

WORK3207: Future of Work

Theme 1: Identity and Future of Work

Week 1: Introduction to the Unit and Introduction to 'The Shift'

Week 2: Identity and Future Work

Week 3: Megatrends & the Future of Work

Week 4: Theatre Workshop 1 – Age, Precarity and the Utilisation of Human Capital

Theme 2: Technology and the Future of Work

Week 5: Artificial Intelligence and Robotics at Work

Week 6: The Gig and Sharing Economy

Week 7: Workplace technology and the future of privacy

Week 8: Theatre Workshop 2 – Technology, Security and Privacy

Theme 3: Globalisation and Future of Work

Week 9: Global Capital

Week 10: Global Work

Week 11: Migrant Work(ers) in Australia

Week 12: Theatre Workshop 3 – Globalisation and the future of work

Week 1: Introduction to the Unit and Introduction to 'The Shift'

Introduction to The Shift

- Likely impact of the 5 forces on the future of work and organisations
 - Technological advancement
 - Increased globalisation
 - Demographic change and increased longevity
 - Social change
 - Natural/energy resources
- The book asks 'how are you going to make the shift that supports your ability to build a high quality career?'
- Alternative scenarios of the future of work
 - Dark side of the 'default' future – a future of isolation, fragmentation, exclusion, narcissism
 - Bright side of the 'crafted' future – a future of collaboration, choice, balance
- Prevailing assumptions to critique possible futures
 - The value of general skills
 - Likely shift from the 'age of the generalist' to the 'age of the serial master'
 - The value of individualism and competitiveness
 - Connectivity, collaboration, networks at work and strong personal relationships in life are likely to be more important in an age of increased fragmentation and isolation
 - The value of prioritising consumption and quantity over production and quality
 - The likely need to rebalance these pursuits in the context of more value placed on living balanced lives

The past six generations have amounted to the most rapid and profound change mankind has experienced in its 5,000 years of recorded history" (Gratton, 2011, pp. 11-12)

- What type of capital ('Entrepreneurial Capital')?
 - Corporate fortunes
 - Corporate structures
 - Mobile workers
 - Remote workers
- The future of work and organisations in Australia
 - By some accounts Australia is the biggest user of automated technology in the world, e.g. according to Prof Hugh Durrant-Whyte there is more robotic driving in Australia than California or the rest of the world combined
 - Automated mining in the Pilbara – mines all over the world are being managed from one room in Western Australia
 - Automated cargo handling has led to a significant reduction in employment on the waterfront but made production safer and more efficient
 - Automation is reducing the labour intensity of low-paid, low-skilled, geographically remote industries which have traditionally faced recruitment difficulties (e.g. agriculture)
 - Future skills – everyone needs to be a technology generalist – but while there is likely to be demand for technology development specialists there is also a need for entrepreneurship and management skills so that technology can be applied
 - "In today's enmeshed globalised economy, with near instantaneous communication, there is no choice to resist technological advances without forfeiting prosperity" (CEDA, 2015: 23)
 - "The 'sharing digital economy' fostered by electronic platforms such as Uber or Airbnb facilitates individuals and businesses outsourcing more of their own needs to others. This trend will benefit individuals who can command higher remuneration for their services, businesses that bring more specialised employees to perform increasingly niche activities in the global value chain that is emerging, and nations that are able to develop value adding specialist goods and services. The

alternative is to experience commoditisation of the goods and services offered by the individual, business or nation, resulting in declining prosperity” (CEDA, 2015: 26)

- A social contract for managing the future of work
 - “Senator Michaelia Cash declared that ‘the future of work is upon us’ but that ‘regulation very much is quite restrictive in terms of where the new economy is going’. She highlighted rapidly growing new business models such as Uber, Airbnb as well as Airtasker, which she said ‘will fundamentally change the way both as consumers and as producers we do business’” Workforce, 22/4/16
 - "There is real innovation in creating these digital platforms and that's wonderful... But often ... they are just creating a new way for the wealthy people to ring their bell for the workers to come running and do very basic tasks... Without a thoughtful system of regulation, we leave everything up to the dog-eat-dog world and some people become serious losers and that's not good for society" Professor Joellen Riley (USYD Law School), quoted in SMH, 19/5/16
- Questioning the changes required to make the shift
 - “The Industrial Revolution brought a mass market for goods, and with it a rewiring of the human brain towards an increasing desire for consumption, and the acquisition of wealth and property. The question we face now is how the working consciousness of current and future workers will be further transformed in the age of technology and globalisation we are entering” (Gratton, 2011, p. 12)
 - Why it’s important: “because you and I, and those whom we care about, need some sort of realistic picture of what the future might bring in order to make choices and sound decisions” (Gratton, 2011, p. 100)
 - How will individuals, organisations, governments and societies deal with a shift of this magnitude?

The Value of Prediction

- “Predictions about future and technical and social developments are notoriously unreliable – to an extent that has led some to propose that we do away altogether with prediction in our planning and preparation for the future. Yet, while the methodological problems of such forecasting are certainly very significant, I believe that doing away with prediction altogether is misguided” - Gratton, 2011, p. 11
- The folly of prediction
 - Fact: Human beings love to predict the future.
 - Fact: Human beings are not very good at predicting the future.
 - Fact: Because the incentives to predict are quite imperfect — bad predictions are rarely punished — this situation is unlikely to change.
 - “The reality is that predicting the future is a matter of degree, and different aspects of the future of work can be predicted with varying degrees of reliability and precision. For example, I can predict with some accuracy that computers will become faster, materials will become stronger and medicine will cure more diseases so that we will live longer. Other aspects of the future, such as migration flows, global temperatures and government policy, are much less predictable. It’s more difficult to predict, for example, how the way we will relate to each other will change, or how our aspirations will evolve” (Gratton, 2011, p. 130)
- Other perspectives
 - “If work was distributed more equally, both between households and over time, we could all be better off. But it seems impossible to achieve this without a substantial reduction in the centrality of market work to the achievement of a good life, and without a substantial reduction in the total hours of work” - John Quiggin (2012) ‘The golden age’
 - “As the income gap in the U.S. has widened, it’s actually lower-wage workers who have ended up with the most leisure. And it’s high earners who report feeling the most time pressure... In a ‘winner takes all’ economy, there’s a strong incentive to make sure you’re on the winning side... What’s become known as the ‘long-hours premium’ – the return that salaried employees

effectively receive for each hour of work they put in beyond the usual forty – has more than doubled in the past thirty years... The disproportionately compensated have a disproportionate motive to keep on working” - Elizabeth Kolbert (2014) ‘No time: How did we get so busy?’

No Time; Kolbert

- 19th century had unleashed such a torrent of technological innovation - "electricity, petrol, steel, rubber, cotton, the chemical industries, automatic machinery and the methods of mass production" - that further growth was inevitable. The size of the global economy, he forecast, would increase sevenfold in the following century, and this, in concert with ever greater "technical improvements," would usher in the fifteen-hour week.
- To Keynes, the coming age of abundance would pose a new, even bigger challenge – with so little need for labour, people would have to figure out what to do with themselves
- Faced with the problem of how to use their freedom, occupying the leisure
- Four fifths of the way through the century, half of the above vision has been realised, however, this increased wealth has not turned into increased leisure
- Mental tape-loop phenomenon – lack of separating home and work life. While we are at home playing with the children, this is considered time off, yet if we are checking our work emails while doing so, this makes it feel less like time off
- Most American women today work; more than 2/3 mothers with school-age kids are employed outside the home. Many outearn their husbands; in dual-income couples, about 1/3 of wives are better paid than their spouses. Even so, studies show, women do the lion's share of the housework: between 70-80%. If they have children, the bulk of the child care also falls to them. "Though men today certainly spend more time caring for their children and doing more chores," Schulte writes, "it is still about half of what women routinely do." Small wonder, she concludes, that women are more likely than men to report "chronic stress and the feeling that life is out of control."
- Keynes assumed that people work to earn enough to buy what they need. And so, as incomes rose, those needs could be fulfilled in ever fewer hours. Workers would knock off earlier, until eventually they'd be going home by lunchtime. But that isn't what people are like. Instead of quitting early, they find new things to need.
- "Most types of material consumption are strongly habit-forming," Gary Becker and Luis Rayo observe. "After an initial period of excitement, the average consumer grows accustomed to what he has purchased and...rapidly aspires to own the next product in line," they write. By Becker and Rayo's account, this insatiability is hardwired into us. Human beings evolved "so that they have reference points that adjust upwards as their circumstances improve."
- Joseph Stiglitz takes a constructivist approach. People's choices are moulded by society and become self-reinforcing. We "learn how to consume by consuming," and how to "enjoy leisure by enjoying leisure."
- As the income gap in the U.S. has widened, it's actually lower-wage workers who have ended up with the most leisure. And it's high earners who report feeling the most time pressure.
 - Those who earn less, by working less, lose less
 - Those who earn more, have more to lose if they work less

Technology, Jobs and the Future of Work; Manyika

- Automation, digital platforms and other innovations are changing the fundamental nature of work
- Understanding these shifts can help policy makers, business leaders and workers move forward
- What will automation change?
 - The development of automation such as robotics and AI brings higher productivity, economic growth, increased efficiency, safety and convenience
 - They also raise difficulties to skills, wages and the nature of work itself
- Developments in employment, income and skills
 - Challenges in labour markets are growing, household incomes in advanced economies have been stagnating and there are increasing skill gaps

- Labour markets are under strain and talent is underutilised
- Unemployment and underemployment are high around the world
- Women represent one of the largest pools of untapped labour
- Skills, jobs and locations do not always match, limiting income-earning opportunities for many
- Education systems have not kept pace with the changing nature of work, resulting in many employers saying they cannot find enough workers with the skills they need
- Some of the mismatching is locational: where there is demand for work, there may not be available and qualified workers to be found. This geographic mismatch can be seen across regions within countries, and between countries.
- Cross-border migration fills some skill gaps but can create tensions
- How automation and technology are affecting work
 - Many activities that workers carry out today have the potential to be automated
 - An additional important finding is that even if whole occupations are not automated, partial automation (where only some activities that make up an occupation are automated) will affect almost all occupations to a greater or lesser degree.
 - The impact will be felt not just by factory workers and clerks but also by landscape gardeners and dental lab technicians, fashion designers, insurance sales representatives, and even CEOs.
 - Highly skilled workers working with technology will benefit. While low-skilled workers working with technology will be able to achieve more in terms of output and productivity, these workers may experience wage pressure, given the potentially larger supply of similarly low-skilled workers, unless demand for the occupation grows more than the expansion in labour supply.
 - Aspects that must be considered with automation:
 - Technical potential
 - Cost of developing and deploying both the hardware and the software for automation
 - The supply-and-demand dynamics of labour: if workers with sufficient skills for the given occupation are in abundant supply and significantly less expensive than automation, this could slow the rate of adoption
 - Benefits of automation beyond labour substitution — including higher levels of output, better quality and fewer errors, and capabilities that surpass human ability
 - Regulatory and social issues, such as the degree to which machines are acceptable in any particular setting
 - Technology can help labour markets – digital talent platforms improve matching between workers and jobs
 - With their powerful search capabilities and sophisticated screening algorithms, online talent platforms can also speed the hiring process and cut the time individuals spend searching between jobs, reducing unemployment
 - By aggregating data on candidates and job openings across countries, they may address some geographic mismatches and enable matches that would not have come about
 - Online talent platforms help put the right people in the right jobs, thereby increasing their productivity and job satisfaction. They can draw people who are engaged in informal work into formal employment, especially in emerging economies
 - Digitally-enabled independent work is on the rise – while independent work and self-employment is still the predominant form of work in emerging economies, the digital enablement of it is
 - Such platforms include includes Uber, Etsy, Didi and others
 - Technology also creates new jobs and income possibilities
- The challenges of digitisation and possible solutions
 - Making sure that digital gains are accessible to all could provide significant value. And though other challenges remain, they could be addressed by exploring several solution spaces—for instance, through evolving education systems or by pursuing public-private partnerships to stimulate investment in enabling infrastructure

- Digital technologies are creating major new opportunities for workers and companies, in advanced and developing economies, but there are significant variations within and across countries and sectors
- Our use of the term digitisation (and our measurement of it), encompasses:
 - Digitisation of assets; infrastructure, connected machines, data, and data platforms;
 - Digitisation of operations; processes, payments and business models, and customer and supply chain interactions; and
 - Digitisation of the workforce; worker use of digital tools, digitally skilled workers, and new digital jobs and roles.
- In measuring each of these various aspects, we find relatively large disparities even among large companies
- A few sectors are highly digitised – financial services, media and IT itself
- These are sectors of the highest productivity growth and wage growth
- Many others are much less digitised – healthcare, education, and retail. These tend to be the largest share of the economy in terms of GDP and the lowest-productivity sectors
- Companies that are digital leaders have faster revenue growth and higher productivity
- More than half of the world’s population is still offline thus limiting the potential to benefit from digital media
- How to positively affect the future of work – solutions:
 - *Evolve education systems and learning for a changed workplace.* Policy makers working with education providers could improve basic STEM skills through the school systems, put a new emphasis on creativity and critical and systems thinking, fostering adaptive and life-long learning.
 - *Determine how the private sector can drive training.* Companies face gaps in skills they need in a more technology-enabled workplace. They could benefit from playing a more active role in education and training, including providing better information about needs to learners and the education and training ecosystem, and providing better learning opportunities themselves.
 - *Create incentives for private-sector investment to treat human capital like other capital.* Through tax benefits and other incentives, policy makers can encourage companies to invest in human capital, including job creation, learning and capability building, and wage growth.
 - *Explore public-private partnerships to stimulate investment in enabling infrastructure.* The lack of digital infrastructure is holding back digital benefits in many economies, both developing and developed; public-private partnerships could help address market failures.
 - *Rethink incomes.* If automation does result in a significant reduction in employment or greater pressure on wages, some ideas such as universal basic income, conditional transfers, and adapted social safety nets could be considered and tested.
 - *Rethink transition support and safety nets for workers affected.* As work evolves at higher rates of change between sectors, locations, activities, and skill requirements, many workers will need assistance adjusting. Many best-practice approaches to transition safety nets are available and should be adopted and adapted, and new approaches considered and tested.
 - *Embrace technology-enabled solutions.* Such solutions, including richer information signals, can be used in the labour market to improve matching and access and bridge skills gaps. Policy makers will need to address issues such as benefits and variability that these digital platforms can raise.
 - *Focus on job creation.* Accelerate the creation of jobs in general through stimulating investment in businesses and accelerate the creation of digital jobs in particular.
 - *Innovate how humans work alongside machines.* Greater interaction will raise productivity but require different and higher skills, new technology interfaces, different wage models in some cases, and different types of investments by businesses and workers to acquire skills.
 - *Capture the productivity benefits of technology.* These can be harnessed to create the economic growth, surpluses, and demand for work that create room for creative solutions and benefit all.