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Melbourne School of Government  

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The John Button Fund

The John Button Foundation was established in 2009 in memory of John Button, the late Industry Minister, Senator and writer. In 2016 the Foundation donated the fund to the University of Melbourne to be managed within the Melbourne School of Government.

Donations to the Fund can be made through the School of Government’s website at the following link:


The John Button School Prize

The School Prize awards the best essay on a subject concerning Australia’s future by a Victorian student who is in Years 10 to 12 and is younger than 19.

Essays submitted for the School Prize will discuss Australian politics or policy. They might address such topics as Australia’s population, climate change, reconciliation with Indigenous Australians, water, asylum seekers, education, health, the state of the arts — big ideas for Australia’s future.

The 2019 winner was announced at the Melbourne Writers Festival on 3 September 2019, at the annual John Button Oration.

The Judging Panel for 2019 consisted of 5 members:

- Judith Troeth, member, Melbourne School of Government Board, former Liberal Senator for Victoria
- John Langmore, Professorial fellow, Melbourne School of Government, former Labor MP for Fraser
- Gerard Martin, Curriculum Manager (History and Civics), Victorian Curriculum and Assessment Authority
- Alistair King, Communications Manager, Victorian Curriculum and Assessment Authority
- Chair: Tom Gerald Daly, Assistant Director, Melbourne School of Government
Melbourne School of Government

The School’s Mission

Our mission is to inspire and equip governments, businesses, social partners and individuals to meet the challenges of contemporary governance. Through interdisciplinary, innovative teaching and research, we seek shared and sustainable solutions to these challenges. The School's activities centre around our thematic areas: renewing democracy; governance and regulation; and troubling policy. In these areas we aim to:

- Harness the University’s diverse resources in our graduate and executive teaching to equip the current and next generation of leaders.
- Facilitate research that meets the needs of governments, industry and social partners.
- Be the platform for exploration, debate and innovation nationally and in our region.

Empowering Younger Generations

The John Button School Prize forms part of the School of Government’s activity in educating and empowering younger generations. As well as the School Prize, other key initiatives include:

- Undergraduate breadth subjects on understanding policy, climate change, and the inner workings of government.
- The Master of Public Administration (MPA), which prepares professionals to take on leadership roles working in and with government.
- The Pathways to Politics Program for Women, a non-partisan initiative run in partnership with the Women’s Leadership Institute Australia and Trawalla Foundation, which provides a select group of female University of Melbourne students and alumni the opportunity to gain the skills and networks to reach elected office at local, state and national levels.
Winner
2020
Why Australia Needs to Engage in Justice Reinvestment to Reduce Indigenous Incarceration Rates and Help Close the Gap

Amelia Lemanis
Australia’s justice system features a decades old gap between our Indigenous and non-Indigenous community. Aboriginal and Torres Strait Islander peoples make up 2% of the population, but 28% of our prison population as of 2018. Despite multiple inquiries into this, and a consensus that change is necessary, not much progress has been made. Increasing calls from Indigenous activists and Black Lives Matter protests have highlighted this problem, with activist Helen Eason stating that the deaths in custody constitute “continued genocide”. It is then clear that Australian governments must commit to the only course of action which is consistently supported by both research and community recommendations: community-based justice reinvestment programs.

The cost of tough on crime policies and mitigating the criminal ‘justice’ gap

Australian justice systems rely on the theory of deterrence, where punishment of minor crimes is seen as necessary to deter more significant crimes. For example, while property crimes fell from 2001-2010 in Western Australia, mandatory sentencing guidelines are still used to emphasise “deterrence, incapacitation and greater consistency in sentencing”. This places financial burden on the correctional system, and affects Indigenous Australians at a greater rate. Since 2010, the number of prison inmates has increased by 39%, 36,000 prisoners currently in Australia. This growth is problematic as data from 2015 shows an expenditure of $100,000 per prisoner per year (the comparable OECD average being $69,000), with little benefit as 45% of released prisoners return to prison within 2 years. Our current system is then one of high cost and little return in terms of either deterring crime or rehabilitating criminals. Efforts by state governments to maintain this ‘tough on crime’ stance result in the counter-productive practice of prisoners serving many short sentences, with no real opportunity of rehabilitation or skill development. For example, over half of Victoria’s Ravenhall Correctional Centre’s inmates are incarcerated for less than 3 months before release, and a rehabilitation program is only available to those incarcerated for over 90 days. This problem exists nationwide: Australia spending $1.8 billion on incarcerating non-violent offenders in 2016, almost half of the entire correctional budget.

Punishing petty crime as a deterrent is also a primary factor for the high incarceration rate of Aboriginal and Torres Strait Islander peoples, who are 12.5 times more likely to be incarcerated than non-Indigenous people. One reason for this is laws which have a greater negative impact remote communities, such as driving with a license, which requires nearby licensing services to be available. These laws disproportionately impact Indigenous peoples as 18.6% of all Indigenous peoples live in remote and very remote communities compared to 1.5% of the non-Indigenous community according to the 2016 census.

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6. Ibid
Another reason for the overrepresentation of Indigenous peoples in the prison system is systematic racism. An example of this is the crime of public drunkenness, illegal in both Queensland and Victoria, and one of the most contentious non-violent offences to date. Tanya Day, a Yorta Yorta woman, was one of the Indigenous peoples making up 29.6% of all imprisoned for public order offenders. Her arrest and subsequent death in custody in 2019 incited public outrage concerning systematic racism by Victoria Police.

Moreover, police aren’t equipped to deal with every situation. The Australian Federal Police found 10% of police callouts in the ACT were mental illness related. Yet police do not have adequate training to deal with these types of instances. NSW is taking some initiative with this, instating a Mental Health Intervention Team comprising of 3,000 officers, but this focuses on reaction rather than prevention, becoming a temporary fix to a larger problem. Additionally, the one day Mental Health training this program ran for other officers from 2014-2015 is not enough to mitigate the diverse array of mental health related calls in the community. Again, mental health is a subject which impacts the Indigenous community more heavily than the non-Indigenous one, with Indigenous Australians being twice as likely to commit suicide.

With these increasing calls by the public to end discrimination against the Indigenous community, the appropriate reaction to these demands for justice can no longer be high-minded rhetoric combined with a continuation of existing justice policies. Whilst overcoming systematic racism may be a task of decades, one sure way to prevent deaths in custody is to ensure vulnerable people are not placed in custody in the first place. This can be achieved by shifting the focus from punishment of petty crime to justice reinvestment.

**Justice reinvestment**

Justice reinvestment is the inclusion of localised “Indigenous self-governance which empowers community to coordinate the right mix and timing of services through an Aboriginal community owned and led, multi-disciplinary team working in partnership with relevant government and non-government agencies.” It prioritises prevention rather than punishment and deterrence by deemphasising harsh punishments and reallocating resources from policing, courts and corrections into community services. Additionally, it acknowledges the issues brought up consistently since the 1991 Royal Commission into Aboriginal Deaths in Custody, particularly the notion that Indigenous policy must be guided by the principle of equity, and should instil “a sense of identity and self-worth as opposed to changing someone’s lifestyle in order for them to ‘fit back into the general society’.”

One of the biggest impacts that justice reinvestment initiatives have achieved is giving remote communities access to services which they otherwise might not have. A prime example of this is

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13 Ibid


16 Ibid


driving lessons and licensing. The Bourke justice reinvestment centre ‘Maranguka’ saw an 83% increase in licenses issued from 2016-2017, a factor contributing to a 38% reduction in juvenile charges in the top five offence categories.\textsuperscript{20} This prevents further disadvantage for the Indigenous community from harsh fines and sentences, with Victoria having a fine of up to $3,600 and up to 3 months in prison, and Western Australia automatically impounding the vehicle for 28 days if driving without a licence.\textsuperscript{21} Other impacts include a 31% increase in Year 12 retention rates in Bourke from 2016-2017\textsuperscript{22} and a 50% reduction in burglary in Halls Creek Shire since the Olabud Doogethu centre’s 2019 inception.\textsuperscript{23} This kind of progress is not simply limited to criminal justice; it extends to broader Closing the Gap goals such as that of increasing school attendance, which has not seen improvement nationally in 5 years.\textsuperscript{24} Similarly, these programs also strive to provide better support for those affected by mental health struggles, the Olabud Doogethu’s program in Mulan both advocating for mental health awareness through marches and establishing mental health services.\textsuperscript{25} Another benefit of justice reinvestment is its active stance in combating the stereotype of the Indigenous community as more ‘criminal’ than the rest of Australia by showing how Indigenous initiatives serve to reduce crime.

Despite this progress, the handful of centres established so far rely on philanthropic donations, with only the ACT’s justice reinvestment program receiving a modest $14.5 million per year.\textsuperscript{26} This stands in contradiction to the Pathways to Justice report suggesting “that Commonwealth, state and territory governments should provide support for the establishment of an independent justice reinvestment body.”\textsuperscript{27} As these centres work best alongside other programs and established communities- such as Project Walwaay running alongside Dubbo’s Police-Citizens Youth Clubs and Rotary- more active government support would extend the benefits of their work and enable the establishment of additional justice reinvestment initiatives.\textsuperscript{28}

Consequently, state and territory governments should invest in justice reinvestment centres and provide a framework which allows them to work alongside local police and community centres. As these centres rely on local decision making to meet local needs, this framework would need to ensure community input and leadership. These programs could be funded by eliminating mandatory sentencing for petty crimes, and redirecting expected savings from correctional budgets. This is intended to ease the transition into moving funding away from prisons, and is based on data like that of South Australia’s penal system showing a current expenditure of $66,802,000 on ‘purchase of property, plant and equipment’ in 2017-2018 despite a budget of $40,841,000 for that area.\textsuperscript{29} This would ultimately save money as rather than requiring new funding, it simply redirects that from the current penal system, and has been shown to be more cost effective than simply building more

\textsuperscript{22} Ibid
\textsuperscript{26} Bartels, Lorana. (2019). Australian government should follow the Act’s lead in building communities, not prisons. Retrieved 25/09/20 from https://theconversation.com/australian‐government‐should‐follow‐the‐acts‐lead‐in‐building‐communities‐not‐prisons‐111990
prisons- Bourke Shire having saved an estimated $3.1 million in 2017. Additionally, the Commonwealth could support this by offering additional funding to states which meet goals relating to incarceration rates as part of the Closing the Gap framework, thereby providing an incentive for state governments to reach these targets and ultimately reducing the amount being spent in other sectors such as healthcare.

The need to close the gap between Indigenous and non-Indigenous communities is abundantly clear. The Australian government must respond to the unique challenges facing Indigenous communities instead of punishing them. This can be achieved through justice reinvestment programs which “promote the reinvestment of resources from the criminal justice system to community-led, place-based initiatives that address the drivers of crime and incarceration”. The only way forward then is to take initiative and expand these programs nationwide before more money is thrown into Australia’s outdated, discriminatory and insufficient prison system.

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First Runner-Up
2020
Don't Let the Bed Bugs Bite: Tackling Fatigue in the Australian Workplace

Nalini Jacob-Roussety
While a global pandemic challenges Australia’s economic and social welfare, another detriment to the nation’s productivity and wellbeing slumbers beneath the surface.

The 2019 Parliamentary Inquiry into Sleep Health Awareness in Australia revealed the discrepancy between the importance of sleep health and safety, and the lack of any kind of uniform national policy. The effects of this discrepancy are especially prominent in the workplace, posing particular risks on Australia’s roads and in the medical sector. While the average adult requires between 7 and 9 hours of sleep each night, 4 in every 10 Australians are not getting adequate sleep.\(^1\) This impairs performance in myriad ways, including by causing slower reaction times, reduced awareness, reduced concentration, poor judgement, reduced work efficiency, and periods of microsleep.\(^2\) Thus, the risk of sleep deprivation must be addressed through national policy in order to safeguard the prosperity of Australia’s future.

In a submission to the Parliamentary Inquiry into Sleep Health Awareness, Deloitte estimated that sleep deprivation resulted in 3017 deaths in Australia in 2016, and cost the economy approximately $66.3 billion.\(^3\) Despite the Inquiry report having been tabled to Parliament, no further comment has been made regarding the adoption of recommendations. However, sleep health must become a national priority as Australia transitions to a ‘new normal’ beyond the pandemic, so that Parliament may mitigate the substantial productivity and wellbeing detriments caused by fatigue. By inquiring into legislation amendments, initiating public health campaigns, promoting flexible working hours, encouraging rest-breaks, and prioritising sleep, Parliament can induce a culture shift and increase in public sleep health awareness in Australia. Additionally, this will aid the nation in rehabilitating its economy from the recession induced by COVID-19 by addressing the underlying financial risks posed by a national lack of sleep.

Australia’s negligent fatigue safety protocols in the workforce leads to accidents and reduced wellbeing. The Parliamentary Inquiry into Sleep Health Awareness found that 21% of men and 13% of women have fallen asleep at work in the past month.\(^3\) Reduced alertness due to workplace fatigue results in nearly 10,000 serious workplace injuries in Australia each year.\(^4\) However, many industry awards continue to allow for shift workers to work upwards of 11 hours per day,\(^5\) resulting in fatigue for many employees, particularly those on night shifts. Consequently, shift-workers sleep for an average of 2-3 hours less than those who work regular hours.\(^6\) Because long-term fatigue significantly impairs awareness,\(^2\) increases the risk of cardiovascular disease, cancer and type-2-diabetes,\(^7\) and increases the risk of depression and anxiety,\(^8\) this significantly impairs safety and wellbeing. Shift-work can also have a higher impact on particular members of the workforce, including women and those from low socio-economic backgrounds. Women are especially susceptible to lack of sleep due to the domestic responsibilities they are often required to undertake, such as nursing infants, which results in a greater lack of recovery time between shifts.\(^3\) Furthermore, those from low socio-economic backgrounds may be required to undertake greater travel to work due to a lack of private transportation, and those living outside capital cities generally have a greater commuting distance than metropolitan citizens,\(^9\) allowing them less recovery time between shifts. Thus, the effects of rapid shift changes cannot be ignored.

To address such detriments, legislation such as the Fast Food Industry Award (2010) could be amended to provide uniform requirements such as a maximum number of consecutive night shifts. Businesses should be required to provide adequate rest breaks and staff amenities which facilitate this. In addition, modelling software may be used to allocate rosters and rest breaks which comply with safety standards for alertness at work.\(^3\) This modelling software can be tailored to take into account individual characteristics such as distance travelled to work and domestic responsibilities, and efforts should be made to tailor work schedules to the individual, rather than encouraging cuts in hours or workplace discrimination based on particular characteristics. Screening for sleep disorders should be mandatory for
professional drivers and machine operators, and treatment compulsory. These amendments will ensure that shift-workers attain the required sleep to function at their optimum level of awareness, whilst also boosting Australia’s overall productivity levels and decreasing the risk of fatigue-related work accidents.

The medical sector is one of the industries most impacted by sleep-loss. In a pilot study on the safety implications of a lack of sleep in the medical community, nurses reported struggling to remain awake during 36% of shifts, with significantly higher levels of medical errors on days with less sleep recorded. Additionally, extreme drowsiness while driving or cycling home was reported by nurses on 11.5% of occasions. An audit of doctors working in public hospitals across Australia also found that 1 in 2 doctors are working unsafe shifts, placing them at significantly higher risk for fatigue and medical errors. Some of these doctors reported working shifts that exceeded 70 hours. This is particularly concerning when it is considered that a sleep-deprived physician may be functioning at the same level of awareness as an intoxicated person with a Blood Alcohol Concentration (BAC) of 0.05% or higher while performing surgery on a patient.

A system-level approach could see the implementation of education for healthcare providers on the importance of sleep, in order to dismantle the cultural norm of long hours in the medical sector. Sleep breaks should also be provisioned during medical shifts, and a safe environment to disclose and prevent fatigue-related incidents should be created. Furthermore, the patient handover process could be streamlined through the use of electronic systems in order to save time and prevent fatigue. These systems include the Fatigue Risk Management System (FRMS) employed in Australia’s aviation industry, which aims to ensure personnel are “sufficiently alert” by applying “scientific principles and processes” to reduce workplace risks relating to fatigue. The Queensland Government has already introduced an industrial entitlement for nurses and midwives, allowing for a 10-hour rest break before commencing duty for any period of work between rostered shifts. National legislation which regulates minimum working hours for the medical sector would benefit the health and wellbeing of medical practitioners and their patients. This will move the priority from long work hours to mitigating the health risks of fatigue for medical practitioners and their patients.

Free market advocates may argue that legislation which addresses fatigue in the workplace is an excessive intrusion of government bureaucracy into the private sector. Perhaps the proposed regulations will stifle business innovation and economic recovery from COVID-19. “Red tape creates structural biases in favour of large firms”, writes the Institute of Public Affairs. Indeed, the current Federal Treasurer promised Australians “less red tape”, during a time in which “public trust in bureaucracy is decreasing”. However, it is important to note that ‘red tape’ refers to ‘unnecessary’ rules and processes that ‘cause delay’. If accompanied by a clear analysis of potential impacts on small businesses, and any necessary amendments to account for these, the proposed regulations could reduce the $17.9 billion in productivity loss caused by fatigue in Australia each year. It would also address the pressing health concerns of fatigue in the workplace and thus, should not be deemed ‘unnecessary’. Further, many European economies have shifted towards more flexible working hours and shorter working weeks. Citizens of the Netherlands, for example, work an average of 29 hours per week - 9 hours less than Australia’s legislated maximum. Many studies have shown that the average worker can only produce around 4 effective hours of work per day. With a large portion of the nation transitioning to working from home, Australia’s future may consist of an increasing shift to digital work, making flexible working hours significantly more achievable.

Australia would also benefit from implementing legislation with provisions for sleep health while driving. Around 20% of all fatal road accidents in Victoria involve fatigue, and fatigue-related accidents cost the
nation as a whole around $3 billion each year.\textsuperscript{22} Australia may follow its European neighbours in tightening legislation around safe driving in order to reduce such fatigue-related accidents. The EU specifically prohibits commercial driving for longer than 9 hours per day, with no longer than a continuous 4.5 hours without breaks. Additionally, a driver cannot exceed 90 hours of driving in a fortnight.\textsuperscript{23} Australia currently has no specific fatigue-related OHS legislation for private or commercial drivers, with the exception of provisions for drivers of 'heavy vehicles'.\textsuperscript{24} In Victoria, employers do have a duty of care under the OHS Act to maintain a working environment that is 'safe and without risks to health' - including on roads.\textsuperscript{25} However, all states would benefit from specific legislation, such as that enforced in Western Australia, which regulates driving hours. In Western Australia, solo drivers must have at least 20 minutes of breaks from driving every 5 hours of work time.\textsuperscript{26} A uniform national campaign targeting drowsy-driving such as the "Don't trust your tired self" campaign in Western Australia\textsuperscript{27} and Victoria’s "A 15 minute powernap could save your life" initiative\textsuperscript{28} may, in conjunction with the proposed fatigued-driving legislation, significantly reduce the number of lives lost on Australia’s roads.

Adopting such a solution may incite questions about the extent to which driving activities should be regulated by Parliament, and whether these are enforceable. The Andrews Government’s COVID-19 5km driving radius restriction, for example, has been met with backlash from some Victorians. However, legislative decisions like these are enforced with the safety and best interest of citizens in mind. Fatigue-related driving for commercial drivers is enforced in the EU with the mandatory installation of tachographs in vehicles,\textsuperscript{23} and the same could efficiently be done uniformly across Australia. Additionally, many Australians and their employers may be unaware that being awake for 18 hours is the same as having a blood alcohol content (BAC) of 0.05%\textsuperscript{10}, which is the legal limit for fully-licensed drivers in all Australian states.\textsuperscript{29} Furthermore, being awake for at least 24 hours is equivalent to having a BAC of 0.10%.\textsuperscript{10} It is therefore vital that Australia develop uniform policy in order to regulate maximum driving hours and afford fatigued-driving the same level of concern as intoxicated-driving, in order to mitigate their similarly detrimental outcomes.

All proposed solutions would first require tailored education programs to assist industries and the general public with the implementation of any sleep legislation or industry changes. Many Australians prioritise work over sleep: despite the detriments of frequent shift-work, 60% of casual workers want more hours\textsuperscript{30}. Thus, while legislation enforcing maximum working hours and rest breaks may mitigate the risk of fatigue-related error in the workplace, tailored education programs will empower Australians to manage their own sleep health, and should hence become the nation’s priority. In particular, sleep health awareness programs should be provisioned for shift-workers and the medical sector, in order to minimise workplace risks of inadequate sleep. Further, a nation-wide televised and social-media campaign should include free resources and educational material to promote the importance of healthy sleep and dismantle the cultural norm of working excessive hours. There are limited examples of public health campaigns which target sleep health awareness, both in Australia and internationally.\textsuperscript{3} While having developed sleep guidelines for children up to the age of 5\textsuperscript{30}, the Department of Health states that sleep health “has not been an area that’s specifically focused on within the department, so there’s not a sleep plan or a sleep health plan being developed.”\textsuperscript{33} However, this is exactly what Australia needs to prompt a vital shift in culture by encouraging citizens to make lifestyle choices that promote health and wellbeing by prioritising sleep.

Ultimately, the effects of fatigue cannot be ignored by Australian policy. The technological advancement and economic growth of the modern age promised Australians a better quality of life; instead, they are robbing the nation of sleep. If Australia’s future is to be abundant in health, wellbeing, productivity, and life satisfaction, sleep must be a priority. As Matthew Walker, Professor of Neuroscience at the University
of California and author of the book *Why We Sleep*, states simply: “When sleep is abundant, minds flourish. When it is deficient, they don’t.”32

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**Footnotes**

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Second Runner-Up
2020
Navigating the Fourth Industrial Revolution: Australia's Need to Moderate the Integration of Artificial Intelligence into the Workplace

Mia Koufalas
As technological advances continue to progress, the use of digital technologies including artificial intelligence (AI) will be a major contributor and disruptor to the global economy; a potential worth of AU $22.17 trillion by 2030. This subsequently requires Australia invest in research and AI development in the coming decade to remain competitive in the global market. AI is predicted to deliver approximately AU $315 billion dollars to the Australian economy by 2028. Whilst this major sum will provide Australian enterprise with rises in labour productivity and income for businesses that successfully adapt to technological advances, the integration of AI must be moderated to offset unprecedented consequences.

Artificial Intelligence describes the ability of a computer or computer-controlled robot to perform tasks generally associated with intelligent beings. The concept of AI began in the 20th century, in which British mathematician and logician, Alan Turing, questioned the capacity of machines to think. Turing’s theory was only actuated in 1956, when computer engineers Newell, Simon and Shaw developed, ‘The Logic Theorist’; a computer program designed to replicate the logic and problem-solving skills of human intelligence. AI has since diversified to uses in enterprise, advertising, banking, social networking, manufacturing and online shopping.

Multitudinous benefits are associated with integration of AI into the Australian workforce. AI has and will continue to remove the need for humans to undertake menial and labour inductive tasks, whilst simultaneously increasing productivity and precision in output. AI has the capacity to increase productivity in the Australian workplace by approximately 40%. Similar increase in productivity has been seen in the United States, where implementation of spreadsheet software reduced the need for traditional bookkeeping and accounting and auditing clerks by 44%. This is also evident in the United States medical industry, where ‘automated machine learning’ performs cardiac MRI analysis 186 times faster than human experts, without sacrificing precision.

Past technological advances in Australian enterprise demonstrate that as sectors increase use of automation, the relative price of goods and services decline. This is observed in agriculture, where implementation of automation, plant breeding and nutritional management reduced the relative price of basic food items. Increased access to technology in 1995-1996 allowed Australia to transition to larger scale farming, causing a 62% increase in agricultural production. The Australian Bureau of Statistics projects that Australian farming will further profit from technological advancements by approximately 42% in 2030.

The emergence of AI has placed the globe on the cusp of its Fourth Industrial Revolution. History demonstrates that an industrial revolution not only brings great technological advancement and economic growth, but additionally great displacement of workers and redundancy of previously utilised inventions and industries. 1765 saw the invention of the steam engine, creating a shift from agriculture as the primary mainstay of the economy to industry due to mechanisation. The Industrial Revolution of 1870 brought new energy sources including electricity, gas and oil into use. Introduced methods of commute such as cars and planes led to the eventual redundancy of the horse and carriage by the early 20th century. The Third Industrial Revolution occurred in 1969, resulting in nuclear energy and the rise of electronics, telecommunications and robotics.

Common to each historical industrial revolution, is that as certain fields become redundant, displaced workers hold no power in the evolving market. Evident in the first Industrial Revolution, skilled workers no longer needed for newly mechanised factory work became unemployed and desperate for re-employment. Such desperation reduces the bargaining power of the worker, whose skills hold no value in the modern market. Employers are then freely able to set new terms of work which may include reduction of wages and increased working hours, as witnessed in the first industrial revolution. Such occurrences remain hypothetical in the 21st century, however the Australian
government must regulate the integration of AI into the Australian workplace, lest trust the wellbeing of the Australian worker to the integrity of enterprise.

Whilst many proponents of the free market would argue that regulatory policy regarding the use of AI would stifle investment and innovation, an assessment of Australia’s current capacity to manage rapid unemployment is necessary. Currently, Australian government has no clear direction or apparent concern as to the future of technology and automation in the modern workplace. The 8 AI Ethics principles are insufficient to truly monitor and manage the spread of automation within industry. Such principles, designed to ‘encourage organisations using AI systems to strive for the best outcomes for Australians,’ are no means of enforcing regulation. The notion that businesses will be receptive to principles such as ‘AI systems should benefit individuals, society and the environment,’ is both naïve and an ill means of preparation for an imminent technological insurgence.

The McKinsey Global Institute estimates an exodus of as many as 375 million workers from the global workforce by 2030, many of whom will require a shift in occupational field. Australia alone may account for as many as 2.7 million displaced workers due to technological advancement by 2035, according to conservative estimates from the Australian Computer Society. A further 5.3 million Australian jobs are at risk of redundancy by 2035 due to the development of AI. The repercussions of such mass unemployment paired with the volatility of a post-COVID19 economy would severely inhibit the ability of the Australian government to mitigate financial disaster. Since the 5th of May 2020, COVID19 has caused the unemployment of almost one million workers, with the Reserve Bank of Australia expecting a 10% hit to the economy.

To offset further unemployment or allow redundant workers to successfully transition into modern fields, extensive investment into reskilling and education of workers is necessary. In recognition of this need, the Australian Department of Education developed a ‘Skills Checkpoint Program,’ incentivising retraining of 3600 aged workers per year, offering $2200 to each participant. Whilst this program may appear a stepping stone towards larger scale retraining of aged workers, the incentive is only available between January 1st 2019 to December 31st 2020. The Australian government must incentivise further education of redundant workers and workers in industries at risk of automation. By 2030, workers will be expected to reskill and upskill between eight to ten times throughout their career. Furthermore, up to 65% of primary school aged children are expected to fill jobs in 2030 that do not yet exist. Lack of policy regarding future work and reskilling, place Australia in a precarious position in which future generations are to plunge headfirst into an unknown marketplace.

It may seem that attempts to plan for such a future are futile. However, Australia need not prepare students specifically for uninvented industries. Instead, Australia must equip students with the skills and adaptability needed for an uncertain and likely automated future. To navigate the future workplace, Australians must be armed with competencies in system-oriented thinking, writing, speaking, computational thinking, programming and data analysis. Based on this information, the efficacy of the Australian Curriculum in preparing students for future occupations is questionable. The 2018 Programme for International Student Assessment report demonstrates Australian students are being surpassed in literacy and mathematical skills on a global scale. Compared with Singaporean students, Australian students were outperformed in mathematical literacy by an imbalance of 3 years, and similarly outperformed in scientific literacy and reading.

Greater focus upon STEM-related subjects must be an initiative of the Department of Education. Investment into training qualified STEM teachers is needed to mitigate the issue of shortages of qualified specialised teaching staff. The government’s ‘Teach for Australia’ and ‘High Achieving Teachers’ programs aim to fill these teaching roles with ‘fast-tracked’ teaching qualifications or even
with applicants lacking a tertiary qualification. These programs cost the taxpayer over $77 million in 2018, resulting in only 124 teachers in 5 years.

To ameliorate these issues, the Australian government should reincorporate the $14 billion dollars taken from public school funding in 2017 back into the budget. This funding allows public schools to hire specialised teachers and supplies disadvantaged schools with money needed to fund a comprehensive curriculum, accommodating STEM-based subjects. Redefining the Australian Curriculum is not an action that may be actualised in months or years. Decades are required to optimally transition to a curriculum that provides students with skills needed to navigate the future workplace. Hence, it is imperative that this change occur in coming years, and not be postponed until young workers are found in the midst of an unfamiliar market.

Whilst many businesses stand to profit from the use of AI, automation has the potential to severely reduce the amount of competition in the market. AI tends to form large monopolies in the market, instead of increasing labour productivity across all industries. This can be explained due to the value of data. Data is the most valuable asset in the world, surpassing gold and oil. As larger companies gain more data, their existing algorithms in turn improve, stimulating customers to generate more data. This self-perpetuating positive feedback loop causes large businesses to continuously outcompete their competitors simply through automation and algorithms, not through improved product design. Examples include Microsoft, Apple and Facebook – each holding extreme shares of data and thereby are able to outcompete smaller technology firms, leading to monopolisation of the market. Through AI, these large ‘tech giants’ are able to exploit the Australian market whilst simultaneously reducing their Australian workforce.

As smaller businesses and their workers are outcompeted, it must be acknowledged that not all workers can be reskilled. Retraining a worker requires large investment; monetarily and with time. Harvard Business Review suggests the benchmark for reskilling a worker is 480 hours. If reskilling workers is to be realistic for all businesses, the Australian government must support smaller business and industries. One way to do this would be replicating Singapore’s ‘Skills Future Credit,’ funded by the government and unions, to offer $370 annually to allow workers 25 years or older to invest in reskilling. This action is yet to be emulated by the Australian Government.

For workers that cannot be retrained or are unable to transition into modern industry, the concept of a universal income must also be considered. This is especially pertinent following the financial devastation caused by COVID19. In coming decades, the Australian Government must prepare for increased unemployment, and aim to allow redundant workers to contribute to the economy.

In the post-COVID19 market, calls for a universal income in Australia have resurfaced, however this solution must be assessed for its advantages and disadvantages. A universal income allows employed and unemployed individuals to receive a grant intended to allow them to sustain themselves. In this sense, a universal income is superior to welfare, which mandates applicants possess no assets or financial stability. Hence, a universal income both able to support those at the bottom of society, but also prevent individuals from deteriorating to such instability. This must then be weighed against the fact that a universal income may cost AUD $55 billion within a period of 6 months. It has also been proposed that universal wages would disincentivise work and provide additional wages to richer members of society who would not recirculate that money into the economy.

Currently, a universal wage would not be effective in Australia according to Simon Cowan of the Centre for Independent Studies, as the grant offered is unlikely to exceed welfare payments and full-time workers are likely to suffer due to increased taxation. To significantly benefit Australians, raises in
taxation would be required. This again may be avoided if higher-earners are taxed for universal income benefit. This proposal cannot be ignored by Australian Government in future years.

Furthermore, the importance of adequate leadership when integrating AI and automation into industry cannot be understated. Two-thirds of Australian businesses report finding difficulty in acquiring suitable staff to lead AI integration into their companies, whilst 75% of IT decision makers feel that the executive team in their company requires formal training regarding the implications of AI usage. If integrated incorrectly, AI promises to disadvantage the worker and the company itself.

The fourth industrial is imminent and inevitable, yet Australia has shown a lack of action and policy regarding the future of industry and automation. The implications of broad displacement of workers, lack of knowledge regarding future industry, minimal capacity for companies to successfully lead integration of the technology, all combined with an absence of planning for future economic recovery signal an industrial revolution more monumentous than the first – both in innovation and economic devastation.

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