**A brief introduction to the future of work**

We're living in a period of profound and rapid technological change, termed *The Second Machine Age* (Brynjolfsson and McAfee, 2014) or *Fourth Industrial Revolution* (Schwab, 2017). This has been characterised by a range of advances in technology including automation, digitisation, digitalisation, artificial intelligence, machine learning and *The Internet of Things*, along with other trends and changes including the global climate crisis, resource scarcity and demographic changes.

The focus of the World Economic Forum (WEF) 2016 Davos Summit was the *Fourth Industrial Revolution* (4th IR) and how individuals and institutions should respond. Following the summit, the WEF published reports in 2016 and 2018 summarising the trends and implications of the 4th IR and the skills that individuals will need to thrive in the future (WEF, 2016 & 2018).

There has been a focus on the future of work for a few years before the WEF summit however and, in particular, since two researchers at the University of Oxford published a report summarising the threat to jobs by computerisation in 2013 (Frey and Osbourne, 2013). They concluded that approximately 47% of jobs in the US labour market would be vulnerable to automation and their conclusions generated shockwaves. People began to talk about the possibility of widespread technological unemployment, one example being Martin Ford's 2015 book *The Rise of the Robots* (Ford, 2015). Ford points out that in the past people have been able to protect themselves against the advances of technology by learning new skills, but Ford argues this no longer offers us protection as machines are becoming better at learning new skills.

In 2016 the Organisation for Economic Cooperation and Development (OECD) published the results of their own analysis of the threat to jobs by automation and their conclusions were very different. They used a different methodology and concluded that around 9-13% of jobs in OECD countries are vulnerable to automation (Arntz *et al*, 2016).

A range of other organisations have also modelled what the future of work could look like including The British Academy and Royal Society (2018), McKinsey (2017), Nesta and the Oxford Martin School (Bakhshi *et al*, 2017), PwC (2017), The RSA (2019) and the Scottish Council for Development and Industry (2020).

**Uncertainty and two opposing schools of thought**

So, many organisations have been modelling the future of work and two opposing schools of thought have emerged. The optimists point out that technology can increase productivity, create new jobs and change work for the better, while the pessimists predict widespread unemployment, more workplace and performance monitoring and the growth of insecure work. When we factor in other trends including the global climate crisis, resource scarcity and demographic changes then a great deal of uncertainty emerges about the future of work.

All of this modelling was done before the Coronavirus (COVID-19) pandemic of course and now we face the consequent possibility of global recession and other social, political and economic changes, all of which add more uncertainty to the picture. Some organisations have already started making predictions about what impacts the pandemic will have on the future of work including Nesta (2020) and the RSA (2020) and others are sure to follow suit in the coming weeks and months.

**Why is this important?**

Klaus Schwab, Executive Chairman of the World Economic Forum, discusses the uncertainty and debate about the future of work in his 2017 book *The Fourth Industrial Revolution* (Schwab, 2017).  In it he stresses the importance of moving on from focusing on debate and uncertainty and to instead focus efforts on how institutions and individuals respond, including the skills and attributes that people will need to thrive in the future. Schwab asserts that although we don't know what the future has in store there are still things that we can do to prepare for it and to ensure that we have the right set of skills to thrive. Uncertainty is the only certainty but if we can be comfortable with this uncertainty and develop the right set of skills then we will be prepared and be able to tackle the complex challenges we face as a human race.

**So what might the future of work look like?**

Some questions for you to consider as a starting point:

- What factors contribute to the uncertainty around the future of work predictions and in what ways?
- Which reports and predictions resonate for you?  Are you an optimist or a pessimist? Why?
- What skills and attributes will individuals need in order to thrive in the future, whatever it has in store for us?  How will you develop these skills and attributes? What can you develop through your course and what can only be done through co- or extra-curricular activities?
- Are there predictions made in the original reports on the future of work that no longer seem relevant in light of the COVID-19 pandemic?
- How might the COVID-19 pandemic impact on the future of work and in what ways?
- What sectors might do well in the future and which are likely to go in to decline?
- How do you feel about the future of work?  Are you excited by it or do you feel anxious?

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