Current Affairs 19ᵗʰ October 2023 by Saurabh Pandey

Torres Strait

Australians were asked to vote on whether to establish an Aboriginal and Torres Strait Islander Voice to Parliament.

The Voice was proposed as a means of recognising Aboriginal and Torres Strait Islander peoples as the First Peoples of Australia in the Constitution.

Voting is compulsory in Australia. Every eligible Australian citizen over 18 years of age is obliged to vote in elections and referendums.

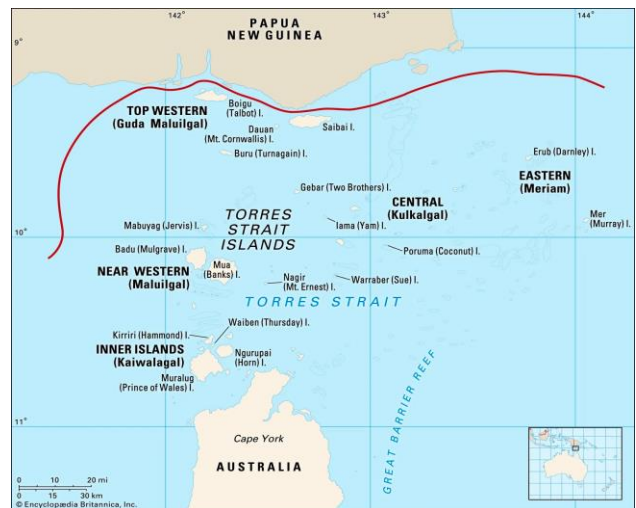It's very difficult to achieve constitutional change in Australia.

Since federation in 1901, 45 questions have been put to Australian voters in referendums.

Only eight of those have succeeded.

Torres Strait Islanders

Torres Strait Islanders are the Indigenous Melanesian people of the Torres Strait Islands, which are part of the state of Queensland, Australia.

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Quantum computers vs classical computer

An algorithm is a sequence of logically connected mathematical steps that solve a problem.

A quantum algorithm is also a series of steps, but its implementation requires quantum gates. Some problems may need fewer steps on the part of a quantum algorithm than the number of steps required by a classical algorithm.

That is, the quantum algorithm can speed up the computation. One factor that controls this speedup is the possibility of superposition of the states of quantum bits, or qubits, that encode information.

Whereas a classical computer uses semiconductor based gadgets as bits to encode information, quantum computers use qubits.

In both cases, the bit or the qubit can have two distinct states, 0 or 1; but qubits have the additional ability to be partly 0 and partly 1 at the same time.

One of the earliest quantum algorithms is the factorization algorithm developed by Peter Shor.

It requires fewer steps to factorise a number than one that operates with classical principles.

Shor's algorithm identifies the factors of a given integer.

Another popular quantum algorithm is the quantum search algorithm developed by Lov Grover.

It looks for a numerical pattern in a large list of numbers.

The Hindu

AI and wildlife

When scientists want to measure reforestation, they can survey large tracts of land with tools like satellite and lidar.

But determining how fast and abundantly wildlife is returning to an area presents a more difficult challenge sometimes requiring an expert to sift through sound recordings and pick out animal calls

Bioacoustics, which uses sound to learn more about animal life and habitats.

It is a longstanding research tool, but more recently is being paired with computer learning to process large amounts of data more quickly.

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Cognitive warfare

Cognitive warfare truly ranks alongside other elements of modern warfare such as the domains of maritime, air and space.

Cognitive warfare puts a premium on sophisticated techniques that are aimed at destabilizing institutions, especially governments, and manipulation, among other aspects, of the news media by powerful non- state actors.

It entails the art of using technological tools to alter the cognition of human targets, who are often unaware of such attempts.

The end result could be a loss of trust apart from breaches of confidentiality and loss of governance capabilities.

Even more dangerous is that it could alter a population's behaviour using sophisticated psychological techniques of manipulation

As firms, large and small, spend billions of dollars to migrate to the Cloud, and more and more sensors constantly send out sensitive information, the risks go up in geometrical progression.

All this portends a dark, rather than a brave, new world order that we hope to inhabit.

Hence, digital uncertainty is morphing into radical uncertainty and rather rapidly.

Today, government and government agencies are spending significant resources to undo the impact of misinformation and disinformation, but this may not be enough.

There is not enough understanding of how the very nature of information is being manipulated and the extent to which AI drives many of these drastic transformations.

All this contributes to what can only be referred to as 'truth decay'

The Hindu

The emergence of AGI

As growing numbers of people cognitively and psychologically become dependent on digital networks, AI is able to influence many critical aspects of their thinking and functioning.

What is simultaneously exhilarating and terrorizing is the fact that many

advances in AI are now being birthed by the machine itself.

Sooner rather than later, we will witness the emergence of Artificial General Intelligence (AGI) Artificial Intelligence that is equal and or superior to human intelligence, which will penetrate whole new sectors and replace human judgement, intuition and creativity

It has an inherent capacity to flood a country with fake content masquerading as truth, and for imitating known voices with false ones that sound eerily familiar.

This could lead to a breakdown of the concept of trust of what is said, read, or heard and could lead to overturning the trust pyramid with catastrophic consequences.

AGI will enable highly autonomous systems that outperform humans in many areas, including economically (valuable) work, education, social welfare and the like.

AGI systems will have the potential to be able to make decisions that are unpredictable and uncontrollable which could have unintended consequences, often with harmful outcomes

Digital data could in turn become converted into digital intelligence, enlarging the scope for disruption and the reining in of entire sectors.

It would enhance inequalities and exacerbate social disparities, and worsen economic disparities

AGI could prove to be as radical a game changer in the world of the 21st century as the Industrial Revolution was in the 18th century.

It is almost certain to lead to material shifts in the geopolitical balance of power, and in a way never comprehended previously.

The spectre of digital colonisation looms large with AGI based power centres being based in a few specific locations.

Consequently, AGI driven disruption could precipitate the dawn of the age of digital colonialism. This would lead to a new form of exploitation, viz., data exploitation.

Israel's massive intelligence failure is attributed by some experts to an overindulgence of AI by it, which was skillfully exploited by Hamas.

AI depends essentially on data and algorithms, and Hamas appears to have used subterfuges to conceal its real intentions by distorting the flow of information flowing into Israeli AI systems.

The Hindu

OBOR Summit

The Third Belt and Road Forum for International Cooperation that was convened in Beijing, China (October 1718) has put the spotlight back on Chinese President Xi Jinping's signature initiative.

BRI to China's Marshall Plan, stating that it was a gateway for China to transition from a regional power with global influence to a global power with comprehensive strength

China's bid to reboot globalization and rectify its shortcomings.

A rising China also felt the need to develop new transport and trade arteries as alternatives, since rivals could put the squeeze on the Strait of Malacca the jugular vein for China's economy

Beijing was also putting its money where its mouth was with the establishment of the Asian Infrastructure Investment Bank with a $100 billion war chest, challenging other lending institutions.

The Chinese government's white paper on BRI released this month ("The Belt and Road Initiative: A Key Pillar of the Global Community of Shared Future") revealed that over 200 BRI cooperation pacts had been inked with over 150 nations

According to the World Bank, 675 million people are without electricity globally, around 2.3 billion lack potable water, and 450 million live beyond the coverage of a broadband signal.

The lending institution calculates that bridging the infrastructure gap will need capital infusion of $1.5 trillion annually through 2030, which is approximately 4.5% of the GDP of low and middle-income countries.

Under China's Marshall Plan, motorways, power plants, ports, railway networks, and digital infrastructure have been built.

A report from the ISEASYusof Ishak Institute on the BRI has highlighted

issues related to ecological damage, displacement of people, disputes over payouts and labour unrest.

The findings detail case studies of Indonesia, where things came to a head over anxieties related to Chinese labourers filling up positions earmarked for locals.

Issues have tarnished the reputation of brand BRI, especially its tagline of 'win win cooperation' as there are perceptions that it is a win for China twice over at the cost of other stakeholders.

The Joe Biden administration announced the 'Build Back Better World' (B3W) initiative that seems to have been reorganized as the Partnership for Global Infrastructure and Investment, which aims to channelize private capital into climate change and energy security, health care and health security, digital technology, and gender equity.

Here, it must be noted that India has steadfastly opposed CPEC over issues related to sovereignty and had raised concerns over issues of unsustainable debt.

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The G20 Delhi summit posited yet another alternative in the form of the India Middle East Europe Corridor (IMEC) that seeks to link India, West Asia, and Europe through railways and shipping lines.

In addition to the trade connectivity, electricity and digital infrastructure as well as a pipeline for clean hydrogen export have been envisioned.

The Hindu

Working women

If the country is to grow into a $5 trillion economy, women must be included.

There are two specific ways to get here: women's work, often care work, must be appropriately valued, and women must be adequately supported to participate in economic activity outside the home.

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All women work, but not all of them get paid

India's first national Time Use Survey released in 2020 by the National Statistical Office, finds that 81.2% of all women are engaged in unpaid domestic services, compared with 26.1% of men.

It finds that men spend 42 hours on average on activities within the production boundary, i.e. what is traditionally counted as economic activity, whereas women spend 19 hours.

However, women spend 10 times more time on household maintenance and care for children, the sick and the elderly 34.6 hours versus 3.6 hours.

There are two implications for this: working women face the dreaded "double burden", where working outside the home and contributing to family income does not come with a commensurate reduction in household responsibilities

When uncounted, women's work remains invisible, which has implications for labour and employment policies.

For example, statistical invisibility pushes household labour "outside the realm of protective labour legislation," which limits the work day and regulates labour conditions. Women in India work 1.5 hours longer a day than men, mostly unpaid

Anganwadi system, which reaches 80 million children of up to six years of age through 1.4 million centres. These centres function best in a rural setting, where community members participate together.

A fast urbanising India needs different models to support its women.

Today, the women's labour force participation rate (FLFPR) in India is 32.8% according to government sources and 24% according to the World Bank, compared to China's 61%, Bangladesh's 38%, Nepal's 29% and Pakistan's 25%

The Hindu