FUTURE OF WORK: PEOPLE, PLACE, TECHNOLOGY

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A selective summary of presentations to the ‘Future of Work: People, Place, Technology’, hosted by the Department of Management and Marketing’s Centre for Workplace Leadership at the University of Melbourne on 9–10 April 2014.

Exactly 60 years ago, Isaac Asimov (1964) – speculating on what work might look like in 2014 – wrote:

The world of AD 2014 will have few routine jobs that cannot be done better by some machine than by any human being. Mankind will therefore have become largely a race of machine tenders. Schools will have to be oriented in this direction. The lucky few who can be involved in creative work of any sort will be the true elite of mankind, for they alone will do more than serve a machine ... Indeed, the most sombre speculation I can make about AD 2014 is that in a society of enforced leisure, the most glorious single word in the vocabulary will have become *work*.

Asimov’s vision was, in some ways, prescient. Twentieth century futurists certainly had a sense – whether of foreboding or optimism – of looming technological disruption, a phenomenon rippling through entire industries and which leaders in 2014 ignore at their peril. They asked questions that preoccupy societies today: what do we do with our young people? What skills should workers have and how will they get them? How do we provide jobs for everyone able to work? Is technology the road to the good life, dystopia, or both?

In April 2014, the Centre for Workplace Leadership held its inaugural Future of Work conference, on the theme of People, Place and Technology. Part of the Faculty of Business and Economics, the Centre aims to bridge the gap between academic rigour and the real world challenges facing Australian businesses.

Nearly 50 domestic and international speakers speculated on how the nature of work is changing, what this means for entire workforces, workplaces and teams, and the sorts of demands these developments are placing on workplace leaders. The event was held in partnership with the Australian Chamber of Commerce & Industry, Cisco Systems Australia and Clayton Utz. The conference enabled employees, managers, business leaders and business owners to access cutting edge technology, research and thinking on the modern workplace and beyond.

On technology and knowledge

Trying to second-guess the future can be fun, a chance to let the imagination run free. In 1958, the American illustrator Arthur Radebaugh began a futuristic comic strip called *Closer Than We Think*, in which he depicted space-age marvels that would deliver us into an era of high-tech leisure. Some of these were not far off the mark: electronic home libraries, wall to wall television, and ‘bloodless surgery’ using ‘proton beams’. Radebaugh’s jetpack-propelled postmen begin to look positively old fashioned when we consider that drones are now being developed to deliver mail and pizza. Alas, his pogo police car never gained traction.
Envisioning the future can, however, also be confronting and sobering, with a complexity that can defeat our ability to digest the implications. Perhaps this partly explains why decision making in business and government is notoriously short-term. Keynote speaker Lynda Gratton, labelled one of the world’s leading business thinkers by the Financial Times, is a consultant and organisational theorist at London Business School. She is also the founder of the Hotspots Movement, an interactive research project with 200 executives from 23 multinational corporations that, among other things, looks at the Future of Work. Gratton argues five forces have created a ‘perfect storm’ that will require people to embark on massive shifts in their approach to their working lives: technological developments, globalisation, demographic trends, societal trends and low-carbon developments.

**Shrinking technology, expanding knowledge**

According to conference keynote speaker Dave Evans, chief futurist at Cisco, the sum of human knowledge used to double every century but is now doubling every two years and growing exponentially, especially in fields like nanotechnology and biotechnology. Evans noted some estimates that the world’s data stores will double every 11 hours by 2025. Much of this activity is in rich-text media like photos and video, but data in the workplace, he said, has grown 50 times faster than consumer data. He also told the conference:

As of 2008, we’re now creating more new data every 10 minutes than we did in all of human history. If we don’t invest in the tools and technologies to mine this data, we’re going to be buried in so much data we won’t be able to extract the knowledge that we need to make smart decisions.

Evans outlined several developments that are ushering in, or are expected to usher in, new waves of digital disruption, especially in health and medicine and manufacturing. Some of them raise serious issues about privacy, although Evans, a self-confessed optimist, prefers to see them as opportunities that can be managed.

The first of these is Augmented Reality (AR), in which a view of real-world information (either online or direct) is overlaid by computer-generated input such as text, sound, video or GPS data. Examples include text being overlaid on a driver’s windscreen, navigation and weather data to help pilots, or imaging on a patient’s body to help guide surgery.

Since the dawn of time, humans have been accustomed to adapting to technology. The future according to Evans is technology that adapts to us. We will move away from actively searching for information to letting information come to us. This technology will transform consumer habits through innovations such as digital signage in shopping malls that recognises, if customers opt in, shoppers’ faces, ages, ethnicities and shopping preferences. Another scenario is television sets that recognise when a small child is in the room and filters out inappropriate content, or recognises when viewers are bored. Evans believes brain-machine interfaces are not far away – devices such as thought-driven wheelchairs, or the ability to download a new skill or even a language – a theme in Nicholas Negroponte’s 2014 TED (Technology, Entertainment and Design) talk.

The second is 3D printing, which has dropped tenfold in price in the past five years. 3D printers can already process 70 materials, including carbon fibre, aluminium and precious metals, to produce objects such as bicycles, jewellery and turbo engines. Online marketplace websites such as Shapeways have sprung up to enable bespoke manufacturing, similar to Etsy (the online marketplace for handcrafted and vintage items), but for plastics and metals. The implications for medical research and transplant medicine are enormous: scientists have already printed a human liver that can survive for 40 days, and miniature organs. Airbus Industries predicts that by 2050, it will be able to print planes using hangar-sized 3D printers. The Zeus 3D printer, expected to be available to consumers later this year, will allow people to insert an object, make a copy and even fax it to another Zeus.
‘The entire physical world is becoming digital,’ Evans said. ‘We will download things as easily as we download music today. Who will be the manufacturer, the innovator, tomorrow? How will this shape the workforce?’ Evans is optimistic about the prospects for future workforces as a result of these digital innovations, acknowledging that jobs will be lost, but that new opportunities will emerge. ‘The top 10 jobs in the next six years don’t yet exist... we’re training kids for jobs that don’t yet exist, using tools that may not yet exist. It would be quite easy to move into a dystopian future. I don’t think that would be the case.’ In any case, he says, as outlandish as talk of virtual people and 3D printing sounds, all of this is underway. ‘It’s not science fiction, it’s science fact. And every single thing was enabled by the internet.’

**Are we creating coin-operated employees?**

Technology disrupts and transforms, but it does not do away with the eternal conundrum that is people, and questions such as how best to lead, manage, follow and work with others. The way we work is changing. Australians are increasingly employed...
in non-traditional industries, working flexible hours and using technology to work anywhere. Expectations of leaders are changing with an ever-increasing imperative to innovate and build dynamic workplace cultures.

Employees, too, are feeling buffeted by technological advances and globalisation. In survey results released to coincide with the Future of Work conference, 49 per cent of Australian workers aged under 55 reported feeling worried about what the future holds for them at work. Executive and middle managers were more fearful than non-managerial employees. Despite this, the survey also revealed 79 per cent of Australians are open to change in their workplace to improve productivity.

Better leadership and new technology were the two key areas that Australian workers identified to increase productivity, with government workers in particular highlighting more effective leadership and management as a change that would most likely increase productivity.

What makes for a productive or ‘high performance’ workplace might be called the holy grail in management and business research, especially in the area of human resources management and industrial relations, where a great deal of effort has been
expended in investigating the relationship between different types of workplace and management practices, and higher productivity and other workplace performance measures.

The Centre for Workplace Leadership has just completed a literature review of prior research to underpin the Centre’s own research agenda and inform the development of programs and events. There is abundant international research on the effectiveness of different leadership styles and approaches, but a significant gap in our understanding of leadership capability in the Australian context.

The last 20 to 30 years of research on the ‘high performance workplace’ consistently shows that better workplace productivity and performance is associated with the deployment of management practices that invest in skills and capabilities, enable employee discretion and involvement, and engender employee motivation and engagement.

Paradoxically, however, the evidence also indicates that a minority of workplaces deploy them. There are many reasons that explain this paradox, but clearly, developing the ability of business leaders and managers to translate these principles into their workplace practices presents a great opportunity to lift productivity significantly.

Anecdotally, we know that many firms are still stuck in a nineteenth-century approach to leadership, and this was a theme taken up by conference speakers who explored motivation and incentives. Terry Lee, Director of Leadership Psychology Australia, whose clients include Wesfarmers and Bunnings, said many organisations were finding themselves in a cultural cul-de-sac at a critical time. ‘We’ve spent 100 years designing organisations not to change, to dumb down initiative, to structure people into compliance, and now we’re trying to transform those very structures into high-performance organisations which unlock the potential of people’, he said.

Lee expressed scepticism about financial incentives, arguing they work only in a narrow range of circumstances. They can discourage employees not traditionally rewarded in this way. For example, small businesses that reward sales staff with bonuses are signalling that they value this class of worker more than others. While these incentives are measurable, clear and do work, they have ‘a demeaning effect on people who operate in a support capacity’.

When financial incentives are used to stimulate innovation, Lee argues they have a perverse effect in drawing out mediocre contributions from people keen to harvest financial rewards rather than those genuinely passionate about an idea. Motivation, Lee says, is about carrots and sticks, ‘whereas inspiration is to awaken something in the person... If you’re paying people to do the thing they love to do, then you demean the thing they love to do.’

Jason Clarke, author, consultant and founder of Minds at Work, charted a common demotivation trajectory, saying:

When you hire someone, guess what they bring to the job? Their heart, their mind, their body. The first couple of days you get the whole package. And do you know what happens when we say we’re not interested in your ideas? They leave their mind at home. You know what happens when we say we don’t care about your passions? They leave their heart at home. And you know what’s left? We’ve thrown away all the best bits, and this husk turns up and we become coin operated.

Diversity, collaboration and reluctant leaders

Mid-century futurists like Arthur Radebaugh emphasised technology but seldom speculated on how it might shape us. People might have been portrayed as taller, shinier and happier, but their roles defaulted to the mid-century American norm: the women were at home and the faces were white.

The reality Australian leaders face today is much more diverse. Geoff Aigner, former management consultant and now director at Social Leadership Australia, told conference attendees that leaders and managers need to understand diversity in much broader terms, not only because the make-up of our workforce is changing but also because collaboration is a much more significant part of our working lives.
Beyond the familiar categories of race, class and gender there are also age, experience, psychological outlook, confidence, and connection to a deeper purpose. Australian managers are, he says, too conflict averse to navigate through this diversity. He says:

The way through collaboration is anything but capability. You can have as much technical capability as you like – great processes, great nous, a great project plan and lots of money. But what’s missing is that we haven’t been educated or rewarded to work across differences. We’ve been rewarded to work with similarity.

Aigner is the author, with Liz Skelton, of *The Australian Leadership Paradox*, which argues that Australian leaders are reluctant to acknowledge the power they have and are unsure what to do with it. He told the conference that every day, society sees the effects of misused or unacknowledged power in child abuse, domestic violence and workplace bullying.

‘The people who are throwing their weight around or bullying and harassing people are not people who are owning their power,’ Aigner said. ‘They’re generally people who don’t understand their power.
and as a consequence abuse it or neglect it. We see a repeated dynamic in Australian workplaces where people use too much firepower: ‘I don’t think I have any power so I turn up the heat’.

Neglect might seem a benign alternative to misuse, but Aigner argued that disavowing power is not the answer: it is crucial to use it well. And in collaboration, there is no escaping power:

Collaborative efforts are essentially a negotiation of power, a movement of power between individuals. Collaborative efforts are necessarily shifting power because the (pre-existing) hierarchies which have much clearer power structures are being shaken up.

This ambivalent attitude to leadership was echoed by Jason Clarke: ‘We keep asking for leadership and it’s the thing we’re most cynical about; “Tell us, oh mighty one – you idiot – what are we doing?”’

Clarke too advocated an expanded view of diversity: ‘Great minds don’t think alike. You want change? Then you want cynics, idealists, pragmatists and lunatics, panic junkies, devil’s advocates. You need them all, they’re all beautiful. The trick is knowing how to get them to work together.’

**Conclusion**

Envisioning the future of work requires both examining the past but also recognising that there are, as Lynda Gratton argues, limits to what the past can tell us about the future in times of massive volatility. The forces shaping new worlds of work not only shape the macroeconomy, but have significant and often disruptive effects ‘on the ground’. They are destroying old businesses and prompting the development of new ones.

Of particular interest for understanding productivity, we can say that these changes are reshaping labour markets and workplaces. These developments challenge managers and business leaders, as well as workers. They are altering models of work and employment, changing our attitudes towards different forms of employment and sense of careers over the life course.

**References**
