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The Future of Work and Labour Regulation after COVID-19

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The worldwide shock of the COVID-19 pandemic has recast debates about the future of work. A discussion previously dominated by automation and the rise of the gig economy rapidly expanded to encompass new, and newly important, concerns: remote work, the protection and recognition of 'essential' workers, wage subsidies for the unemployed and furloughed, and government's broader responsibilities to maintain social cohesion and rebuild economic vitality. As the Australian economy commences a tentative recovery from the deep ravages of 2020, we cast our eye over recent developments in the labour market and working practices, in light of that earlier future of work discourse, to ask how much of it remains relevant and what new issues and concerns have come to light. We argue that the role of technological change has been subdued, but not extinguished, by the current crisis. We highlight two important domains — workplace surveillance and enforcement of minimum standards — where governments and labour regulators can seize on nascent technological possibilities to realise a more equitable future of work after COVID-19.

I Introduction

Before the novel coronavirus pandemic (COVID-19), there was an ongoing debate about the future of work in light of rapid technological changes and the burgeoning 'gig economy'.¹ The debate included consideration of the appropriate regulatory responses to actual and anticipated changes in working practices and labour markets. In this article, we offer an initial assessment of how the pandemic has complicated and challenged understanding about what the future of work looks like and what regulatory responses it demands.

COVID-19 has profoundly affected both the availability and conduct of work.² The pandemic has seemingly accelerated the future of work, prompting a rapid and widespread uptake of remote working arrangements and deeper reliance on 'contactless' online work platforms, among other things. The pandemic has also exacerbated pre-existing challenges for labour regulation,

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1 See, eg, C Curchod et al, 'Working for an Algorithm: Power Asymmetries and Agency in Online Work Settings' (2020) 65 *Admin Sci Q* 644; P Gahan, J Healy and D Nicholson, 'Technology, the Digital Economy and the Challenge for Labour Market Regulation', in J Howe, A Chapman and I Landau (Eds), *The Evolving Project of Labour Law: Foundations, Development and Future Research Directions*, Federation Press, Sydney, 2017, p 276; A Tassinari and V Maccarrone, 'Riders on the Storm: Workplace Solidarity among Gig Economy Couriers in Italy and the UK' (2020) 34 *Work Employ Soc* 35.

2 For a summary of impacts on work and working people in the Australian context, see, eg, A Forsyth, 'COVID-19 and Labour Law: Australia' (2020) 13(1S) *Italian Labour Law e-Journal* <<https://doi.org/10.6092/issn.1561-8048/10812>>.

such as the appropriate valuation of human-centred work and noncompliance with minimum employment standards.

We begin by reviewing the future of work debate before COVID-19, and then map how the pandemic has altered this trajectory. In particular, we examine whether the previous patterns of job creation and job destruction have been accentuated or attenuated, and to what extent technology's role in these processes has been reinforced or moderated. We then discuss the role of labour regulation and the scope for innovative regulatory applications of technology to help protect workers in the changed work environment that is likely to follow COVID-19.

II The Future of Work before COVID-19

Pre-pandemic debates about the future of work centred on new technology. Technology was often seen to imperil workers, due to automation. But it could also stimulate job creation and enable better monitoring of labour standards. We briefly review the evidence on these divergent possibilities.

The threat of technologically induced job losses is not new,³ but the urgent, even alarmist, tone of recent debates intimated the start of a newly disruptive phase. Perhaps the most influential contribution to this discourse was a 2013 paper by Frey and Osborne, published in 2017.⁴ Its notoriety is unsurprising, given the study's source (the University of Oxford) and its dramatic result: nearly half (47%) of jobs in the United States could soon be automated.

Following its appearance, many policymakers and pundits earnestly debated how to handle the imminent displacement of half the workforce — until the study's results were challenged by several critiques. Frey and Osborne's predictions coincided with a strong period of employment growth.⁵ This did not prove their predictions of potential job losses wrong, per se, since they had not considered the offsetting potential for job creation. But, if we take their findings seriously, and their implication — that US employers were going to automate more jobs with the aid of emerging technologies — then job *creation* in other sectors of the economy must have been prodigious for the overall US employment rate to rise, as it did. Indeed, other studies show significant job creation potential, even in existing industries.⁶ Moreover, while technological changes inflict some job losses, the demand for labour, and hence the potential for job creation, is derived from the demand for goods and services.⁷

3 See B Jones, *Sleepers, Wake!: Technology and the Future of Work*, 4th edn, Oxford University Press, Melbourne, 1995; J M Keynes, 'Economic Possibilities for Our Grandchildren', in *Essays in Persuasion*, Palgrave Macmillan, London, 2010, p 321.

4 C B Frey and M A Osborne, 'The Future of Employment: How Susceptible Are Jobs to Computerisation?' (2017) 114 *Technol Forecast Soc Change* 254.

5 In the five subsequent years (2014–18), total US employment grew by 11.4 million jobs, the employment rate rose, and the unemployment rate fell to a decades-long low of 3.9%. See *Labor Force Statistics from the Current Population Survey*, US Bureau of Labor Statistics, Washington, DC, at <<https://data.bls.gov/PDQWeb/ln>> (accessed 28 April 2021).

6 E Paus (Ed), *Confronting Dystopia: The New Technological Revolution and the Future of Work*, ILR Press, Ithaca, 2018.

7 M Ugur, S A Churchill and E Solomon, 'Technological Innovation and Employment in Derived Labour Demand Models: A Hierarchical Meta-regression Analysis' (2018) 32

Even the scope for automating current occupations may have been overstated by Frey and Osborne. Using different methods, other researchers⁸ estimated that only around 1 in 10 jobs are at risk of outright automation; much less than Frey and Osborne's 47%. The vast difference is explained by *job transformation*, with the implication that much of today's work will be reshaped, but not replaced, by foreseeable technological developments. This qualitatively different finding opens up possibilities for intervention by labour regulators (and other actors), to manage the transformation process and its consequences.

Beyond their employment effects, technological advances also spawn new business models. Often characterised as 'disruptive',⁹ the latest business model innovators exploit digital capabilities to lure customers and outmanoeuvre incumbent businesses.¹⁰ In debates about the future of work, platform companies are the most important of these new models. Again taking different forms, but exemplified by ride-hailing company Uber, platform companies have created a 'gig economy' in which short-term, contract-based work prevails, and issues of labour rights and regulation are unresolved.¹¹

While contentious, many commentators see the gig economy as a harbinger of the future of work.¹² Others are unswayed by these predictions.¹³ In Australia, gig work *has* become more prevalent, especially among younger and migrant workers.¹⁴ Yet there has been no overall increase in the proportion of workers who are self-employed in their main job,¹⁵ contrary to claims about the 'gigification' of work.¹⁶ Even if platforms are unlikely to soon dominate the general workforce, their labour management practices are justifiably causes of concern for unions and regulators.

One aspect of how platforms manage gig workers is becoming more universal, however: 'algorithmic management'.¹⁷ A prime example is 'people

J Econ Surv 50.

8 M Arntz, T Gregory and U Zierahn, 'Revisiting the Risk of Automation' (2017) 159 *Econ Lett* 157.

9 H Volberda, F van den Bosch and K Heij, *Reinventing Business Models: How Firms Cope with Disruption*, Oxford University Press, Oxford, 2017.

10 The different models are discussed by Gahan, Healy and Nicholson, above n 1.

11 A Forsyth, 'Playing Catch-Up but Falling Short: Regulating Work in the Gig Economy in Australia' (2020) 31 *KLJ* 287; J Healy and A Pekarek, 'Work and Wages in the Gig Economy: Can There Be a High Road?', in A Wilkinson and M Barry (Eds), *The Future of Work and Employment*, Edward Elgar, Cheltenham, 2020, p 156; S Kaine and E Josserand, 'The Organisation and Experience of Work in the Gig Economy' (2019) 61 *JIR* 479.

12 G Standing, 'Taskers in the Precariat: Confronting an Emerging Dystopia', in E Paus (Ed), *Confronting Dystopia: The New Technological Revolution and the Future of Work*, ILR Press, Ithaca, 2018, p 115.

13 J Healy, D Nicholson and A Pekarek, 'Should We Take the Gig Economy Seriously?' (2017) 27 *Lab Ind* 232.

14 P McDonald et al, *Digital Platform Work in Australia: Prevalence, Nature and Impact*, Department of Premier and Cabinet (Vic), Melbourne, 2019.

15 Updated from R Wilkins and M Wooden, 'Two Decades of Change: The Australian Labour Market, 1993–2013' (2014) 47 *Aust Econ Rev* 417 at 426.

16 A Veen et al, 'The "Gigification" of Work: Consideration of the Challenges and Opportunities', in R D Lansbury, A Johnson and D van den Broek (Eds), *Contemporary Issues in Work and Organisations: Actors and Institutions*, Routledge, Abingdon, 2019, p 27.

17 J Prassl, 'What if Your Boss Was an Algorithm? Economic Incentives, Legal Challenges,

analytics' in human resources (HR).¹⁸ It involves analysing data from diverse and sometimes unconventional sources (for example, social media) to judge workers' past and *potential* job performance.¹⁹ A wide array of data can be fed into HR algorithms. One frontier is 'wearable devices' that allow organisations to monitor an astonishing number of increasingly sensitive variables, including movement and even heart rate.²⁰ Wider use of these devices will exacerbate concerns about worker privacy, trust and engagement, control and resistance, and discrimination, especially if accompanied by an enduring shift toward more work being done remotely or at home.

A closely related question is whether the technologies that are enabling greater workforce surveillance have anything to offer the regulatory authorities charged with monitoring and upholding workplace laws and labour standards. The tremendous pattern-spotting powers of artificial intelligence (AI) technologies are already being widely used in the professions, for instance, to detect disease and predict judicial decisions.²¹ This side of the technological revolution has received less academic attention than automation and the gig economy, but it is an important issue that we take up in Part IV, after first documenting how COVID-19 has affected the labour market and patterns of work.

III The COVID-19 Recession and the Future of Work

As our foregoing review shows, technology is pivotal to many analyses of how work is changing, with other factors playing a secondary role. Quite apart from whether this reflects a degree of technological determinism,²² the current COVID-19 pandemic-induced recession forces a reassessment and reinterpretation of much of this prior work.

We address two core questions in this section. First, to what extent has the pandemic altered previous patterns of job creation and job destruction? Our interest is in whether COVID-19 has reinforced or moderated the role of technology in these processes. Second, how has the pandemic influenced the quality and experience of work? Again, a key issue is whether the consequences have been mediated through technological innovations or via the novel application of pre-existing technologies. More speculatively, we consider whether the immediate responses to COVID-19 are likely to signal a permanent shift in how we work.

and the Rise of Artificial Intelligence at Work' (2019) 41 *Comp Lab L & Pol'y J* 123.

18 M M Cheng and R D Hackett, 'A Critical Review of Algorithms in HRM: Definition, Theory, and Practice' (2021) 31 *Hum Resour Manag Rev* (advance), at <<https://doi.org/10.1016/j.hrmr.2019.100698>> (accessed 28 April 2021).

19 M T Bodie et al, *The Law and Policy of People Analytics*, Research Paper No 2016-6, Saint Louis University School of Law Legal Studies, Saint Louis University, 2016.

20 F Miele and L Tirabeni, 'Digital Technologies and Power Dynamics in the Organization: A Conceptual Review of Remote Working and Wearable Technologies at Work' (2020) 14 *Sociol Compass* e12795.

21 R Susskind and D Susskind, *The Future of the Professions: How Technology Will Transform the Work of Human Experts*, Oxford University Press, New York, 2015.

22 S Wyatt, 'Technological Determinism Is Dead; Long Live Technological Determinism', in E J Hackett et al (Eds), *The Handbook of Science and Technology Studies*, 3rd edn, MIT Press, Cambridge, 2007, pp 165–80.

Definitive answers to these questions are hampered by data limitations and the obvious fact that, at the time of writing, the full consequences of the COVID-19 crisis are still unfolding.²³ However, at this stage there are some useful preliminary conclusions that we can draw from the available data.

The severity of the current downturn can be seen by comparisons with earlier recessions. The changes wrought by COVID-19 on key labour market indicators — unemployment, the employment-to-population ratio and total working hours — have been faster and noticeably more severe than in the two previous Australian recessions. Total working hours dropped more precipitously, reflecting the fact that policy responses have, in effect, hidden the true employment effects of the pandemic due to labour ‘hoarding’.²⁴

The COVID-19 recession was deeper at onset than previous recessions, and so the long-term recovery prospects initially looked pessimistic. Following recessions in both the 1980s and 1990s, the unemployment rate took more than 5 years to return to pre-recession levels. By the end of 2020, however, and certainly going against expectations,²⁵ working hours and employment rates had recovered significantly. By November 2020, working hours remained just 1.5% below March levels, and employment remained just 1.1% behind that recorded for March, with recovery further signalled by a rebound in job vacancies.²⁶ The Australian Bureau of Statistics’ (ABS) COVID-19 household impact survey suggests, however, that many people were still affected. In the latest release at the time of writing (the November 2020 survey), 4.1% of respondents were still employed but not working any hours.²⁷

The adverse employment consequences were not evenly felt across the Australian workforce. Our analyses of ABS monthly labour force data, along with surveys of household and firm responses to COVID-19,²⁸ suggest that, first, young workers, especially young and mid-career women, were worst affected.²⁹ In the 3 months from February to May 2020, 15% of young men

23 The data constraints also reflect longer term shifts in unemployment and underemployment, along with immediate policy responses that in effect reallocate what would otherwise be categorised as unemployed to furloughed employees supported through welfare benefits and other payments. See in particular O’Donnell and Arup in this special issue: A O’Donnell and C Arup, ‘Income Support in a Time of Contagion’ (2021) 34 *AJLL* 43. See also A O’Donnell, *Inventing Unemployment: Regulating Joblessness in Twentieth-Century Australia*, Hart Publishing, Oxford, 2019, pp 2–3.

24 J Borland, ‘Labour Market Snapshot #60: COVID-19 and the Australian Labour Market: What Do the Data Tell Us Happened between March and April?’, 2020, at <<https://drive.google.com/file/d/12cmott0hjAhbbAKm76cyyjmTNOZE17mR/view>> (accessed 21 December 2020).

25 J Borland, ‘Labour Market Snapshot #73: There, and Almost All the Way Back (Keynes Does It Again)’, 2020, at <https://drive.google.com/file/d/1Y_TsQidlXrFBHph17DLbm1fbq-IT_ZBb/view> (accessed 21 December 2020).

26 Australian Bureau of Statistics, *Job Vacancies, Australia, August 2020*, Cat No 6354.0, ABS, Canberra, October 2020, at <<https://www.abs.gov.au/statistics/labour/employment-and-unemployment/job-vacancies-australia/aug-2020#data-download>> (accessed 28 April 2021).

27 Australian Bureau of Statistics, *Household Impacts of COVID-19 Survey, November 2020*, Cat No 4940.0, ABS, Canberra, December 2020, at <<https://www.abs.gov.au/statistics/people/people-and-communities/household-impacts-covid-19-survey/nov-2020>> (accessed 28 April 2021).

28 *Ibid.*

29 Analysis of US data suggest the age and gender effects translate into a significant ‘motherhood penalty’ and ‘fatherhood premium’. Our data are consistent with this

(aged 15–24 years) lost their jobs, compared to almost 20% of young women.³⁰ Overall, women were more adversely affected than men, largely because of the industries in which female workers are concentrated. As expected,³¹ the most severe effects occurred in sectors exposed to shutdown orders and other restrictions imposed as the crisis took hold.³² Over the same period, no occupation was spared from the adverse effects of COVID-19, but employment losses were concentrated in lower-skill occupations. The worst effects were felt by community and personal service workers, many of whom are employed in badly affected industries.³³

A central concern within future of work debates has been the impact of technology on the experience of work. To explore this in light of COVID-19, we draw on different data sources, starting with the dedicated ABS COVID-19 household panel survey.³⁴ This asked whether individuals were working from home (WFH) due to the pandemic. As initial restrictions were eased in most states by August 2020 (with the exception of Victoria, where a second wave of infections led to the imposition of a more stringent shutdown), the survey also asked about returning to workplaces.

The results are summarised in Figure 1. The top panel shows whether individuals worked from home due to COVID-19 over the months from April to June 2020. In April, just over 28% of those employed were estimated as WFH because of COVID-19. A further 9% had stopped working altogether. The WFH proportion fell slightly in May but, by June, it had increased sharply again, to just over one-third of those in employment. The easing of restrictions in most states from July–August 2020 saw many workers return to their workplaces — as shown in the bottom panel of Figure 1. In Victoria, however, the proportion WFH or not working, due to the reimposed COVID-19 shutdown conditions, increased substantially.³⁵

proposition, but are not able to test for such effects without access to ABS microdata. See F A Dias, J Chance and A Buchanan, 'The Motherhood Penalty and the Fatherhood Premium in Employment during COVID-19: Evidence from the United States' (2020) 69 *Res Soc Stratif Mobil* 100542.

30 Calculated from data cube EM1a in Australian Bureau of Statistics, *Labour Force, Australia, Detailed, December 2020*, ABS, Canberra, January 2021, at <<https://www.abs.gov.au/statistics/people/people-and-communities/household-impacts-covid-19-survey/dec-2020>> (accessed 28 April 2021).

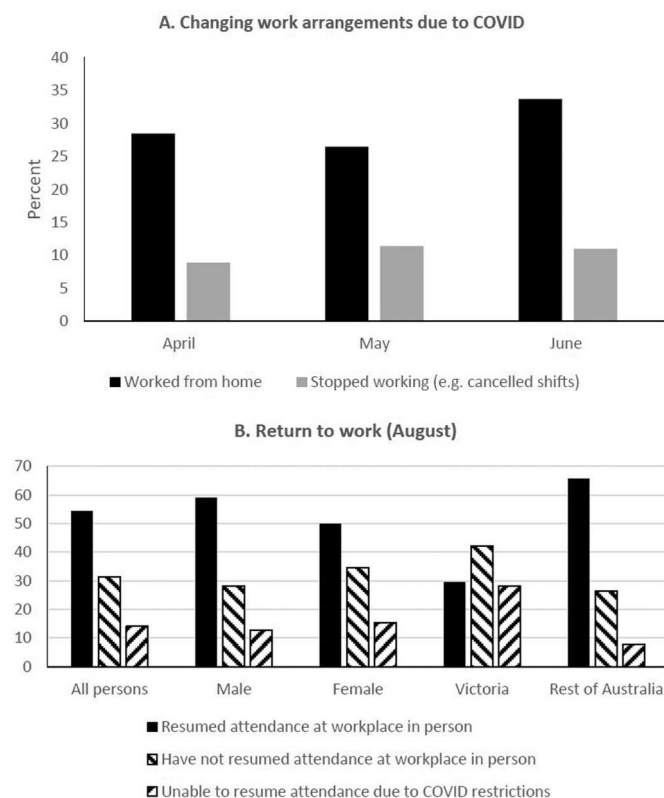
31 M Dey and M A Loewenstein, 'How Many Workers Are Employed in Sectors Directly Affected by COVID-19 Shutdowns, Where Do They Work, and How Much Do They Earn?' (2020) *Mon Lab Rev*, at <<https://doi.org/10.21916/mlr.2020.6>> (accessed 28 April 2021).

32 These include accommodation and food services; arts and recreation services, and 'other services' (ie, repair and maintenance and other personal services provided to private households, such as cleaning).

33 Time series spreadsheets, tables 11 and 12 in Australian Bureau of Statistics, *Labour Force, Australia, Detailed, Quarterly, February 2020*, Cat No 6291.0.55.003, ABS, Canberra, March 2020, at <<https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia-detailed-quarterly/feb-2020>> (accessed 28 April 2021).

34 See ABS, *Household Impacts of COVID-19 Survey*, above n 27.

35 Unfortunately, due to small sample sizes (approximately 1,500 respondents), the ABS does not produce more detailed demographic breakdowns or release the survey microdata.

Figure 1: The impact of COVID-19 on working arrangements³⁶

An issue of global interest is whether the COVID-19 pandemic is likely to permanently alter attitudes about WFH.³⁷ This is addressed in detail by Allen and Orifici in their article in this special issue.³⁸ We restrict our observations to trends suggested by other data sources. Despite a great deal of encouragement and evidence supporting its benefits,³⁹ WFH arrangements were not widespread prior to COVID-19. From 2001–15, the proportion of Australians WFH was consistently around 1 in 4.⁴⁰ And, for most of this

³⁶ ABS, *Household Impacts of COVID-19 Survey*, above n 27.

³⁷ See, eg, A Stahl, 'What Does Covid-19 Mean for the Future of Work?', *Forbes*, 15 June 2020, at <<https://www.forbes.com/sites/ashleystahl/2020/06/15/what-does-covid-19-mean-for-the-future-of-work/#53efec1f446f>> (accessed 21 April 2021); J Karr, K Loh and E A San Andres, *COVID-19, 4IR and the Future of Work*, Policy Brief No 34, APEC Policy Support Unit, Singapore, at <<https://www.apec.org/Publications/2020/06/COVID-19-4IR-and-the-Future-of-Work>> (accessed 8 April 2021).

³⁸ D Allen and A Orifici, 'Home Truths: What Did COVID-19 Reveal about Workplace Flexibility?' (2021) 34 *AJLL* 77.

³⁹ C Diamond, 'Telework: A "Family Friendly" Work Arrangement' (2005) 13 *Lab Ind* 39.

⁴⁰ J Healy, D Nicholson and P Gahan, *The Future of Work in Australia: Anticipating How New Technologies Will Reshape Labour Markets, Occupations and Skill Requirements*,

group, WFH accounted for a small proportion of their working time, with just 7% of all working hours done at home. Almost half (46%) of all those WFH did so for less than 5 hours per week. In short, there was no evidence, prior to COVID-19, that WFH was becoming notably more prevalent.

Figure 1 suggests that, following the easing of restrictions, a growing proportion of workers (and managers) returned to their normal workplace. By November (the latest data available at the time of writing),⁴¹ the differences between Victoria and the rest of Australia in working from home prevalence had become much less pronounced. While this might indicate that the COVID-19-driven growth in WFH is temporary, and will be reversed once restrictions are fully lifted, significantly more workers may nonetheless spend a greater proportion of their time WFH than previously.⁴² Surveys show⁴³ higher life satisfaction for individuals who are WFH than for those at their usual place of work, or those who faced the vulnerabilities of having to stop work altogether under COVID-19 restrictions.⁴⁴

A preference to WFH is, however, unlikely to hold across all types of work and households.⁴⁵ Privately conducted surveys find that office workers have a stronger preference for WFH,⁴⁶ especially those who had already built WFH into their routine,⁴⁷ and where there is strong managerial and technological support for doing so.⁴⁸ In the ABS COVID-19 household survey, the majority

Department of Education (NSW), Sydney, 2017, at <<https://education.nsw.gov.au/content/dam/main-education/teaching-and-learning/education-for-a-changing-world/media/documents/The-Future-of-Work-in-Australia-analytical-report.pdf>> (accessed 21 April 2020).

41 ABS, *Household Impacts of COVID-19 Survey*, above n 27.

42 See, eg, C Fitzsimmons, 'The Unintended Consequences of Working from Home', *Sydney Morning Herald*, 20 May 2020, at <<https://www.smh.com.au/business/workplace/the-unintended-consequences-of-working-from-home-20200519-p54ugp.html>> (accessed 26 October 2020); G Press, 'The Future of Work Post-Covid-19', *Forbes*, 15 July 2020, at <<https://www.forbes.com/sites/gilpress/2020/07/15/the-future-of-work-post-covid-19/#439424764baf>> (accessed 21 April 2021).

43 V Galasso and M Foucault, *Working during COVID-19: Cross-Country Evidence from Real-Time Survey Data*, OECD Social, Employment and Migration Working Papers No 246, 2020, at <<https://doi.org/10.1787/1815199X>> (accessed 21 April 2021).

44 Of course this data conflates a number of factors, including the satisfaction that may come from attending to non-work obligations, the sense of safety that might be derived from being isolated from risks of contracting the virus and so on. It may also be the case that the extent to which this level of satisfaction holds may deteriorate over time, and the value of separating work and non-work grow.

45 M Dey et al, 'Ability to Work from Home: Evidence from Two Surveys and Implications for the Labor Market in the COVID-19 Pandemic' (2020) *Mon Lab Rev*, at <<https://www.bls.gov/opub/mlr/2020/article/ability-to-work-from-home.htm>> (accessed 21 April 2021).

46 J Hennessy, 'A New Survey of Australian Office Workers Has Found We Like Working from Home — But Distractions and Maintaining Team Culture Are Big Concerns', *Business Insider Australia*, 10 June 2020, at <<https://www.businessinsider.com.au/working-from-home-survey-australia-2020-6>>.

47 D Ziffer, 'Most Workers Want "Hybrid" Jobs at the Office and at Home after Coronavirus, Study Finds', *ABC News*, 23 June 2020, at <<https://www.abc.net.au/news/2020-06-23/most-workers-want-hybrid-of-home-and-office-post-coronavirus/12381318>>.

48 A Kamouri and K Lister, *Global Work-from-Home Experience Survey*, Iometrics and Global Workplace Analytics, 2020, at <<https://globalworkplaceanalytics.com/wp-content/uploads/edd/2020/05/Global-Work-from-Home-Experience-Survey-Report-FINAL.pdf>> (accessed 21 April 2021).

of those who did *not* WFH said this was because their work could not be done at home. Preferences for WFH also seem to vary by age group, with younger people seeing WFH as more challenging, due to problems associated with remaining connected to work colleagues, accessing information and managing online collaboration technologies.⁴⁹

Employers' willingness to support WFH has also been underwritten in part by technologies that facilitate remote monitoring of employees at home, rather than an increased sense of trust that unsupervised employees will continue to be as productive.⁵⁰ Recent Australian reports point to the growing use of technologies to record and track employee movements and time spent on websites or non-work-related programs, and to undertake closer real-time monitoring of emails and other communication platforms, as foreshadowed in many earlier accounts of technologically driven futures of work.⁵¹ Such developments raise significant ethical and legal issues, in terms of privacy at home, and what constitutes appropriate levels of work surveillance, which can itself induce stress and other adverse responses for employees.⁵²

Overall, the evidence on how COVID-19 is impacting work and labour markets is somewhat mixed — and definitely incomplete — with few systematic, well-designed field studies from which we can draw firm conclusions. The adverse impacts are widespread, but with clearly accentuated differential effects for particular groups of workers, workplaces and industries.

The immediate effects stand in contrast to technologically centred explanations of how and why work is changing. Instead of automatability being the primary driver of job destruction, the fact that this recession has been triggered by a viral pandemic means that job losses are concentrated in what might be described as 'human-centred work' — where human services and person-to-person contact are mainstays. Nonetheless, there is reason to expect that a longer-term effect of COVID-19 will be to accelerate the diffusion of the technologies that were previously emphasised in the future of work literature, as businesses and consumers normalise the beneficial aspects of recent developments and look for efficiencies to regain profitability and competitiveness. Insofar as this occurs, the ramifications of COVID-19 will be broadly consistent with established empirical evidence on how new technologies affect the quality of work and workers' experiences.

49 N Arboleda, 'Millennials Struggle with Remote Work: Survey', *CRN*, 28 April 2020, at <<https://www.crn.com.au/news/millennials-struggle-with-remote-work-survey-547331>> (accessed 21 April 2021).

50 A Satariano, 'How My Boss Monitors Me while I Work from Home', *New York Times*, 6 May 2020, at <<https://www.nytimes.com/2020/05/06/technology/employee-monitoring-work-from-home-virus.html>> (accessed 21 April 2021); E Stott and N Wiggins, 'Being Monitored by Your Boss while Working from Home — Necessary Trade-off or "Stupid" Surveillance?', *ABC News*, 16 October 2020, at <<https://www.abc.net.au/news/2020-10-16/work-from-home-tracking-software-monitoring/12766020>> (accessed 21 April 2021).

51 P Wood, 'Employee Monitoring Software Surges as Companies Send Staff Home', *ABC News*, 22 May 2020, at <<https://www.abc.net.au/news/2020-05-22/working-from-home-employee-monitoring-software-boom-coronavirus/12258198>>; N Drozdiak and H Fouquet, 'Creepy Technologies Invade Workplaces (and Privacy)', *Australian Financial Review*, 24 May 2020.

52 T Henderson, T Swann and J Stanford, *Under the Employer's Eye: Electronic Monitoring & Surveillance in Australian Workplaces*, The Australia Institute, Canberra, 2018.

IV Regulating Work after COVID-19

We now consider some of the potential regulatory responses that arise in light of the impacts of COVID-19 on the present and future of work that we have raised. The pandemic has exposed the vulnerability of many businesses and workers to significant economic fluctuations, including a reduction in overall employment. It is unlikely that labour demand will simply ‘snap back’ to pre-COVID-19 settings once we reach ‘COVID normal’.

At the macro level, it is important to consider the broader policy settings needed to deliver a sustainable and equitable recovery and economic reconstruction.⁵³ Addressing the seismic shifts in the labour market described above requires careful government planning and consultation with industry, unions and other stakeholders. Industry policy should be prioritised — what steps can be taken to ensure the economy is best placed to create new, decent jobs which offer viable career paths? A second key area is active labour market policies and wider social protection for those who are unemployed or not otherwise in paid work, based on a labour market regulation perspective. To some extent these issues are addressed in the federal government’s recent JobMaker budget statement; we do not comment further here, as these matters are largely addressed elsewhere in this special issue.

Regulatory responses are also warranted where the pandemic has affected work practices. To date, governments’ responses have emphasised temporary measures to stem job losses and support businesses to stay afloat, such as JobKeeper, and by providing employers with labour law flexibility to adjust to the pandemic’s economic challenges.⁵⁴ However, other changes have amplified pre-pandemic developments, either necessitated by the reduced capacity for face-to-face work, due to social distancing measures, or through employers using the crisis as an opportunity to make changes — for example, the increase in remote work. We have also become more reliant on platforms offering locally delivered services as they offer socially distanced access to necessities. These platforms rely on human agents — gig workers — to provide an end product, such as food deliveries. Gig workers are among the insecure workers who have become more valued by the community during the crisis, but who remain vulnerable because the work itself poses health and safety risks, because they mostly do not enjoy the luxury of ongoing employment with one employer, and are casual, in a labour hire arrangement, or classified as independent contractors.⁵⁵ Given that the pandemic has exposed some of these vulnerabilities to the wider community, there may be

53 J Braithwaite, ‘Strategic Socialism, Strategic Privatisation and Crises’ (2013) 28 *Aust Jnl of Corp Law* 35.

54 See Forsyth, ‘COVID-19 and Labour Law: Australia’, above n 2, for more detailed consideration of regulatory measures introduced in response to COVID-19. See also J-C Tham, ‘The COVID-19 Crisis, Labour Rights and the Role of the State’ (2020) 85 *JAPE* 71, and other contributions to this special issue.

55 See, eg, P McDonald et al, *Digital Platform Work in Australia: Preliminary Findings from a National Survey*, Department of Premier and Cabinet (Vic), Melbourne, 2019.

an opportunity for consideration of long-debated regulatory reforms to the definition of employment, which is the lynchpin for many of the worker protections currently provided.⁵⁶

Unfortunately, while the federal government made industrial relations reform a key plank of recovery, its reform agenda remains fairly narrow.⁵⁷ Consultation was limited to the issues of award simplification, enterprise agreement-making, casuals and fixed-term employees, compliance and enforcement, and greenfields agreements for new enterprises. The ‘IR Omnibus Bill’, tabled in Parliament on 9 December 2020,⁵⁸ incorporated a number of changes to the FW Act in these priority areas. However, the Government was not able to secure support for the Bill in the Senate. An amended version dealing only with the issue of casual employment was returned to the House of Representatives. It has now passed into law as the Fair Work Amendment (Supporting Australia’s Jobs and Economic Recovery) Act 2021 (Cth). The new statutory definition of casual status in that legislation does not assist gig workers.

While there are numerous areas where future labour law settings are vital (some of which are considered by other contributions to this special issue), we focus on areas where COVID-19 has highlighted a need for new regulation, tied to debates about the future of work: regulation of workplace surveillance and protection of privacy, following an increase in remote work; and addressing noncompliance with labour law using ‘RegTech’ solutions. The first issue, which entails the use of increasingly sophisticated and invasive technologies in both surveillance of and control over workers, may require ‘a fundamental rethink of key elements of the traditional apparatus of employment law and labor market regulation’.⁵⁹ With respect to the second issue of noncompliance with minimum employment standards, we consider how emerging technologies may be used as tools of regulation, to address this longstanding enforcement problem that has been exacerbated by the COVID-19 pandemic.

Regulation of workplace surveillance and protection of remote workers’ privacy

The pandemic has significant and ongoing consequences for how businesses and work are organised, with many workers being required or encouraged to work from home. Questions of worker wellbeing and the duty of care owed by

⁵⁶ See, eg, the recommendations of N James, *Report of the Inquiry into the Victorian On-Demand Workforce*, Department of Premier and Cabinet (Vic), Melbourne, 2020. For further consideration of needed reforms in the Australian context, see, eg, Forsyth, ‘Playing Catch-Up but Falling Short’, above n 11; A Stewart and S McCrystal, ‘Labour Regulation and the Great Divide: Does the Gig Economy Require a New Category of Worker?’ (2019) 32 *AJLL* 4. At the international level, see, eg, V De Stefano, ‘The Rise of the “Just-in-Time Workforce”: On-Demand Work, Crowdwork and Labor Protection in the “Gig Economy”’ (2016) 37 *Comp Lab L & Pol’y J* 471.

⁵⁷ See generally A Stewart, *COVID-19 and the Future of Australian Industrial Relations*, CEDA Labour Market Policy after COVID-19 Brief, 14 September 2020.

⁵⁸ Fair Work Amendment (Supporting Australia’s Jobs and Economic Recovery) Bill 2020 (Cth).

⁵⁹ Prassl, above n 17, at 124.

employers to those WFH are addressed elsewhere in this special issue. We focus here on where technological developments of recent years have dovetailed with an increase in remote working — workplace surveillance and people analytics. These growing technological capabilities on the employer side have triggered a raft of new concerns, due to: the sheer volume of data that can potentially be captured about employees' activities; the impact this can have on the boundary between the workplace and people's private lives; the processing of this information to assess worker efficiency and productivity; and the use of this information by management in formulating judgments about employees or, even worse, in unaided decisions made by the technology.⁶⁰

Even before COVID-19, the regulation of workplace surveillance and people analytics in Australia lagged behind technological developments. Regulation of workplace surveillance is largely a state responsibility and, while general privacy laws offer workers some protection, there is wide variation in the existence and sophistication of regulation directed specifically at surveillance in the workplace context.⁶¹ The most comprehensive laws are in New South Wales and the Australian Capital Territory; these seek to balance the need for security and safety in the workplace with an employee's right to privacy.⁶² In Victoria, there has been limited provision for regulation of workplace surveillance since 2006, shortly before the release of the first iPhone. Following a Victorian Law Reform Commission inquiry into workplace privacy, the Surveillance Devices Act 1999 (Vic) (SD Act) was amended to prohibit employers' use of optical surveillance or listening devices to surveil employees in workplace toilets, washrooms, change rooms or lactation rooms.⁶³ The use of surveillance devices in Victoria is otherwise covered by the SD Act. Other states do not have specific workplace surveillance laws, although Queensland has been considering introducing them.⁶⁴ In 2014, the Australian Law Reform Commission recommended uniform national workplace surveillance laws as part of a wider inquiry into protection of privacy in the 'digital era'.⁶⁵ That recommendation has not yet been adopted.

Steps towards regulatory reform in this area will need to be mindful of whether traditional forms of regulation adequately address the capacity of the

60 R A Bales and K V W Stone, 'The Invisible Web at Work: Artificial Intelligence and Electronic Surveillance in the Workplace' (2020) 41 *BJELL* 1; *ibid*, at 138. See also B Rogers, 'The Law and Political Economy of Workplace Technological Change' (2020) 55 *Harv Civ Rights-Civ Liberties L Rev* 531; Henderson, Swann and Stanford, above n 52; Bodie et al, above n 19.

61 Henderson, Swann and Stanford, above n 52, at 22–4; A Stewart et al, *Creighton & Stewart's Labour Law*, 6th edn, Federation Press, Sydney, 2016, pp 708–12. The Australian Law Reform Commission (ALRC) has called for uniform national regulation of workplace surveillance: ALRC, *Serious Invasions of Privacy in the Digital Era: Final Report*, ALRC Report 123, ALRC, Canberra, 2014.

62 Workplace Surveillance Act 2005 (NSW); Workplace Privacy Act 2011 (ACT).

63 Surveillance Devices Act 1999 (Vic) s 9B. The amendment was made by Surveillance Devices (Workplace Privacy) Act 2006 (Vic).

64 Y D'ath, *Terms of Reference: Queensland's Laws Relating to Workplace Surveillance*, Queensland Government, Brisbane, 24 July 2018, at <[https://www.qlrc.qld.gov.au/_data/assets/pdf_file/0005/589514/Amended-Workplace-surveillance-ToRs.pdf](https://www qlrc qld gov au/_data/assets/pdf_file/0005/589514/Amended-Workplace-surveillance-ToRs.pdf)>.

65 ALRC, above n 61, at 293 (Recommendations 14–16).

machine learning technologies that are now being more widely utilised. As Prassl has observed: ‘algorithmic management does not rely on legal mechanisms to obfuscate control in order to evade responsibility — rather, diffuse and potentially inexplicable control mechanisms are inherent in the use of increasingly sophisticated rating systems and algorithms’.⁶⁶ If existing laws cannot adapt to the surveillance capabilities of new technologies, then research is needed to address what mechanisms will ensure an appropriate balancing of employers’ and workers’ interests.⁶⁷

Noncompliance and RegTech solutions

In recent years, Australia has had major problems of noncompliance with employment standards, or ‘wage theft’.⁶⁸ This has only been exacerbated by the economic impacts of COVID-19.⁶⁹ Many businesses are facing solvency challenges and some may respond to this by unlawfully cutting labour costs. Given the large unemployment effects documented earlier, previously secure workers will be significantly more vulnerable than before. There will likely be pressure applied by some employers for workers to accept underpayment, in return for a job, and reluctance on the part of some workers to report such practices, for fear of losing their jobs. Both factors will further stretch detection and enforcement efforts, at a time when the Fair Work Ombudsman’s (FWO) resources are already under strain.⁷⁰

But could emerging technologies provide solutions to these compliance issues? While often prompting concerns about regulatory effectiveness, technology can also be an *instrument* of regulation.⁷¹ To date, the use of ‘RegTech’ — regulatory technologies — in compliance has largely been associated with finance and banking.⁷² RegTech is well-embedded in that sector, where information systems are used to collect and manage data more effectively, to meet regulatory obligations. Increasingly, emerging technologies such as AI and ‘distributed ledger’ capabilities are being tested to streamline and automate these regulatory processes.

However, RegTech options appear to be expanding into other sectors. A recent report of the Senate Select Committee on Financial Technology and

66 Prassl, above n 17, at 139.

67 For some thoughtful suggestions on future research and policy directions, see Bales and Stone, above n 60, at 59–62.

68 S Clibborn, ‘Australian Industrial Relations in 2019: The Year Wage Theft Went Mainstream’ (2020) 62 *JIR* 331; T Hardy, ‘Trivial to Troubling: The Evolution of Enforcement under the Fair Work Act’ (2020) 33 *AJLL* 87 at 88–90.

69 See, eg, Unions NSW, *Wage Theft: The Shadow Market*, December 2020; T Hardy, ‘What Now for Wage Theft? Enforcement of Employment Rights and Entitlements in a Time of Crisis’, *Labour Law Down Under*, 22 April 2020, at <<https://labourlawdownunder.com.au/?p=829>> (accessed 28 April 2021).

70 ‘Underpaying Corporates Piling Pressure on Stretched FWO: Parker’, *Workplace Express*, 23 September 2020.

71 R Brownsword, E Scotford and K Yeung, ‘Law, Regulation, and Technology: The Field, Frame, and Focal Questions’, in R Brownsword, E Scotford and K Yeung (Eds), *The Oxford Handbook of Law, Regulation and Technology*, Oxford University Press, 2017, p 3 at p 20.

72 See, eg, J Barberis, D W Arner and R P Buckley, *The RegTech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries in Regulation*, John Wiley & Sons, 2019.

Regulatory Technology noted that ‘RegTech solutions will become of increasing importance for businesses as a result of the COVID-19 pandemic, with time and cost savings able to be delivered using RegTech products’.⁷³ A recent Productivity Commission (PC) report similarly paints an optimistic picture for increased RegTech adoption in Australia, highlighting the potential benefits for regulatory compliance.⁷⁴ Such ideas are not unheralded. Before COVID-19, US researchers had argued that machine learning and data science could assist in detecting wage theft.⁷⁵

The Australian Small Business and Family Enterprise Ombudsman (ASBFEO) is among those currently advocating ‘RegTech’ solutions for business labour law compliance.⁷⁶ According to a recent Senate submission:

embracing regtech to translate complex regulation — such as in the IR space, in the tax space or in the OH&S space — to make it simple and usable for small businesses can help them to get it right. I think most small business, most businesspeople, want to do the right thing, but sometimes the complexity of regulation that they find themselves in makes that really hard.⁷⁷

The ASBFEO has further suggested that, as part of a COVID-19 recovery plan for small business, RegTech solutions for ascertaining accurate conditions and pay scales developed by the private sector and integrated with payroll software should be accredited by the FWO. This would provide ‘a technology driven method for small business to adhere to the current awards system, contracts, conditions, and dismissal processes’.⁷⁸ The technology could be developed in a partnership between government and the private sector.

More controversially, the ASBFEO has argued that in situations where an accredited RegTech solution is followed, the government should “‘de-risk” the landscape’ for small business by providing a ‘safe harbour’ from litigation for noncompliance where a business has acted in ‘good faith’.⁷⁹ This proposal would seemingly allow small businesses to pass responsibility for compliance with the Fair Work Act 2009 (Cth) to the FWO, which, as we have noted, is already stretched.

An alternative submission on use of RegTech was put to the Senate Committee by Tanda, a Queensland company that provides a cloud-based workforce management platform to help businesses manage rostering and payroll. Tanda submitted that technology is ‘the best means of identifying and

73 Senate Select Committee on Financial Technology and Regulatory Technology, *Interim Report*, Parliament of Australia, Canberra, 2020, at [2.125].

74 Productivity Commission, *Information Paper: Regulatory Technology*, Productivity Commission, Canberra, 2020.

75 T Johnson et al, *Predicting, Analyzing, and Educating on Wage Theft with Machine Learning Tools*, Technical Report No TR229, Center for Integrated Facility Engineering, Stanford University, 2018. See also Rogers, above n 60, at 578–9.

76 Senate Select Committee on Financial Technology and Regulatory Technology, above n 73; P Karp, ‘Payroll Software Could Protect Employers Who Commit Accidental Wage Theft, Ombudsman Says’, *The Guardian*, 25 August 2020.

77 Senate Select Committee on Financial Technology and Regulatory Technology, above n 73, at [2.126].

78 *Ibid*, at [2.128].

79 *Ibid*, at [2.129].

uncovering unlawful employee underpayments'.⁸⁰ However, instead of a formal accreditation system for RegTech products, Tanda recommended that the government should develop a rating system 'to measure and report on the extent to which off-the-shelf payroll calculation technology provides a compliant solution when used properly'.⁸¹ Rather than advocating that use of payroll technology provides a 'safe harbour' from legal action, Tanda argued that investment in compliant payroll calculation technology by a business should be a factor considered by the courts in assessing civil penalties in cases of underpayment. Such a system would still require government investment. And it is to be hoped that, when assessing penalties, courts would look beyond the adoption of technology to other practices that contribute to noncompliance. The federal government has since committed \$10.0 million over 4 years from 2021–22 'to implement regulatory technology solutions to assist employers to interpret and comply with modern awards, and to explore and promote new ways of assisting employers through regulatory technology'.⁸²

V Conclusion

In this article, we sought to understand what the sudden, systemic 'shock' of the COVID-19 health and economic crisis has meant — and will mean — for work, labour markets and labour regulation. Our contribution is framed by a large pre-pandemic literature on the future of work, in which several themes dominated: the centrality of technology, the potential for large-scale job losses and the breakdown of traditional ongoing employment arrangements, typified by the emergence of the 'gig economy' and increasing possibilities for remote work.

COVID-19 remains a 'live threat' to public health and prosperity. Yet many observers — and the federal government — have already begun to formulate proposals for exiting the crisis in a different direction, rather than seeking merely to 'snap back'. Our analysis suggests that a return to pre-COVID-19 'normal' may be unachievable, given the depth of the employment losses, the emerging technological potential (and consequent pressures for change) and the appetite that is now felt for 'doing things differently' on the other side of the pandemic — stimulated for many workers by the viability of remote and work-from-home alternatives.

Implicit in our analysis is an argument that getting people back to work, and assisting them financially through the transition, should be the federal government's highest priority. Given the suddenness of the initial economic downturn and recurrence of lockdown restrictions in response to further COVID-19 outbreaks, this is unlikely to be a short-term task. With women being among the worst affected by the economic fallout of the COVID-19 shutdown orders, female-dominated sectors and occupations appear particularly worthy of greater government assistance. More research is needed into exactly where the worst and longest-lasting effects of the pandemic have

⁸⁰ Ibid, at [2.131].

⁸¹ Ibid, at [2.132].

⁸² Commonwealth of Australia, *Budget Measures: Budget Paper No 2 2021–22*, 2021, <<https://budget.gov.au/2021-22/content/bp2/index.htm>> (accessed 6 August 2021).

been felt, so that appropriate government resources can be directed to assisting their recovery. If COVID-19 becomes endemic, the option for workers to do paid work tasks while maintaining physical distancing (and attending to their caring responsibilities) will call for the refinement of existing (and perhaps hastily designed) WFH arrangements in many organisations.

As economic conditions stabilise and a ‘new normal’ emerges, there is also an opportunity for governments to address important unresolved sources of inequity and imbalance in current labour laws. A consistent theme running through our analysis here is that entirely new directions for reform are rarely required. In many cases, government-initiated inquiries have devised solutions, or workable approaches have been demonstrated by — effectively, ‘piloted in’ — other jurisdictions. We gave examples relating to a number of key challenges, but focused on two in particular: regulation of AI-based workplace surveillance capabilities, and the take-up of RegTech correctives to insidious wage theft problems. In these cases, the task for governments is not to devise new programs, but to implement (generally at low cost) the options that have already been devised or adopted elsewhere. Such measures would contribute to making the ‘post-COVID-19’ working world more resilient and equitable than the one shaken by the global pandemic in 2020.

More generally, we can speculate on whether the COVID-19 responses are likely to have a lasting impact on labour markets and labour regulation. In general, the evidence suggests that, in the short term at least, its impact on alternative working arrangements is more limited, although, as we noted, it is likely to act as a catalyst for the acceleration of how technology has been used in various ways to automate work in order to reduce costs, as well as to facilitate WFH and virtual work arrangements, and to drive interest in surveillance of individuals WFH. More broadly, the impact on the types of jobs and forms of employment is more likely to be driven by consumers’ preferences for transacting online and using home delivery services, and by businesses’ evaluation of the risks now associated with global value chains. There may be ‘scarring effects’ on longer-term beliefs about the future and the risks of a return to normal that are yet to become fully apparent.⁸³ The COVID-19 pandemic has exposed the inherent limitations associated with these developments and their vulnerability to unexpected shocks, suggesting the ‘gigification’ of work may have natural limits.⁸⁴

In broad terms, however, our early view is that whilst the short-run effects of the pandemic have been to impact human-centred jobs more adversely, the longer-run consequences are more likely to reinforce the deployment of new technologies that transform work and which have been reshaping patterns of job creation and destruction over the past several decades. A central concern in this process will remain how to effectively balance the inherent tensions between promoting fairness and efficiency and ensuring workers have the capacity to voice and influence decisions about their working lives.

83 J Kozlowski, L Veldkamp and V Venkateswaran, *Scarring Body and Mind: The Long-Term Belief-Scarring Effects of COVID-19*, Working Paper No 27439, National Bureau of Economic Research, Cambridge, 2020, at <<https://www.nber.org/papers/w27439>> (accessed 28 April 2021).

84 P Fleming, C Rhodes and K-H Yu, ‘On Why Uber Has Not Taken over the World’ (2019) 48 *Econ Soc* 488 at 496.