

The FUTURE is not WORKING

ROBOTS ARE TAKING OUR JOBS:
DOES AUTOMATION MEAN WE NEED
A UNIVERSAL BASIC INCOME?

WORDS RITA LOBO

Once a scenario fit only for a science fiction thriller, today many workers are seeing their jobs being taken by robots. Factories in Korea already have 4.78 robots per every hundred workers. The global average is around 0.66, but as this number

grows the cost of implementing robot workers shrinks, making them a viable and cheaper alternative to human workers.

According to recent data, about 57 per cent of all jobs around the world are at risk from automation, and in developing countries the risk is much higher. In Ethiopia, 88 per cent of jobs are immediately at risk of automation, and in China the figure is close to 77 per cent. While certain industries are almost entirely automated already, like manufacturing, many other jobs from short-order cook to insurance underwriter are expected to become fully automated in the next few decades.

Father of psychoanalysis Sigmund Freud said, "Love and work are the cornerstones of our humanness." Little children are encouraged to consider their future careers from a young age, and a political manifesto has never been written, by the left or the right in any country, that didn't at least mention the promise of job creation. Equally, over the past several decades the discourse has revolved around efficiency and productivity, and there has been a concerted effort to modernise workplaces through the use of new technologies.

Automation is the use or introduction of automatic equipment in a manufacturing or other process or facility. While we frequently speak of robots in terms of heavy machinery, a process – such as the use of a simple algorithm to make a sale – qualifies as well, as long as no human was involved in the process. It seems like our work culture and our thirst for innovation are at odds, but as the cost of automation comes down, innovation will almost certainly come out on top.

"If you go back in history to the 50s, 60s and 70s, experts – like economists, sociologists and anthropologists – have been predicting for ages that the robots will come and that they will take our jobs. But somehow it hasn't happened yet," »

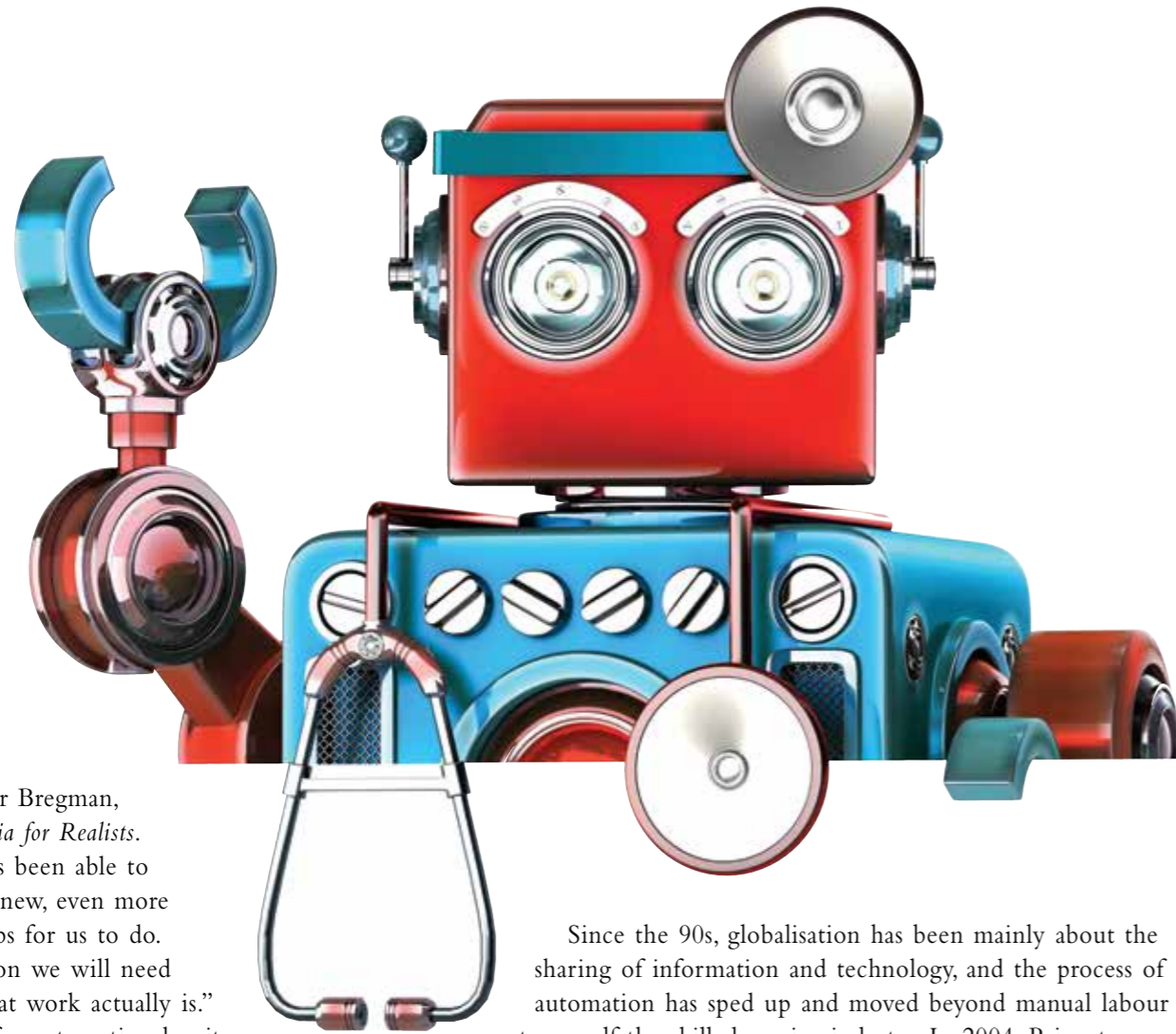
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– Rutger Bregman



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explains Rutger Bregman, author of *Utopia for Realists*. “Capitalism has been able to come up with new, even more meaningless jobs for us to do. That’s the reason we will need to redefine what work actually is.”

The trend for automation has its roots in the Industrial Revolution of the nineteenth century. Steam power, electricity and the beginning of a period of relative peace worldwide meant that goods could be produced faster and shipped around the world with ease. This trend endured for the better part of the twentieth century, but as factories and farms became more and more automated, labour costs grew exponentially as well. As an example, it costs around £4 an hour to operate a robot in a manufacturing setting, making it hard for Europe to compete as total labour costs there amount to around £40 an hour. Even the cheaper labour of a country like China (£9 an hour) struggles to make its case against automation.

Proponents of universal basic income suggest that by freeing workers from meaningless jobs and those that can just as well be automated, there would be an explosion in creativity, entrepreneurship and research.

Since the 90s, globalisation has been mainly about the sharing of information and technology, and the process of automation has sped up and moved beyond manual labour to engulf the skilled service industry. In 2004, Princeton University academics F Levy and RJ Murnane predicted that difficulties in replicating human perception meant that driverless cars were all but impossible, saying, “Executing a left turn against oncoming traffic involves so many factors that it is hard to imagine discovering the set of rules that can replicate a driver’s behaviour.” Less than six years later, Google announced that it was in the process of developing fully autonomous vehicles, and as of 2016 many cities around the world have been preparing traffic legislation to accommodate driverless cars on the roads.

When we think of automation, there is a tendency to assume that manual work such as factory assembly and farming would be the jobs most at risk, but according to research by Carl Frey and Michael Osborne from the University of Oxford, a variety of jobs we would consider more ‘skilled’ are under greater threat. Library technicians, brokerage clerks, loan officers, credit analysts, legal secretaries and real estate agents all have a 98–99 per cent chance of becoming computerised in the very near future, on par with farm labour contractors, who have a 97 per cent

probability of becoming automated, according to the Oxford study. Least likely to be replaced are highly skilled health and mental-health care professions, which rely on extremely fine-tuned perception. The Oxford study ranks recreational therapists, oral and maxillofacial surgeons, and elementary and primary school teachers among the professions least likely to be replaced by robots.

Automation and industrialisation have long been associated with developing countries, while a move towards a more service-based economy is a trend reserved for mature economies. However, as automation becomes more widespread, developing nations in Africa and Latin America have seen their manufacturing and employment output shrinking long before they achieve comparable levels of development to post-industrial countries, according to the United Nations Conference on Trade and Development (UNCTAD). “The increased use of robots in developed countries risks eroding the traditional labour-cost advantage of developing countries,” reads UNCTAD’s ‘Robots and Industrialisation in Developing Countries’ report. “If robots are considered a form of capital that is a close substitute for low-skilled workers, then their growing use reduces the share of human labour in total production costs. Adverse effects for developing countries may be significant.” Estimates by the World Bank suggest that developing countries as a group will see their “share of occupations that could experience significant automation is actually higher than in more advanced ones, where many of these jobs have already disappeared”, and might amount to up to two-thirds of all jobs.

The consensus is that there is no stopping the rise in automation. Some countries, like Brazil, are considering taxing the use of robots to try and safeguard lower-skilled jobs, but that is unlikely to be a long-term solution to what will likely be a significant and enduring drop in

demand in the labour market. However, an old idea is gaining traction with political thinkers and leaders of industry alike: universal basic income (UBI). The idea has been around since Thomas More’s *Utopia* (published in 1516), and has resurfaced every hundred years or so in times of economic strife. The idea is for the state to provide a fixed amount of money to every one of its citizens regardless of their income or work status. In guaranteeing income to every citizen, households living below the poverty line would no longer exist, and it would be an effective way to distribute the fruits of technological advancement fairly. UBI has a lot of supporters in science and technology. Silicon Valley bosses are experimenting with it through the charity GiveDirectly. For tech bosses, we may be living in the ‘beginning of the end’ of work and on the brink of a post-work future. “Because it’s universal, everyone gets it: whether you’re rich or poor, employed or unemployed. I see it as a dividend of progress. Because our forefathers worked so hard, we can now afford to give everyone a share of their accomplishments,” says Bregman. With UBI, no-one has to worry about their next pay cheque, therefore everyone can continue to consume and innovate. Beyond the charity sector, feasibility studies and trial projects are underway in a number of countries like Finland, the Netherlands, Switzerland, as well as Kenya and India.

A recent UK poll concluded that almost 40 per cent of British workers believe their jobs are meaningless. Proponents of UBI suggest that by freeing workers from meaningless jobs and those that can just as well be automated, there would be an explosion in creativity, entrepreneurship and research. According to Bregman, “If we want to reap the rewards of the huge technological advances made in recent decades (and of the advancing robots), then we need to radically rethink our definition of ‘work’. I believe in a future where ‘jobs are for robots and life is for people’.” ■

PERCENTAGE OF JOBS AT RISK

- Insurance underwriter **99%**
- Mathematical technicians **99%**
- Cashiers **97%**
- Tax examiners and collectors, and revenue agents **93%**
- Bakers **89%**
- Dental hygienists **68%**