

1. Understanding the future of work

Adrian Wilkinson and Michael Barry*

A CASE OF COMPETING GRAND NARRATIVES

According to Yogi Berra, ‘the future ain’t what it used to be’ (Scott 2019). Indeed, this is one of his better observations. The future of work is not a new topic despite the current acres of newsprint that suggest it is. We can go back to Alvin Toffler in 1970 – ‘too much change in too short a period of time’ – but, also, many others, from Jeremy Rifkin, who in 1995 predicted the end of work, to more recent publications that claim to be able to predict future trends (e.g. Gratton 2011; Ross 2016; McKinsey 2017).

Moreover, for many years we saw two grand narratives. One offered a utopian perspective of the leisure society (Keynes thought 15 hours of work would be enough for a good living by 2030), where for those at work, they existed as empowered knowledge workers. The other narrative envisaged a darker future, featuring intensification, surveillance, casualisation, austerity, financialisation, low pay, long hours, the platform economy and digital technology. In short, in the latter narrative, working life is portrayed as nasty, brutish and long. We see considerable debate at present in both the academic world and the wider community about the direction of work and the desirability of developments both for work and life outside work. A major part of this debate is also influenced by the globalisation of work, the impact of new technologies, and the shift of skills and knowledge development to low-cost labour countries (Howcroft and Taylor 2014). However, these stylised accounts lack granularity and are not based on interrogating the evidence so much as putting together a picture by using a series of often bold predictions, or by using one or two case studies to make generalisations about the future of work. Indeed, prediction is often mixed with prescription and description.

Too much of the literature on the future of work favours broad brush strokes in which the world is one of paradigm shifts. Various, we are told we are in the midst of the fourth industrial revolution, the second machine age, the new economy (Ross 2016). These new, often shaky, assumptions are favoured over notions of contestation, unevenness and choice. It is as

if there is a tsunami of change that cannot be shaped in any way and which delivers outcomes that cannot be negotiated. Of course, this suits global elites, those who may shape developments but can then attribute such developments to immutable external forces. Thomas Piketty's (2014) work shows how unbridled capitalism was earlier tamed with regulations that 'de-commodified' labour by providing social welfare and labour market support arrangements to redistribute wealth, and that social contracts were embedded in society until neo-liberalism eroded these structures.

Today, the positive grand narrative is downplayed, with the new vision rather more alarmist and also in receipt of considerably more air time – perhaps bad news sells? 'The robot ate my job' is perhaps the most common headline fitting with this narrative (see Table 1.1). McKinsey (2017) predicted that half of all jobs would be automated in the near future (for a different view, see Agrawal et al. 2018). Job losses through technology are of course not new. The Luddites were alarmed before they smashed machines, and the knocker-up profession lost its rationale when alarm clocks became affordable and reliable. While job losses are inevitable, new technology also creates jobs for IT specialists and gamers, among others. Moreover, as Fleming (2019) points out, robots might not destroy jobs as quickly or as extensively as expected. Instead, in a somewhat similar vein to the dystopian vision of the future portrayed in Shriver's book *The Mandibles*, the logic for retaining human labour will be that it might often prove cheaper than robots. Among other examples, Fleming cites the fact that sewer cleaners in India are cheaper than technology-based solutions in the UK. It is also worth bearing in mind that unemployment rates are similar to those of the 18th century (Bank of England KnowledgeBank 2019). Here again, our contention is that we need to analyse the future of work by drilling below the alarmist headlines about jobs, to see the importance of issues such as underemployment and poor wage growth (see Blanchflower 2019).

While scholarly research produces less exciting headlines than futurology, it also leads to more sober and nuanced assessments. Research, such as that presented in this volume, points to elements of continuity that always appear less dramatic than paradigm shifts and revolution. There are more people working in fast food franchises such as McDonald's than in leading technology firms such as Google, despite contentions surrounding the growth of the knowledge economy (Alvesson 2013). Moreover, the new economy has elements that look very much like the old. Briken and Taylor (2018, p. 455) describe a work process at the Amazon fulfilment centre in which employees are on the end of a 'bastardized, technologically driven, cost-obsessed form of lean working'.

In assessing these competing narratives, our aim in this book is to chart a forward-looking agenda for employment relations research. The brief for

Table 1.1 *The end of work?*

Title	Source/quotes
Artificial Intelligence WARNING: Can intelligent robots replace human jobs by 2025?	<ul style="list-style-type: none"> ● S. Kettley (2018, 17 September). Artificial Intelligence WARNING: Can intelligent robots replace human jobs by 2025? <i>Express</i>. Retrieved from https://www.express.co.uk/news/science/1018786/Artificial-intelligence-AI-robots-replace-humans-machines-take-over-jobs
The Future of Jobs Report 2018	<ul style="list-style-type: none"> ● WEF (2018). <i>The Future of Jobs Report 2018</i>. Insight Report. Cologne/Geneva: World Economic Forum ● ‘One set of estimates indicates that 75 million jobs may be displaced by a shift in the division of labour between humans and machines, while 133 million new roles may emerge that are more adapted to the new division of labour between humans, machines and algorithms.’ (p. viii)
With His Job Gone, an Autoworker Wonders, ‘What Am I as a Man?’ You Will Lose Your Job to a Robot—and Sooner Than You Think	<ul style="list-style-type: none"> ● S. Tavernise (2019). With His Job Gone, an Autoworker Wonders, ‘What Am I as a Man?’ <i>New York Times</i> ● K. Drum (2017, November/December). You Will Lose Your Job to a Robot—and Sooner Than You Think. <i>Mother Jones</i>. Retrieved from https://www.motherjones.com/politics/2017/10/you-will-lose-your-job-to-a-robot-and-sooner-than-you-think/ ● ‘When robots become as smart and capable as human beings, there will be nothing left for people to do because machines will be both stronger and smarter than humans. Even if AI creates lots of new jobs, it’s of no consequence. No matter what job you name, robots will be able to do it.’ ● ‘Mass unemployment is closer than we feared—in fact, it may be starting already.’
Five Million Jobs by 2020: The Real Challenge of the Fourth Industrial Revolution	<ul style="list-style-type: none"> ● O. Cann (2016, 18 January). Five Million Jobs by 2020: The Real Challenge of the Fourth Industrial Revolution. World Economic Forum. Retrieved from https://www.weforum.org/press/2016/01/five-million-jobs-by-2020-the-real-challenge-of-the-fourth-industrial-revolution/ ● ‘In terms of overall impact, the report indicates that the nature of change over the next five years is such that as many as 7.1 million jobs could be lost through redundancy, automation or

Table 1.1 (continued)

Title	Source/quotes
Will Democracy Survive Big Data and Artificial Intelligence?	<p>disintermediation, with the greatest losses in white-collar office and administrative roles.’</p> <ul style="list-style-type: none"> ● D. Helbing, B. Frey, G. Gigerenzer, E. Hafen, M. Hagner, Y. Hofstetter . . . A. Zwitter (2017, 25 February). Will Democracy Survive Big Data and Artificial Intelligence? <i>Scientific American</i>. Retrieved from https://www.scientificamerican.com/article/will-democracy-survive-big-data-and-artificial-intelligence/?redirect=1
Robot automation will ‘take 800 million jobs by 2030’ – report	<ul style="list-style-type: none"> ● ‘Today 70% of all financial transactions are performed by algorithms. News content is, in part, automatically generated. This all has radical economic consequences: in the coming 10 to 20 years around half of today’s jobs will be threatened by algorithms. 40% of today’s top 500 companies will have vanished in a decade.’ ● BBC (2017, 29 November). Robot automation will ‘take 800 million jobs by 2030’ – report. BBC News. Retrieved from https://www.bbc.com/news/world-us-canada-42170100
800 Million Jobs To Be Lost By 2030 Due To Automation	<ul style="list-style-type: none"> ● ‘Up to 800 million global workers will lose their jobs by 2030 and be replaced by robotic automation, a new report from a consultancy has found.’ ● T. Frl (2019, 7 January). McKinsey: 800 Million Jobs To Be Lost By 2030 Due To Automation. <i>The Incomer</i>. Retrieved from https://www.theincomer.com/2019/01/07/mckinse-800-million-jobs-to-be-lost-by-2030-due-to-automation/ ● ‘800 million jobs are expected to be lost by 2030 due to automation and robotic labor, according to a study by the McKinsey Global Institute.’
The Future of Work: Could Automation be Positive?	<ul style="list-style-type: none"> ● City News (2018). The Future of Work: Could Automation be Positive? (N. Ranson, ed.) <i>City News</i> (28), pp. 8–9. Retrieved from https://issuu.com/cityuniversitylondon/docs/city_news_issue_28 ● ‘Automation could be a positive development if it is directed in a liberating way. Unfortunately, the history of automation in industry has tended toward deskilling the workforce, lowering pay and eroding conditions.’ (P. Fleming as quoted on p. 8)

Table 1.1 (continued)

<i>Title</i>	<i>Source/quotes</i>
The Future of Work: Could Automation be Positive?	● 'According to auditor PwC's recent Workforce of the Future report, 37 per cent of us are concerned we might lose our jobs to automation.' (p. 18)
Workforce of the Future: The Competing Forces Shaping 2030	● PwC (2017). <i>Workforce of the Future: The Competing Forces Shaping 2030</i> . London: PwC ● '37% are worried about automation putting jobs at risk – up from 33% in 2014.' (p. 8)
Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation	● McKinsey (2017). <i>Jobs Lost, Jobs Gained: Workforce Transitions in a Time of Automation</i> . McKinsey Global Institute. New York: McKinsey and Company ● 'We estimate that between 400 million and 800 million individuals could be displaced by automation and need to find new jobs by 2030 around the world.' (p. 11)

authors was as follows: map out the important intellectual boundaries for their field of research, outline the key research needs and link this research agenda back to how it should inform practice. We look first at current research topics, such as the rise of the gig economy and the role of platform companies. We examine the implications of such developments for key employment relations research agendas, such as (in)security of employment, equity, fairness, wellbeing and voice. Second, we asked contributors to take a view, or position, on the likely developments in work and employment to identify interesting areas of research that seem to address this future positioning. Our aim here is to explore interfaces between the field of employment relations (ER) and cognate disciplines so that our research agenda includes broader issues around innovation, globalisation and a new social contract. Our volume seeks both to review the extant literature on the future of work and to explore the big issues facing the modern workforce. While acknowledging that, and analysing how, the world of work is changing in important ways, we argue for a research base that allows more sober reflections on grand claims that surround the future of work. A base of research that is firmly grounded in evidence is also important to guide policy makers and practitioners who must tackle the issues raised in this volume.

In addition, we need a lens on the future of work that is neither reduced to a robots-or-jobs dichotomy nor polarised by assessments of lousy and

lovely jobs (Goos and Manning 2007). In the UK, quality of work has become a major public policy issue, with the 2017 Taylor review outlining that work should not only be fair and decent, but also have realistic scope for development and fulfilment. If the following excerpt, comprising three of the five reasons why good work matters, gives a flavour of the ambitious nature of the project, it also provides a sense of the challenge confronting its achievement in the future:

Because, despite the important contribution of the living wage and the benefit system, fairness demands that we ensure people, particularly those on lower incomes, have routes to progress in work, have the opportunity to boost their earning power, and are treated with respect and decency at work. Because, while having employment is itself vital to people's health and well-being, the quality of people's work is also a major factor in helping people to stay healthy and happy, something which benefits them and serves the wider public interest.

Because we should, as a matter of principle, want the experience of work to match the aspirations we have for modern citizenship; that people feel they are respected, trusted and enabled and expected to take responsibility.

Because the pace of change in the modern economy, and particularly in technology and the development of new business models, means we need a concerted approach to work which is both up to date and responsive and based on enduring principles of fairness (Taylor 2017: 6).

UNDERSTANDING THE FUTURE OF WORK

If understanding how the disruptive nature of technology will impact current work processes and employment arrangements is key to predicting the future, what is also important for ER research is seeing how disruption will impact the balance of power within, and the ongoing contestation of, the employment relationship (Dundon et al. 2017). As Quiggin notes (2020), when the balance of power favours management, disruption works against worker interests.

The changes examined in this volume are set against a backdrop in which organisations (and employees) are having to deal with the rise of highly competitive markets, financial crises, increasingly fast-paced technological change, the emergence of a finance-driven business model and the globalisation of markets. In addition, we see increased female participation, an ageing workforce, increased casualisation and greater employment insecurity (Batt 2018; Milkman 2018). Accompanying this has been a proliferation of different guises of employment, bringing into sharp focus the growth of new corporate arrangements and work practices, such as subcontracting, franchising, home-working and the use of illegal labour. These arrangements place increasing numbers of workers outside the reach

of traditional regulatory institutions that provide core protections such as minimum wages, Occupational Health and Safety (OHS) standards, and workers' compensation (Wilkinson et al. 2018). David Weil (2014) points out that laws that regulate employment assume an employee/employer relationship and make presumptions about responsibility and liability, but ignore the 'fissured' workplace, meaning there are gaps in the protection of workers (especially if they are not classified as employees).

These developments are in sharp contrast to the features of the old model of employment that included long-tenure jobs with steadily rising pay, extensive workplace and retirement benefits, and a psychological contract based on a *quid pro quo* of employee loyalty for job security (Kochan 2015). Increasingly, this model is seen as being displaced by a more fluid market-mediated relationship featuring shorter-term jobs and multiple employers, shift of employment risk to employees, and a new psychological contract that indicates the job only lasts as long as it is a beneficial proposition for both parties (Cappelli 2008; Wilkinson and Pickett 2009). Global supply chains are now estimated to make up some 80 per cent of world trade and 60 per cent of global production (ITUC 2016), presenting challenges for traditional forms of labour market regulation (see Reinecke et al. 2018; Thomas in this volume).

Batt (2018) warns that the financial model of the firm points to why many employers don't want or need a relationship with employees in order to make money. She notes as follows:

For a large swathe of activities, they simply need to contract for services rendered or buy technology, with labor already embedded as an input. This in turn suggests that a policy focus on the labor market alone – a strengthening or reform of labor and employment laws – is insufficient to achieve the kind of lasting reform needed to build a sustainable economy that provides decent jobs and income security for the majority of working people. (p. 466)

In conservative politics deregulation is seen as the answer to the new competitive context, and this has led to a questioning of old models of work regulation (Kaufman et al. 2020). Both the marginalisation of traditional labour market institutions, such as unions and collective bargaining, and the hegemony of neo-liberalism in many advanced societies have challenged the foundations of much of the traditional institutional regulation of work. The economic crisis has led both to pressures for a further paring back of governmental capabilities for regulation and enforcement, and a renewed interest in the possibilities for meaningful institutional redesign (Wilkinson and Wood 2012). In this sense the 'rules of the game' that impact the scope and authority of available work choice have been questioned (see Barry and Wilkinson 2019).

While much popular literature sees a context in which universal forces are unleashed upon the world of work (as if there were no human agency), analysis such as that presented in this volume (see for example Foden) suggests there is considerable unevenness in the workplace, not least as institutional arrangements at national level have a major impact on how broad trends play out in the workplace. What is needed, we argue, is a discussion of how existing institutions (albeit engineered for a different era) can be matched with the changing world of work. Is there scope to utilise Streeck's concept of beneficial constraints, to suggest that embedded institutions constrain free market behaviour in ways that in fact enhance economic performance (Streeck 1997)? Our hope is that the chapters in this volume contribute to a better understanding of what is actually happening in the world of work, which should then help inform policy and practice.

SETTING OUT A RESEARCH AGENDA FOR THE FUTURE OF WORK

This volume comprises a wide range of future of work topics, and it includes contributions from policy makers and practitioners as well as a number of academics. The book is set out as follows. Our contributions commence with a chapter by Chris Brewster and Peter Holland, who examine the transformation of employment in the 21st century and key aspects of work relationships. Globalisation, outsourcing, Artificial Intelligence (AI) and the changing nature of employment are all seen as reducing fairness, wellbeing and voice in the workplace. For some time, employment was not only the focus for people who needed work and the organisations they worked for; it was also the focus of governments that were judged by rates of employment and unemployment. It is in this context that the authors outline concerns relating to AI, noting that they are not new. For example, Karl Marx, in the famous 'Fragment on Machines' in *The Grundrisse* (1973), predicted that the rise of new machinery would create radical change in the role of workers, leading to the loss of jobs. However, while many have viewed technology as a means of job loss for workers, Brewster and Holland maintain that AI has potential to support positive employment relationships under leadership dedicated to fair and equitable workplaces. Without leaders who possess the skills and innovation to manage technology, the authors suggest that the threat of robotisation and AI will lead to searches for ever-cheaper ways of getting work done, pressuring people to move out of employment and to get them to provide work in other ways. Ultimately, Brewster and Holland argue that these changes are already occurring and are having a profound effect on employee voice

whether it is recognised or not. However, voice is likely to remain central to the functioning of the work and/or employment relationship as a form of communication and countervailing power.

Paula McDonald and Deanna Grant-Smith examine internships and education-focused work experience, both on the rise and widely considered foundational in facilitating 'employability' and serving as a pathway into the paid labour market. This form of labour may be organised by the intern, the organisation or a broker, and may be voluntary or mandatory. Although work experience may attract remuneration, it primarily consists of unpaid work, distinguishing work experience from apprenticeships. The authors address three streams of research that involve advanced knowledge of trends in relation to the future of (unpaid) work experience: (1) modes and types of unpaid work; (2) the expansion and prevalence of unpaid work; and (3) the impacts of unpaid work on participants and other workers. The evidence presented on the expansion of unpaid work and internships, the myriad of different forms that have evolved, and the degree of support for their continuance, suggests the practice of unpaid work and internships is likely to remain a permanent, though contested, feature of youth employment, at least in industrialised economies. Yet the potential for exploitation, inequity and negative impacts on the labour market more broadly is significant. The research agenda canvassed here provides an imperative for establishing sound evidence of how internships and other forms of unpaid work experience can be structured fairly and in a way that promotes, rather than diminishes, employment opportunities for young people who currently face uncertain prospects in the transition from education to work.

Gill Kirton focuses on workplace diversity and inclusion in modern society across the dimensions of theory, context, practice and research. Diversity and inclusion have arguably been the main drivers of change in ER, which, according to Kirton, can be attributed to factors such as growth in women's employment, an ageing workforce, the rising age of retirement, and migration. Globalisation and technology have led to new forms of employment – zero-hour contracts, temping, working remotely – that deviate from the once-standard model of full-time employment in a single organisation. Kirton reminds us that globalisation has increased outsourcing for services, which has altered work conditions negatively, and cost many jobs in countries with higher-paying wages. So, Kirton asks, do these developments create a more flexible labour market and a better work–life balance? Some research indicates that, despite improvements in workplace diversity and inclusion, insecure forms of work, as seen in the gig economy, can negatively impact mental health, as well as people's economic wellbeing. Kirton calls the reader to acknowledge that social

and political contexts worldwide filter into organisations and workplaces. Thus, inequality is constant in the changing world of work, despite a plethora of laws and organisational level policies, in developed countries at least, meant to eliminate discrimination and promote a diversity agenda. Positive shifts in workplace diversity and inclusion must start with good practice models and bold actions to break down barriers to inclusion by building workforce diversity across occupations, hierarchies, functions, workgroups and teams.

Catherine Bailey and Adrian Madden explore the concept of meaningful work in the complex age of globalisation and technological advancements. The authors assert their position in the debate on whether meaningful work is a luxury rather than a necessity, by citing research indicating that meaningful work is highly significant for individual workers. They note that emerging forms of work such as crowdsourcing, gig work or digital microwork represent potentially exploitative work situations that may deprive individuals of a regular income, stability, supportive workplace relationships and connections with others, all of which may be important components of meaningfulness. Bailey and Madden draw on research from a wide range of discipline areas – philosophy, ethics and political theory, sociology, management studies and psychology – to map the terrain of meaningful work and evaluate the extensiveness of knowledge in the field. They then draw on this evidence base to pose a series of questions for future research and outline practical suggestions for individuals and the workplaces, such as employers demonstrating to workers the impact their work has on colleagues, the organisation and wider society, and promoting a positive and collaborative work environment.

David Foden examines the question of the quality of work and employment. He considers the extent to which the policy objective set by the European Union, of creating not only more jobs, but also better jobs, has been met. Taking as read that improving job quality is accepted as a valid endeavour, the chapter follows the International Commission on the Measurement of Economic Performance and Social Progress in placing wellbeing at the centre of economic and social policy debate. The idea here is that policies should be judged by more than their impact on income and wealth alone, and this applies to the policies and practices shaping our experience of work as much as to those shaping the quality of life more generally. Foden's analysis follows that of the European Foundation for the Improvement of Living and Working Conditions (Eurofound), which focuses on the level of the job (as opposed to the individual worker, the company, the wider labour market or economy) and identifies characteristics linked to seven distinct dimensions of job quality (including earnings), all of which are known to have causal links to health and wellbeing. A

brief reflection on the role of institutions, policies and company practice precedes the conclusions.

Jean Cushen explores the role that financialisation is playing in changes to the world of work. She looks at how financial markets and investment decisions are leading firms to move away from the view that internal investment in labour is the best means to secure competitive advantage and profitability. In this way, Cushen sees the financial model of the firm as an existential threat to the traditional model of human resource management (HRM), built as it is on the notion of employee value creation rather than employee value extraction. The fear of financialisation is, then, that technology and analytics may render many employee skill sets redundant, and at the same time that the HR function will be tasked with distributing low-road strategies such as outsourcing work, managing redundancies, reducing or rejecting traditional employment benefits, and promoting peripheral employment and variable pay. Cushen's call is for HRM, both as a science and in practice, to be more assertive in arguing the case for firm investment in employee development and quality work to build sustainable productive value.

Sarah Kaine, Frances Flanagan and Katherine Ravenswood highlight the importance of understanding the consequences the current and pending changes to work and employment are having, and will continue to have, for gender. The chapter considers whether gig work provides new avenues to genuine flexibility, where women can balance work and family/caring commitments, or whether flexibility is more myth than reality, with gig work simply reproducing existing gender inequalities. In taking up this argument, the authors remind us that gig workers are not the only employees who are effectively working 'on demand', and that in non-gig work it is women in care industries who are disproportionately represented in such on-demand arrangements. Thus, despite claims that gig work may enhance female opportunity, there are signs that point towards its growth leading, as the authors state, to 'digitally "encase" much of the work performed by women within an ongoing paradigm of semi-informality.' The authors also argue for a research agenda for the future of work that considers whether the use of algorithmic data, such as provided by clients who rate and rank gig worker performance, is being used by platforms in ways that place additional burdens on women, or indeed gives rise to gender discrimination because such ratings contain underlying gender biases.

David Peetz and Georgina Murray open their chapter by acknowledging that most public debate about technology and robots focuses on how biotechnological change affects job loss. The authors state that, while forms of technology may change, their relationship to the production process and class are essentially the same. This chapter focuses on the implications of

reaching towards the limits of technological capability and its insertion into or integration with the human body. The authors question what effect this technology will have on class and into which types of roles it will be inserted. When it comes to biotechnology, the topics of emotional labour, autonomy, stress, health and wellbeing are essential. The authors provide examples of the potential reduction in discretion that cyborg technology and its links with AI might bring and what workers' abilities will be to override a decision made by AI. No matter what forms of AI are mass produced, Peetz and Murray argue that, without conscious policy interventions, the rise of cyborg technology will impact the distribution of income and power. The rise of neural implant technology and other forms of cyborg technology raise major challenges, equal to that of the emergence of capitalism and climate change. The authors argue that society can choose what outcomes will arise from the development of neural technology: whether it will be a force for overcoming injury, illness and disability and improving living standards; or for pioneering a period of inequality; or both.

Joshua Healy and Andreas Pekarek return us to the theme of gig work. They argue that, while vitally important to the debate about gig work, the current academic preoccupation with the legal status of workers, as either employees or contractors, is too narrow. They call for a broader consideration of other mechanisms by which gig work can be assessed, and in doing so they invoke the notion of 'high road' and 'low road' employment. As the authors note, the high-road model proposes a broader standard: that employment is not just legal, but also that it is fair and reasonable. If, as the authors argue, workers need to consider different means of compelling platforms to offer fairness, one way to do this is by organising. Here, the authors show that gig workers are far from powerless, and indeed they cite examples of novel and emergent ways in which workers have used digital technology to resist employer control. A second avenue to promote improvement for workers is via shaping consumer preferences, and here there is evidence that some platforms are trialling high-road ER practices as a point of ethical differentiation in the market, even where this increases labour costs. The authors also see the prevailing labour market as a source of possible pressure on platforms, with tight labour market conditions acting as a pressure point to force platforms to enhance wages. As the authors conclude, however, predictions of how things will unfold are fraught because of the current lack of data on gig workers' earnings, how they vary and in what ways gig workers supplement those earnings with non-gig work.

Victor Gekara and Darryn Snell examine emerging workplace technologies and propose various questions for research in the next few years. Gekara and Snell argue that, while most of society agrees that new digital

and automation technologies are expected to cause major industrial transformations and disruptions to people's lives, the nature and extent of impact has been the subject of policy and academic debate for many years. The authors examine this issue at the national economy and individual levels, and focus on who is most affected and/or most at risk in the unfolding workplace technological change, how those affected can be assisted, what systems of mitigation can be introduced to protect workers from the impacts experienced and, finally, who should be responsible for these tasks. Gekara and Snell suggest that research is required on these issues to inform effective policies and strategies on work and employment under emerging technologies. The authors argue that, due to the speed and complexity of these developments, governments require clear, empirically driven guidance on effective policies to manage technological change associated with economic transition. Similarly, industry requires informed strategies to effectively manage technological change while maintaining an appropriately skilled, engaged and motivated workforce.

Huw Thomas explores the role that Global Production Networks (GPNs) have in shaping the future of work. Thomas reminds us of how global capital can exploit what the literature refers to as 'spaces of exception' in ways that effectively allow them to operate outside the reach of regulation. Thomas notes that much of the early literature on production networks/chains focused on understanding the networks themselves, how they operated and their degree of embeddedness, and largely saw workers as passive agents. However, in returning to the theme explored in Healy and Pekarek, Thomas argues that workers need not be seen simply as bystanders watching these processes of change unfold. Rather, as he argues, workers have agency, and here again the future of work provides exciting opportunities for researchers to explore new forms of worker resistance to the dominance of global capital. For Thomas, the future of work for workers in GPNs is not set, and indeed there are alternative possibilities: on the one hand there is a model of soft, private regulation that places few constraints on GPNs, and on the other hand there are models of governance that include a strong role for workers and public agencies. What is at stake here, according to Thomas, is whether GPNs incorporate equity, voice and efficiency, or just act according to economic efficiency.

Edwin Trevor-Roberts notes that, while our understanding of careers today has evolved over the past century, there remains an inherent assumption that careers are built in an environment of certainty or, at the very least, that an individual will purposefully move towards certainty in their career. The future of careers, however, is predicated on uncertainty. The pace of change, whether it be technological, societal or organisational, will continue to accelerate. Individuals face an increasing number of

alternatives for their career structure, such as boundaryless, portfolio, gig or traditional. In addition, people can no longer expect clearly identifiable career paths mapped out by their organisation, as organisations themselves explore new methods for producing value, as discussed in earlier chapters. A successful career of the future will be characterised by a person's ability to manage the uncertainties they experience. The chapter explores what a career will look like in the future, starting with a re-conceptualisation of careers as subjective sense-making processes to be enacted within an environment of uncertainty.

The final contribution is an ambitious attempt to plot the future direction of employee engagement. In this chapter Bruce Kaufman and colleagues note that, despite its importance, there is little agreement between consultant and academic communities about what engagement actually is or how to measure it. While academic interest in employee engagement has grown rapidly only in the last decade, the authors note that efforts to engage workers are far from new; and if other words, such as energetic and industrious, are used then the study of engagement can be traced as far back as to the work of Adam Smith and John Commons. The second part of the chapter reports on the findings of the authors' large, four-country survey of workers and management, known by the acronym SWERS, which yields some engagement insights. While noting differences in measurement techniques, the SWERS results are not dissimilar to those of leading survey firms, such as Gallop, which show there is considerable room for improving employee engagement. An interesting finding of SWERS is that within-country differences are equal to, if not more significant, than cross-national differences, even though the latter are quite significant. Finally, the chapter seeks to assess the future of employee engagement, no small task given difficulties inherent in predicting the impact of influences such as rate of economic growth, employment/unemployment, the rise and decline of different industries, and so on. In this section the authors attempt to predict future patterns and possible growth in engagement by assessing the likelihood of greater dispersion of high-performance work systems (HPWS), which are predicated on engaged workers. The authors settle on a sober assessment, noting that, while some trends such as growth in knowledge-driven and high-technology industries favour an expansion in HPWS, other future-of-work trends, such as financialisation and employment insecurity, work against the adoption of HPWS.

NOTE

- * The authors acknowledge financial support from the ARC (DP140100194), SSHRC (435-2015-0801) and the Innovation Resource Center for Human Resources (IRC4HR).

REFERENCES

- Agrawal, Ajay, Joshua Gans and Avi Goldfarb (2018) *Prediction Machines: The Simple Economics of Artificial Intelligence*, Boston, MA: Harvard Business Review Press.
- Alvesson, M. (2013) *The Triumph of Emptiness: Consumption, Higher Education, and Work Organization*, Oxford: Oxford University Press.
- Bank of England KnowledgeBank (2019) 'KnowledgeBank: The economy made simple', accessed 4 October 2019 at <https://www.bankofengland.co.uk/knowledgebank>.
- Barry, M. and A. Wilkinson (2019) 'Regulation, deregulation or re-regulation? The changing regulative framework for HRM', in A. Wilkinson, N. Bacon, S. Snell and D. Lepak (eds), *The Sage Handbook of Human Resource Management* (2nd edition), London: Sage, pp. 65–81.
- Batt, R. (2018) 'The financial model of the firm, the "future of work", and employment relations', in Adrian Wilkinson, Tony Dundon, Jimmy Donaghey and Alex Colvin (eds), *The Routledge Companion to Employment Relations*, London: Routledge, pp. 464–79.
- Blanchflower, D. (2019) *Not Working: Where Have All the Good Jobs Gone?* Princeton, NJ: Princeton University Press.
- Briken, K. and P. Taylor (2018) 'Fulfilling the "British way": beyond constrained choice – Amazon workers' lived experiences of workfare', *Industrial Relations Journal*, 49(5–6), pp. 438–58.
- Cappelli, P. (2008) *Employment Relationships: New Models of White-Collar Work*, Ithaca, NY: Cornell University Press.
- Dundon, T., N. Cullihane and A. Wilkinson (2017) *A Very Short, Fairly Interesting and Reasonably Cheap Book about Employment Relations*, London: Sage.
- Fleming, P. (2019) 'Robots and organization studies: why robots might not want to steal your job', *Organisation Studies*, 40(1), pp. 23–38.
- Goos, M. and A. Manning (2007) 'Lousy and lovely jobs: the rising polarization of working Britain', *Review of Economics and Statistics*, 89(1), pp. 118–33.
- Gratton, L. (2011) *The Shift: The Future of Work is Already Here*, London: Collins.
- Howcroft, D. and P. Taylor (2014) '"Plus ça change, plus c'est la même chose": researching and theorising the new technologies', *New Technology, Work and Employment*, 29(1), pp. 1–8.
- ITUC (2016) Supply Chain Resources Hub, accessed 5 October 2017 at <https://www.ituc-csi.org/supplychains-resources-hub?lang=en>.
- Kaufman, B., M. Barry, R. Gomez and A. Wilkinson (2020) 'Measuring the quality of workplace relations and organizational performance with alternative balanced scorecards from strategic HRM and employment–industrial relations', *Human Resource Management Journal*.
- Keynes, J.M. (2009) 'Economic possibilities for our grandchildren', in *Essays in Persuasion*, London: Classic House, pp. 321–32.

- Kochan, T.A. (2015) *Shaping the Future of Work: What Future Worker, Business, Government, and Education Leaders Need to Do for All to Prosper*, New York: Business Expert Press.
- Marx, K. (1973) *Grundrisse: Foundations of the Critique of Political Economy* [*Grundrisse der Kritik der Politischen Ökonomie*], London: Penguin Books.
- McKinsey Global Institute (2017) 'A future that works: automation, employment, and productivity', [Report].
- Milkman, R. (2018) Winners and Losers: The Future of Work Symposium on New Social Inequalities and the Future of Work, 19 June, The University of Queensland, Australia.
- Piketty, T. (2014) *Capital in the Twenty First Century*, Cambridge, MA: Harvard University Press.
- Quiggin, J. (2020) The Future of Work, The Keith Hancock Lecture, Academy of the Social Sciences in Australia, The University of Queensland, Australia.
- Reinecke, J., J. Donaghey, A. Wilkinson and G. Wood (2018) 'Global supply chains and social relations at work: brokering across boundaries', *Human Relations*, 71(4), pp. 459–80.
- Rifkin, J. (1995) *The End of Work*, London: Putnam.
- Ross, A. (2016) *The Industries of the Future*, New York, NY: Simon & Schuster.
- Scott, N. (2019) 'The 50 greatest Yogi Berra quotes', USA Today Sports, 28 March, accessed 4 October 2019 from <https://ftw.usatoday.com/2019/03/the-50-greatest-yogi-berra-quotes>.
- Shriver, L. (2016) *The Mandibles: A Family, 2029–2047*. London: Borough Press.
- Streeck, W. (1997) 'Beneficial constraints: on the economic limits of rational voluntarism', in J. Hollingsworth, J. Rogers and R. Boyer (eds), *Contemporary Capitalism: The Embeddedness of Institutions*, Cambridge: Cambridge University Press, pp. 197–219.
- Taylor review (2017) *The Taylor Review of Modern Working Practices*, July, London: Department for Business, Energy and Industrial Strategy.
- Toffler, A. (1970) *Future Shock*. New York, NY: Random House.
- Weil, D. (2014) *The Fissured Workplace: How Work Became So Bad for So Many and What Can be Done to Improve It*, Cambridge, MA: Harvard University Press.
- Wilkinson, A. and G. Wood (2012) 'Institutions and employment relations: the state of the art', *Industrial Relations: Journal of Economy and Society*, 51(2), pp. 373–88.
- Wilkinson, A., M. Barry, R. Gomez and B. Kaufman (2018) 'Taking the pulse at work: an employment relations scorecard for Australia', *Journal of Industrial Relations*, 60(2), pp. 145–75.
- Wilkinson, R. and K. Pickett (2009) *The Spirit Level: Why More Equal Societies Almost Always Do Better*, London: Allen Lane.