

THE FUTURE OF WORK

Improving the quality of work

Tom Watson MP

The automation revolution demands an active state: one that promotes investment in new technologies while securing good jobs for all workers.

I saw the hideous phantasm of a man stretched out, and then, on the working of some powerful engine, show signs of life and stir with an uneasy, half-vital motion.

When Mary Shelley wrote the preface to *Frankenstein* in 1831, the industrial revolution was at its height and society was being transformed by scientific developments that were taking place at a dizzying pace. In *Victor Frankenstein*, Shelley created a character whose enthusiasm for technological advancement and messianic determination to push the boundaries of the possible embodied the spirit of the age. But the ‘uneasy, half-vital’ being that Victor’s experiment creates turns out to be a monster.

Frankenstein is the most famous literary expression of the unease Shelley and her contemporaries felt about the threat scientific advances posed for traditional human society.

Today, a fear similar to the one articulated so powerfully by Shelley is rooted in the belief that 'half-vital' robots will invade the workforce, take our jobs and render us redundant in a more fundamental way than simply making many of us unemployed. What societal function will we fulfil when work is carried out by someone – or something – else? How can we prepare for the changes that technological revolution will bring? Can we harness this change in order to build a fairer and more equitable society in which good work pays and bad work – including work which is less well paid, routine or mundane – is taken care of by algorithms and artificial intelligence.

For the Luddites of the early nineteenth century, this was not a philosophical question but a practical one, and they responded in uncompromising fashion by smashing up the machines they believed threatened their livelihoods. This tactic didn't work then, and it won't work now. But will the relentless march of the robots render us powerless? Or can an active state manage the transition from the industrial to the technological age and allow us to shape our own future?

I set up the Future of Work Commission, comprised of experts from academia, industry and politics, to try and answer some of these questions. It found that, although the new technological revolution is already bringing about rapid change, it could create as many jobs as it destroys. Artificial Intelligence can enhance jobs, not just gut them. Investment in the right areas can provide good jobs that are less vulnerable to automation and draw on essential human qualities that are also the hardest for machines to imitate: creativity, care, teamwork and imagination. It could even help us solve some of the economic problems that feel so intractable after eight years of Tory government: falling wages, low productivity, weak growth, inequality. These problems are the result, in large part, of poor decisions taken by Government and an ideological unwillingness to use the power of the state to address the economic challenges we face as a country.

The Commission's report concluded that the way out of this economic quagmire is to welcome automation and AI and use the levers of the state to shape the new world of work to come. Too much of the debate about technology has become dominated by a discussion about how many jobs will be lost when an army of robot labourers who don't demand holidays or claim sick pay displace

their human counterparts. The question of what we want from the new world of work has received far less attention.

The Future of Work Commission was brave enough to conclude that our lives should be centred around good work. That may sound ambitious. But it is no more ambitious than the task set by the founders of the Labour party, who recognised the imbalance between workers and the people that profited from their labour and sought to address it by achieving political representation for workers. Work isn't something people do to fill their time in between leisure activities, family life and sleep or just to pay the bills. Good work is part of our identities. It enriches our lives and enables us to be fuller and better citizens. It reminds us that we – as individuals, communities, and a society – build our own future.

The centrality of work to the lives of individuals has meant it has always been central to Government and public policy makers. Administrations are judged on unemployment figures and wage increases or stagnation. The post-war consensus around full employment defined the political landscape of the time. No senior politician could hope to survive in office if unemployment figures were rising. That fact was reflected by one of the most famous political posters in UK history, Saatchi & Saatchi's Tory attack depicting a long line outside a dole office, which proclaimed 'Labour isn't working'. When Margaret Thatcher's government effectively abandoned the aim of full employment to focus instead on controlling inflation and the money supply, rocketing unemployment, and its long-term consequences in the communities worst hit by it, became one of the defining legacies of her time in office.

Employment levels and wages are critical aspects of work, but they aren't a good enough measure of the state of work in society alone. They miss a fundamental part – the quality of work.

So, the Future of Work Commission issued a rallying cry for a refocus on good work. Not just work that, as Dolly Parton says is 'all takin' and no givin'... no way to make a livin', but good work: work that is valuable in itself, that provides dignity, security and autonomy. Good work, moreover, should be available to everyone, not just the preserve of the elite while others are left with work that is poorly paid, repetitive and lacking in autonomy.

With old jobs fading away and new jobs being created all the time, focusing on creating an economy full of good work is vital. Government and public policy makers must focus on what this new world of work will look like, and on creating work that is more interesting, secure and autonomous than before. We must not just abdicate responsibility and sit back and watch what happens.

One of the Commission's key recommendations is a new Charter for Good Work, embedded in all Whitehall departments, to ensure that the creation of good work is a central objective of the Government's social and economic policy. It's not enough to continue as we have been, playing catch-up and responding to poor practice and bogus self-employment one legal challenge at a time. If the creation of good work, rather than precarious and low-paid work, is a key aim of this technological revolution, then it has to be at the heart of policymaking.

We should be measuring the quality of work too. Rather than just collecting information on unemployment, wages, productivity and GDP, we should use the OECD job quality index, which measures earnings, job security and the work environment.¹

Any purported trade-off between 'good work' and full employment is a chimera. The OECD's view is that pursuing the objective of quality work is entirely consistent with increased productivity and high levels of employment. It will, in fact, feed both innovation and productivity.

What are the levers of the state that we can use to shape the new technological revolution and produce a future of good work?

For a start, investment. The pace of adoption of new technologies is slower in the UK than other countries and the pace is slowing. It's not just a lack of state investment, it's a failure to invest in the private sector too.

The Centre for Economic and Business Research recently found that new industrial robots installed in the UK in 2015 were down 21 per cent from 2014 levels, and that we have just 33 robots per 10,000 employees – one of the lowest ratios in OECD countries – compared to a global average of 69 per 10,000 employees.² An RSA report found that only 14 per cent of employers are investing in new technology or plan to do so soon, even though 43 per cent agreed that new technologies would lead to great prosperity in the long run.³

Investment by the UK government falls well below international competitors too. To make real progress on investment the Government needs to commit to spending the OECD average of 3.5 per cent of GDP on R&D and innovation to help support world class research and support the better use of technology by our long tail of low productivity firms. And within that increased spend, we should dedicate a percentage of the GDP to technology. We also need to make sure that innovation is more collaborative, ensuring that academia, industry and national and local government are joined up.

As Marianna Mazzucato explains in her book *The Entrepreneurial State*, the iPhone is smart because it relies on features such as Internet, GPS and touch-screen display, which were the result of long-term public investment. What she explains is that innovation is often the result of public-private partnership. Without the state-sponsored developments that Apple was able to utilise as core features of its mobile devices, consumers could have had to wait a lot longer for the 715 million iPhones currently in use around the world.

As well as more investment we need better incentives for R&D in the private sector too. Progress does require investment and, crucially, incentives and will. Companies like Apple, Intel, Deepmind and Amazon (who have plans for drone operated warehouses in the sky) have shown that there certainly is will in parts of the private sector, driven partially by profits and partially by intellectual curiosity. But motivation matters. Elon Musk might say that a desire for a greener world drives his investment in electric cars, but most entrepreneurs would say that their clear motive is profit. We need to make sure that we incentivise development in areas that will produce useful technology and good jobs.

Alongside investment, we need skills: skills to develop tech, and skills to utilise it. We also need skills that are going to be resistant to the automation revolution. The need for training extends from primary school right up to advanced research in our universities and to reskilling in the workplace.

Too many companies are not doing enough to help their employees expand and maintain their skills. Research for the Commission found that although employees were aware automation could change their jobs, they thought that changes could be positive, if only they were given the right training to adapt to that

change. A survey by the trade union Usdaw found that 49 per cent of respondents felt that they had not had adequate training in the workplace. A YouGov survey, similarly, found that 55 per cent of respondents were not confident that they would be properly supported by the Government in learning new skills to adapt to changes in their role.⁴

If we are to avoid the political consequences of worker disempowerment and the decline of skilled jobs – already seen in parts of Europe and the United States – this must change. Education should be lifelong, so that when the world and work changes, all citizens are enabled to change with it.

School education needs to change too. Despite much talk from the Government about making our children's education fit for the future, school curriculums remain better suited to the analogue rather than digital age. As of last year just 11.1 per cent of students were taking Computer Science GCSE and just 12.9 per cent taking ICT. At A Level the figure is even worse. Just 1 per cent of all A Level entries are in Computing, and just 0.7 per cent are in ICT.⁵

The Government has made much of investing in AI and tech, including setting up a supposedly independent review of our AI strategy. But in evidence to a House of Lords committee in December 2017, the author of the review, Jerome Pesenti, explained that he was urged to stay away from recommendations about school-age education, being told 'looking at the curriculum is very thorny.'⁶

Just as worrying is the failure to allow students to study creative subjects alongside STEM ones. Some have pitted creative subjects against science subjects in the race for the future, but they are wrong. If our workers of the future are to be able to adapt and thrive in the rapidly changing workforce, creativity will be key.

Stian Westlake, head of policy at innovation charity Nesta, has made the point that 'It's good to invest in creative education because these are some of the skills that should be left' after the automation revolution.⁷ It's important to understand what sectors and skills will be still be needed when robots are better able to do many jobs of the past. The enormous growth of the creative industries over the last few years give some indication of its strength: it is now worth £92 billion and creating jobs at four times the rate of the rest of the economy.⁸ Far

from being useless, creative education in schools will equip children to access these durable careers.

Other industries that require the most ‘human’ skills such as care should also be our focus. Despite the social care crisis caused by our ageing population, care work remains undervalued. With a critical need for more capacity in the care sector, and with little possibility of robots being able to take on significant parts of care work, we should revalue and support this sector as a major growth area. We should be taking advantage of the opportunities these automation resistant sectors offer, but at the moment we are not.

The stark reality is that Britain is woefully underprepared for the technological revolution to come. Becoming ready demands strategic planning: the policy choices we make now will shape how technological change continues to affect the work and lives of our citizens.

There isn’t enough evidence that this planning is happening, or even beginning to happen. Our chronic inability as a country to spend enough on research and development is still holding us back. That is a problem today, but it will be a disaster tomorrow. We need to incentivise the adoption of new technology that will make businesses more profitable and productive. We need to focus on growth sectors that will provide good work, not work that is dehumanizing and just about pays the bills. We need to plan for and invest in the skills for a workforce that will be adaptable and innovative for years to come.

The technological revolution doesn’t need to mean mass technological unemployment, but left to its own devices it might. ‘Uneasy, half-vital motion’ is not good enough. If we are going to seize the opportunities of this revolution, we need a Labour government to take the initiative – and soon.

This article is based on research undertaken by the Future of Work Commission, chaired by Tom Watson MP and Helen Mountfield QC. For more details of the Commission’s research and membership, see www.futureofworkcommission.com.

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Notes

1. The OECD job quality framework relies on a wide number of databases: OECD Earnings Distribution Database for Earnings Quality; OECD Unemployment Duration database, OECD Benefit Recipients database, OECD Labour Market Programmes database and OECD Taxes and Benefits database for labour market insecurity; European Working Conditions Surveys (EWCSs) and International Social Survey Programme (ISSP) for quality of the Working Environment. See <http://www.oecd.org/statistics/job-quality.htm>.
2. Centre for Economics and Business Research (2017), *The impact of automation*: https://www.cebr.com/wp/wp-content/uploads/2017/03/Impact_of_automation_report_23_01_2017_FINAL.pdf.
3. B. Dellot and F. Wallace-Stephens (2017), *The Age of Automation: Artificial intelligence, robotics and the future of low-skilled work* (London: Royal Society of Arts), https://www.thersa.org/globalassets/pdfs/reports/rsa_the-age-of-automation-report.pdf.
4. Future of Work Commission (2017), *Report of the Future of Work Commission*, online at https://d3n8a8pro7vhmx.cloudfront.net/campaigncountdown/pages/1052/attachments/original/1512946196/Future_of_Work_Commission_Report_December_2017.pdf?1512946196, p.68.
5. Department of Education (2017) 'A Level and other 16 to 18 results: 2016 to 2017 (provisional)', <https://www.gov.uk/government/statistics/a-level-and-other-16-to-18-results-2016-to-2017-provisional>.
6. Oscar Williams, 'Government "urged" experts to water down "independent" AI review', *New Statesman*, 3 January 2018, <http://tech.newstatesman.com/news/ai-review-jerome-pesenti>.
7. Sarah O'Connor, 'How to robot-proof your children's careers', *Financial Times*, 6 April 2016, <https://www.ft.com/content/0c7906d6-be89-11e5-9fdb-87b8d15baec2>.
8. UK Creative Industries, 'Creative Industries Earn UK Almost £92 billion', November 2017, <http://www.thecreativeindustries.co.uk/uk-creative-overview/news-and-views/news-creative-industries-earn-uk-almost-%C2%A392bn>.

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