative.

An unprecedented DNA study confirmed that [Aboriginal Australians are the world's oldest civilization](#).

A study found a fascinating pattern. [People are becoming more zero-sum in their thinking](#), and weaker economic growth may explain why. Older generations grew up with high growth and formed aspirational attitudes; younger ones have faced low growth and are more zero-sum.



This [paper](#) presents a scenario that describes a series of events that could lead to the extinction of humans as a species. The scenario is built upon three blocks of events. The first contains events that could severely and rapidly reduce human population in a relatively few years. The second block of events describes the regression of human civilization and technological base and the further loss of human population. The third block encompasses global environmental events that the remaining humans are subsequently unprepared to handle. The scenario posits the death by asphyxiation of the last human being by the year 3000.

A new [study](#) has revealed a high level of conservative views on gender equality is still being held among many Australians. Political [partisanship may impair your ability to reason](#).

The [Disability Royal Commission has made 222 recommendations](#) on how to improve laws, policies, structures and practices to ensure a more inclusive and just society that supports the independence of people with disability and their right to live free from violence, abuse, neglect and exploitation.

The [Australian Cohesion Index](#) brings together an extraordinary depth of data, knowledge and analysis to provide a robust picture of Australia today. It draws upon the ongoing rigour of the Mapping Social Cohesion study, which has been undertaken since 2007, and is the only ongoing and comprehensive study of social cohesion in the world.

[Meta-Analysis](#): Trigger warnings don't help people emotionally prepare for distressing material, or lead them to avoid it - the two things they're intended to do. Their main effect seems to be to make people more anxious about encountering the material.

## **Resources**

In 1899, French Artists Depicted Their [Vision of the Year 2000](#) - see What They 'Predicted'. (old but good)

The pursuit of [Uphill Thinking](#). We often limit our creativity by fixating on adding things to a system rather than [removing existing things](#).

There's a [new method](#) that will help identify the causes of a problem or event.

Books:

