

Is education the antidote to job displacement from automation?

Much is being reported nowadays on the future of work and, specifically, on which and how many jobs will be lost to automation in the next few decades. In such studies and articles, education is often mentioned as the universal solution to respond to the impacts of automation in the workplace.

However, the results from Brunswick's Global Perspectives research show a general belief that while technology is changing for the better and faster, other areas like government or education are not expected to change much in the next 20 years.

This triggers an immediate question: *how can we ensure that as a society we are proactively adjusting to rapid technological progress across industries like telecoms, energy or automotive, when we cannot sustain a similar development pace in the education we provide to the future generations that will coexist with the new technologies?*

In order to find out more about this apparent decoupling I interviewed Sharan Burrow, Secretary General of the International Trade Union Confederation (ITUC) since 2010 and chair of the World Economic Forum's "The Future of Production" committee, which looks, among others, at the future of jobs in manufacturing and the need for an upgraded skillset. Her opinions are of particular interest as they represent the workers' perspective in this issue.

In Sharan's view, the impact of automation on current jobs needs to be analysed per sector and the following 3 perspectives need to be considered:

- 1) Is the technology ready for job automation? In some areas, e.g. robotics, it is, but development in other areas, such as Artificial Intelligence (AI), is not yet as mature.
- 2) Is society ready, for example, to have highways full of drive-less trucks carrying huge tons of freight?
- 3) Will automation really displace workers? For example, there is a lot of innovation and development on wearables, which has the potential to enhance a worker's capacity to do their job, without displacement.

The answers to the above questions will shape different scenarios for the future of jobs as we currently know them; from a situation where there are no barriers to the implementation and

uptake of new technologies as they are developed, to a scenario where growing protectionism and cyber-security challenges slow the social acceptance of new technologies.

Another matter being debated is around what new jobs will be created with the upcoming wave of technological advancement. In previous iterations of technological changes like the ones seen at the beginning of the 20th century there were also theories around technological unemployment that did not materialise. Instead, demand for new types of workers was created.

The key then is to proactively and continuously identify which new skills will be required and facilitate long-life learning, ensuring that policymakers invest in effective education that prepares workers for jobs of the future. In Sharan's view, no one has a clear picture about the required skills mix at this point, but what we do know is that there will be a hollowing out of a variety of skills depending on the sector. Traditional education has focused on cognitive skills like information processing, memorising or writing; but machines are already able to perform these actions in some cases even better than humans. This is the case of white collar jobs such as journalism, which has traditionally been expected to be protected from automation; but the arrival of narrative-writing software able to produce automated articles is questioning this assumption. Some believe that the combination of cognitive skills with creativity and emotional intelligence will continue to provide humans with greater comparative advantage over machines.

Even if education is seen as a necessary measure to mitigate any short term negative impacts of automation, the threat to full employment caused by automation is real. According to the ITUC's Global Poll 2017¹ 73% of the respondents are frightened of losing their jobs, however, only 51% relate this concern to technology taking over jobs. These results are aligned with Brunswick's Global Perspectives² research, showing that only 11% and 15% of workers think their jobs will be largely replaced by automation or technology in developed and emerging countries, respectively. In Sharan's view this shows that it's not the technology that people are frightened of, it's the jobs. Governments must take responsibility for full employment and should be required to look at where the investment in jobs of the future needs to be directed. Sharan places the focus on two areas of investment: infrastructure (mid-

¹ The 2017 ITUC Global Poll gathers views from 15,728 respondents across the adult populations of Argentina, Belgium, Brazil, Canada, China, Denmark, France, Germany, Guatemala, India, Japan, Russia, South Africa, South Korea, the United Kingdom and the United States.

² Brunswick Insight conducted an online survey of 42,956 adults across 26 markets in 25 languages.

term source of jobs) and care economy (jobs in care for the elderly, disabled people and pre-school aged children).

At this point another known contradiction emerges. Although policy and regulation are generally seen as key to limit undesirable consequences from robotics and AI, less than half the respondents to Brunswick's Global Perspectives research (45%) see Governments as the most effective agent at providing solutions compared to a 56% that see business playing this role. Sharan believes that current mistrust comes from governments not paying attention. The survey results would demonstrate that in addition to governments' role as policymakers, businesses must also step up and ensure they develop their employees and communities where they operate for the jobs of the future.

One could examine what the function of trade unions is in these uncertain circumstances for workers. When asked about this, Sharan explains that the 3 main duties of trade unions, i.e. organising people, collective bargaining and advocacy, are still hugely relevant in this wave of change. However, membership to long-established trade unions keeps falling. Although some suggest that this drop is caused by the shift to the gig economy, in which short-term contracts or freelance work dominate over permanent jobs, Sharan argues that gig economy jobs are not different from today's jobs and, therefore, the same fundamental rights and principles remain. Workers still need social protection, minimum wage to live with dignity, the right to bargain collectively and freedom of association, all of which are at the core of trade unions' goals. Unions of freelancers already exist today, e.g. actors' unions, showing that a model to guarantee quality working conditions in an "on-demand" economy is possible. However, we are also seeing damaging examples of companies that in Sharan's view do not have a social license to operate. Again, this would prove that it's not the technology that is the issue, it's the regulation and rules that guarantee decent work that are the issue. For governments to be able to establish such rules it is imperative that they listen and understand how work is changing. In this respect, a paper by Erik Brynjolfsson, professor at MIT and author of "The Second Machine Age", and Tom Mitchell, machine learning professor at Carnegie Mellon University, makes a call for partnerships between governments and digital companies that gather and process vast amounts of data required to understand these changes³. This once more highlights the critical role of businesses in this transition and how

³ Waters, R. (2017). *Society 'flying blind' over robots' impact on jobs*. [online] Financial Times. Available at: <https://www.ft.com/content/d1e8370e-2060-11e7-a454-ab04428977f9>

no stakeholder can work in isolation.

Moreover, one thing that Brunswick's research has taught us is that when interpreting surveys or forecasts it is important not to make simple generalisations and look at the different circumstances of people around the world. The 5Gs – Generations, Gender, Geography, Global Cities, Graduation – provides a good framework to analyse these differences, which governments and businesses should consider in their decision-making processes.

The findings derived from exploring the question raised at the beginning of this essay suggest there is consensus that a transformation in current education systems is required if we want to ensure technological advancement continues to work in favour of people's wellbeing and adequate standard of living. Together with governments, businesses are seen as central players to lead this transformation. At the same time, as Sharan mentioned a few times throughout the interview, it is not the first time that topics like long-life learning and need for governments to listen are being discussed without major breakthroughs so far. So, the follow up question we need to ask ourselves is: *is it too late for a radical transformation in education to guarantee future job prosperity?*