

## RESEARCH NOTE

# ‘The Future of Decision Making’: Nobel Prize Dialogue Sydney 2023 Virtual Event

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**National decision-making systems were not designed to deal with the global scope or complexity of the existential threats facing the world today. Understanding and improving the way we make decisions could help address these pressing global issues more effectively. GAP Project Manager Alison Sheehy outlines the ideas and recommendations from the Nobel Prize Dialogue Sydney 2023 Virtual Event.<sup>1</sup>**

A diverse, multidisciplinary group of participants, including Nobel laureates, university students and senior figures from industry, government and academia, met online on 16 June 2023 to discuss ‘The Future of Decision Making: From Personal Choice to Planetary Impact’.

The Nobel Prize Dialogue Sydney Virtual Event,<sup>2</sup> organised by Nobel Prize Outreach AB in partnership with Global Access Partners (GAP), considered the implications of artificial intelligence (AI) for democratic processes and new ways to engage the public in decision-making, given the long-term existential challenges of climate change and technological disruptions.

In her opening comments, GAP Co-Founder and Managing Director **Catherine Fritz-Kalish** hoped that wiser and more effective decisions would flow from new combinations of data-driven insights, technology’s transformative power, and the collective intelligence of diverse human perspectives in the future. **Laura Sprechmann**, CEO of Nobel Prize Outreach AB, underlined the

1. <https://globalaccesspartners.org/nobel-prize-dialogue-sydney-2023-virtual-event2/>

2. Nobel Prize Outreach AB extends the reach of the Nobel Prize to millions of people around the world through inspirational events, digital media and special exhibitions and activities related to the legacy of Alfred Nobel and the achievements of Nobel laureates. Its Nobel Prize Dialogues are open, cross-disciplinary forums that aim to deepen the dialogue between the scientific community and the rest of society. They bring together Nobel laureates, world-leading scientists, policy makers, youth and thought leaders in a conversation about complex, grand challenges of today.

need for robust and resilient democracies to make evidence-based decisions to confront complex problems such as climate change.

Keynote Speaker **Prof Brian Schmidt AC**, Vice-Chancellor and President of The Australian National University (ANU) and a 2011 Nobel Laureate in Physics, argued a further doubling of the world's population will not be sustainable. Though human fertility tends to decline as education and income increase, disparities in wealth and demographics, over-consumption of resources, pollution, climate change and environmental degradation now threaten to fuel famine, conflict and mass migration. Ageing populations in developed nations may also erode living standards, as fewer workers are called upon to support more older people, prompting social resentment and political instability.

Prof Schmidt noted the power of previous inventions, such as nuclear technology, to generate both progress and peril and suggested that new developments in AI will be used for both the benefit and detriment of humanity. AI-controlled drones could dominate future battlefields, while generative AI could flood democratic societies with massive disinformation or help terrorists produce lethal biological pathogens.

Recent events, from the COVID-19 pandemic to Russia's invasion of Ukraine, have highlighted the vulnerabilities of a prosperous, globally connected world to economic and social disruption. Future climate, environmental and technological shocks, global population trends, and increasing geopolitical competition threaten to destabilise the international order.

Prof Schmidt called for improvements in collective decision-making and the use of technology to improve life rather than destroy it. Decision-makers must focus on the long-term common good of humanity rather than short-term political

and national advantage. Accelerating technological developments, for example, could ease the transition to a low-carbon economy that could still produce the food, energy and services the world's growing population needs.

Emphasising the complex neuroscience behind decision-making and human thought, **Baroness Prof Susan Greenfield CBE** argued that humanity's capacity for real-life experience remains the root of fundamental understanding despite the development of internet-trained AI. Effective problem-solving requires a combination of fluid intelligence – the ability to learn, assess and navigate new situations – and the crystallised intelligence of accumulated knowledge that can be recalled as required. People build an increasingly rich frame of reference throughout their lives and continue to learn thanks to the human brain's plasticity.

Human decision-making is also shaped by the body's endocrine, immune and central nervous systems, as well as our social environment. Termed 'somatic markers' by neuroscientist Antonio Damasio,<sup>3</sup> neurochemicals are unconsciously released in response to stress or emotions and help shape our thoughts and memories in ways computers cannot replicate.

Prof Greenfield explored the nature of decision-making in different contexts – from the instinctive 'freeze, flight or fight' reaction in response to immediate danger to long-term life plans – to further differentiate human and machine decision-making in terms of their essential nature and calculative capacity.

**Prof Saul Perlmutter**, Professor of Physics at the University of California Berkeley and a 2011 Nobel Laureate in Physics, offered three practical pathways to help societies deliberate and decide collective actions more effectively. First, he stressed the need to teach all school students the principles

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3. Damasio, A.R. (1996), "The somatic marker hypothesis and the possible functions of the prefrontal cortex", *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 351, no. 1346, pp. 1413-1420, <https://pubmed.ncbi.nlm.nih.gov/8941953/>

of scientific thinking, regardless of their area of study. If we want to be more capable of evidence-based societal deliberation and decision-making in the next twenty years than we are today, we must ensure every young person knows the vocabulary of ideas and approaches to think through problems that scientists deploy.

Second, the extensive research already undertaken to understand how citizens can effectively deliberate together stressed the effectiveness of the 'deliberative polling' model. Such forums involve a statistically representative sample of citizens, rather than a self-selected group, who interact with a panel of experts on specific issues. These citizens then form small groups for moderated deliberations that are punctuated by opportunities for the groups to engage the experts with new questions rather than passively receiving information from them.

Finally, he warned of the risk that our broken mode of social deliberation poses to the functioning of democracies. The current media landscape, fragmented across the internet, cable news, social media, and traditional sources, appears to be particularly damaging to our collective ability to think together and take productive advantage of our differences. Therefore, he challenged social scientists, non-profit organisations and the major digital platforms themselves to examine and reshape the media landscape to bring people together rather than drive them apart.

In the discussion time that followed the first session, the results of a participant poll revealed great concern for the current state of democracy. Participants also suggested additional ways of including a broader range of people in collective decision-making, as some degree of consensus on beneficial social goals is a necessary precursor of success. Given the rapid development of AI capacities that could eventually surpass and overwhelm human intelligence, a definition of intelligence is also required.

Echoing this sentiment and stressing the exciting potential of AI, **Lee Hickin**, Microsoft's Chief Technology Officer in Australia and New Zealand, traced the delicate path technology companies must tread between innovation, commercialisation and social responsibility in deploying AI.

Though AI can create a brighter, more inclusive future and spur economic growth, he accepted the need for corporate responsibility in its deployment and a degree of regulation for the public good. Major technology companies must balance their corporate responsibility to maximise revenue for shareholders with their civic duty to curb the potential harm misuse of innovative technologies may cause.

In common with other Thought Leaders at the Dialogue, Mr Hickin saw humanity's misuse of generative AI as a more significant threat than misaligned or malignant artificial general intelligence in the future. He backed mechanisms to control access to the technology, although he admitted that AI is set to enter and change every aspect of society.

**Distinguished Professor Genevieve Bell AO**, Director of the ANU School of Cybernetics, then explored the history and importance of systems thinking in technology, democracy and decision-making.

A small group of scientists began the investigation of artificial intelligence as a Dartmouth Summer Research Project in 1956 when creating machines that could simulate human cognition was thought to be a comparatively simple problem. In contrast to cybernetics, in which people, technology and the environment mutually interact in a state of constant feedback, the concept of AI excludes humans and the environment from the equation. It has made enormous strides in recent years, with even more significant developments promised for the future.

The transformative role of technology in humanity's future is now being debated regarding AI's potential effects on global economies, democracies and

social systems. Prof. Bell outlined her work over the last seven years to establish a new branch of engineering to manage AI systems and bring them safely, responsibly and sustainably to scale. She has also worked to build the new vocabulary required to discuss these innovations and argued that analysing problems in terms of systems rather than merely components offers a powerful way to engage with the world.

Rather than limiting our debate to AI, we should embrace cybernetics to think about systems that incorporate people, technology and culture and chart the relationships and dynamics between them. Prof Bell urged consideration of the broader aspects of people's relationship with technology and emphasised the need for continued human agency in shaping a fairer, more sustainable future for all.

In the subsequent discussion, participants explored additional facets of AI and warned against fatalism, as humanity could still retain control of the technology if we choose to exercise it. AI should not be seen as an existential threat, as its potential power to become a master rather than a servant is not yet a *fait accompli*. Several participants lamented the failure of traditional corporate, political and scientific decision-making to respond with enough urgency to the climate emergency, and novel approaches could improve the situation.

**Dr Per Espen Stoknes**, Co-Director of the Centre for Sustainability and Energy at the BI Norwegian Business School, drew on his experience as a psychologist and economist to explain why humans tend to focus on the short-term personal costs rather than the long-term collective benefits of acting on issues like climate change.

Most people feel that crisis on a global scale is psychologically distant from them and recoil from doom-laden warnings about climate change in favour of personal anecdotes about the weather. It is easier for people to rationalise the dissonance between their carbon-heavy lifestyle and their children's prospects of a warmer world than to change their day-to-day behaviour. Rather than

accept the need for action, many people have taught themselves to tune out climate-related news, and so 'climate denial' is less a political position than an unspoken social agreement to pretend the problem does not exist.

Dr Stoknes itemised barriers to action regarding distance, doom, dissonance, denial and identity. The human brain evolved over millennia to prioritise social acceptability over individual judgement or abstract truth, as exclusion from the tribe meant death for most of human history. People, therefore, care more about the actions and opinions of their family, neighbours and circle of friends than academic or media sources of influence and information.

The media offers a constant barrage of unwelcome news with few solutions rather than solution-rich discussion that tends to foster more social engagement. Groups campaigning for climate action should reframe the climate challenge in terms of the incredible economic and social opportunities low-carbon solutions can generate rather than repetitive portents of doom.

Evidence alone will not make people think long-term nor guarantee lasting engagement, but people will modify their behaviour when conducive conditions are put in place. While individual actions and attitudes will not solve climate change alone, they are necessary to build grassroots support for structural change in government and business.

In closing the final session, **Dr Ian Watt AC**, Chair of the International Centre for Democratic Partnerships (ICDP), offered his thoughts on the processes and principles that generate good government decision-making.

Dr Watt drew on his years in the Australian Public Service to reassure participants that governments of all political persuasions want to make good decisions but accepted that every policy option is a trade-off between various competing interests and factors that can sway their final choice. Evidence-based public policy usually pays political dividends, but even the best decisions can misfire, so political

decisions should only be judged by the facts known at the time, without the benefit of hindsight, given the distorting effect of changing circumstances.

Furthermore, decisions are only as good as their implementation, and poor delivery can mean promising ideas produce few concrete outcomes or even adverse results. Delivery tends to be improved by a robust review process conducted by the Public Service and officially released to uncover areas of underperformance that can be reiterated and improved. Such transparency builds accountability, encouraging better decision-making, as poor choices can be traced back to their instigators. Merely having rules about best practices does not mean they will be respected, but when governments realise their electoral success depends upon making good decisions, they are more likely to be made.

In the final discussion session, participants were invited to suggest fresh engagement models to help society tackle wicked problems such as climate change, reduce political and social polarisation, and encourage young people to get and stay involved in political processes. They agreed that taking environmental sustainability and personal wellbeing into account when assessing progress alongside financial results would help policymakers adopt more holistic policies and shift priorities from immediate gratification and personal gain towards caring for the needs of future generations.

**The Hon Cr Philip Ruddock AO**, Mayor of Hornsby, and a former Federal Cabinet Minister agreed the public has a right to participate in decision-making and that people are more likely to accept tough but necessary political decisions if they feel they have been consulted. In closing, **Peter Fritz AO**, Group Managing Director of TCG and Chairman of GAP, suggested establishing several GAP Taskforces to define a rational collective approach to decision-making and develop complementary democratic frameworks supported by modern technology such as AI and sentiment analysis.

The complete list of recommendations from the Dialogue is detailed below.

## Recommendations

**New frameworks for decision making: long-term thinking for the greatest benefit to humanity**

### 1. Explore novel ways to include long-term thinking and intergenerational challenges in democratic decision-making processes.

Opportunity: Establish a GAP Taskforce to consider successful approaches to incorporating long-term thinking in democratic decision making, particularly in the Australasia context, and develop new frameworks for more inclusive, rational and long-term collective decision making to deal with pressing global issues.

**Strengthening democracies for the common good**

### 2. Investigate how participatory democracy processes – such as deliberative polling or citizens' assemblies – can be used to navigate complex and contentious issues and how AI and other technologies can support participatory processes.

Opportunity: Establish a GAP Taskforce to evaluate successful models of participatory democracy processes and identify where these models might be applied in Australia and the Australasia region and how new technologies such as generative AI can support them.

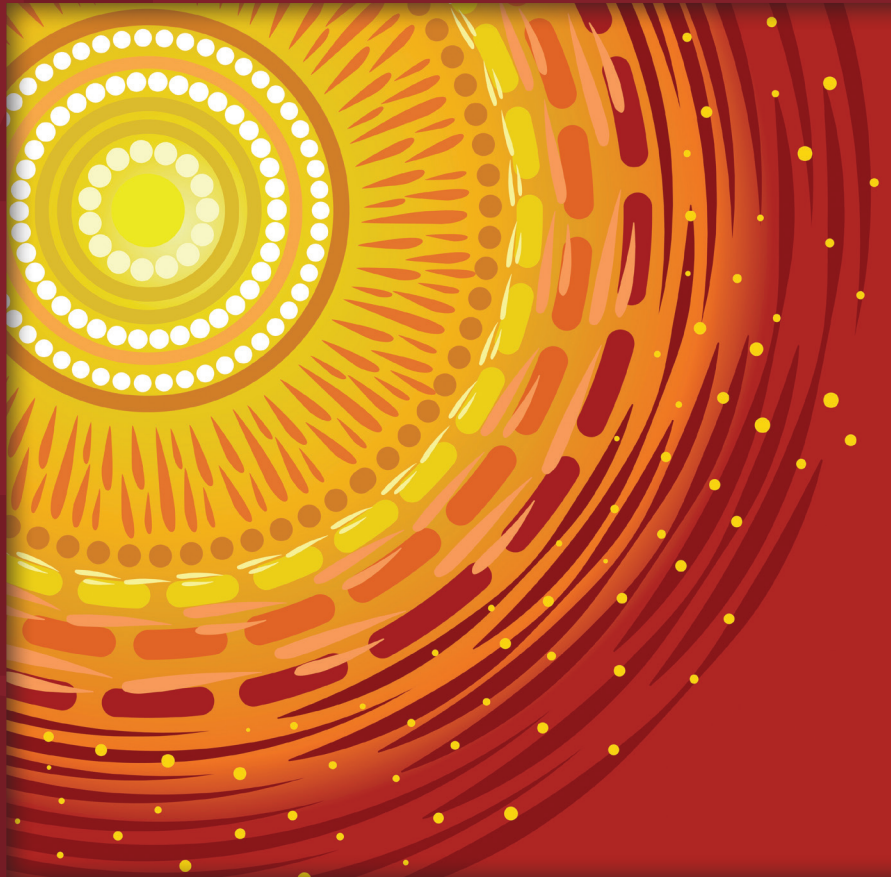
**Critical thinking education for all**

### 3. Encourage the teaching of the principles of scientific thinking to all school students, regardless of their area of study, to encourage rational inquiry and enable informative debate.

Opportunity: Establish an Australian pilot of the Nobel Prize Outreach's high school programme *Scientific Thinking for All: A Toolkit*.

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