

AUTOMATION-RESISTANT JOBS FOR THE FUTURE

Disruptive technologies such as artificial intelligence and big data are changing the world of work. Retail jobs are disappearing in the US while the online sellers supplanting them fill their warehouses with robots instead of human workers. In China, manufacturing businesses that fled wealthy countries to find low-wage workers are now replacing those humans with machines. And on farms around the world, automated systems are beginning to take on backbreaking tasks like weeding lettuce. Studies have found that new technologies threaten around 40% of existing US jobs, and two-thirds of jobs in the developing world.

New technologies threaten around two-thirds of jobs in the developing world

There is one kind of job though, that is both indispensable and difficult – perhaps impossible – to automate: the kind that requires emotional skills. Artificially intelligent software is being built that can recognise emotions in people's faces and voices, but it is a long way from simulating genuine empathy, and philosophers have been arguing for centuries that a machine with real feelings is impossible. Computers are nowhere near being able to compete with humans on the ability to really understand and connect with another human being.

As populations in many countries age and non-communicable diseases grow, the WHO says that the world will need 40 million new health workers by 2030 (Credit: Getty Images)

If these jobs can't be automated, and will continue to be necessary into the future, workers with emotional skills will be highly in demand in the coming decades. But, right now, the jobs that depend most on these skills are often badly compensated: a Business Insider poll put childcare workers and high school teachers in a list of the top ten most underpaid professions.

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Emotional skills include all the abilities that let us recognise and respond appropriately to emotional states in ourselves and others. They're a ubiquitous, yet largely invisible, part of a huge and perhaps surprising array of jobs. It's the supermarket cashier pleasantly asking how you're doing. It's a supervisor correcting a subordinate's mistake while making sure he still feels valued and capable. It's a salesman watching a potential customer's face to see if she's sceptical about his pitch.

As robots come for our routine jobs, the ability to work well with others is becoming a key to success at work. A 2016 World Bank review of 27 studies of employers found that 79% of them ranked a socio-emotional skill such as honesty or the ability to work within a team as the most important qualification for workers.

Emotional skills are particularly crucial in healthcare, where there's an urgent need for more workers. As populations in many countries age and non-communicable diseases grow, the World Health Organization says that the world will need 40 million new health workers by 2030 and we're on course to fall short by 18 million.

That figure includes highly educated doctors and technicians, for whom a good bedside manner is complementary to their technical skills. It also encompasses a wide range of workers whose main qualification is being able to support and communicate with patients. Effective healthcare requires men and women who can check in with diabetes patients to make sure they're making crucial lifestyle changes, talk about contraception with young adults, and perform a million other tasks that require empathy, but not necessarily advanced technical skills.

Education is another industry where the need for emotional connection makes automation unlikely. Teaching young children demands human engagement, in order to motivate students, spot potential developmental problems and instil social skills. As it turns out, that also appears to be true of adult education.

Teaching young children demands human engagement

MOOCs, or massive open online courses, were once seen as a way to scale higher education, letting anyone learn for free if they wanted to, but they've proved something of a disappointment. Estimated completion rates for MOOCs range from 4 to 15%. The success rate is even worse among less-educated young adults in poor communities, who advocates had hoped MOOCs would benefit the most. In contrast, as sociologist Tressie McMillan Cottom has found, for-profit colleges get first-generation college students to enrol and stay engaged by hiring an army of warm, engaging staff to offer personal support and guidance.

Investment is needed

Hands-on healthcare and education are irreplaceable, but the cost of an empathetic, attentive care worker or special educator puts this type of help out of reach for many. In most parts of the US, even standard childcare for a family with a four-year-old and an eight-year-old costs more than rent, and infant care is more expensive than a four-year public college. Meanwhile, comprehensive home care for an elderly parent typically runs to more than \$45,000 a year, more than 80% of the median household income.

Already, large education and health care systems receive much of their funding from government sources. Primary and high schools are almost always publicly funded, and, in many countries, early childhood education and college are too. When it comes to healthcare, even in the US – where private businesses play a large role in the industry – 64% of costs are ultimately borne by the government.

As the world's population expands, and this population continues to require good healthcare and education in order to thrive, more money must be invested in emotional labourers, and their pay must reflect the importance of their work. OECD data from across the developed world has shown, for example, that higher teacher pay is directly correlated to better student performance.

This is already starting to happen. Despite limited financial resources, government-funded programmes are now hiring emotional workers for all kinds of new tasks. They're paying people with mental illness to work as peer counselors, and investing in yoga and mindfulness instructors for at-risk kids.

Governments are even paying people to do the kinds of caring work that have traditionally been unpaid. Many European countries now pay families with kids an annual allowance that can help subsidise a

parent who stays home or works part time. Some countries, including England, Germany, and the Netherlands, as well as US states like California, let people with disabilities use their public health insurance to pay friends and family members to take care of them.

It would be possible to make this happen on a much larger scale in the future, and to avoid devastating levels of unemployment and poverty, by harnessing some of the soaring profits that will almost certainly come from increased automation.

The rising importance of emotional work is likely to affect most of us. Each of us can put effort into sharpening our emotional skills as well as our technical ones. That might mean reading an engaging book with characters you care about, taking a restorative outdoor break to increase emotional resilience, or just stopping to consider how your offhand comments are coming across to your coworkers.

Automation has the potential to create enormous worldwide wealth, and it's vital that we channel some of this into work that engages all of our human capacities, so that we can help each other thrive.

Credit: <http://www.bbc.com>