

ARTIFICIAL INTELLIGENCE
IN THE WORKPLACE

ROLF VAN DICK
GOETHE UNIVERSITY FRANKFURT

According to a survey by the Institute for Management and Economic Research (manager seminars, September 2018), 41% or almost half of those respondents over 60, considered it unlikely that they would be affected by Artificial Intelligence (AI) in the workplace. On the other hand, younger respondents more realistically estimated that significant AI-related changes would occur in their workplace within the next five years, not only in production and data analysis, but also in customer service and office practices across the board.

For many years, the conviction was that a computer would never completely replace a human being due to its lack of intelligence. It was thought impossible that it could, for example, beat a human being at a game of chess. Then, in 1997, IBM computer Deep Blue won a game against incumbent grandmaster Garry Kasparov. Since that time, man and machine have come together to form teams, made up of one human player and one chess programme each, that are currently known as the best chess players in the world. Nowadays, Deep Blue's successor, Watson, can provide medical diagnoses with astonishing accuracy and will likely replace doctors in diagnostics in the not too distant future (Kelly, 2016).

AI has also long been used in staff recruitment practices. DeepSense, a company in California, can determine an applicant's personality based on an analysis of their Facebook profile, and then sends the information on to the recruiter, whether or not the applicant is aware of this. The US company HireVue holds purely digital interviews with applicants. Applicants' voices, facial expressions and choices of words are analysed and compared with specific success parameters. If similarities with those parameters are found, the AI filters out these candidates as those most likely to be a good fit for the recruiter.

The rate of success of such services may not yet be as high as desired, as the algorithm quality is significantly impacted by the choice of psychological test used to profile a personality. If these tests are of poor quality, even the best algorithm cannot deliver reliable results. Nevertheless, we need to resign ourselves to the fact that companies will increasingly rely on such profiling processes and that these will improve over time. At the very least, they will be used, and in fact already are being used, to sift through large volumes of applicants. This has advantages and disadvantages. Beside considerable time-savings, a company will naturally benefit from being able to identify ap-

plicants with a good fit, for example based on their personality. Co-workers also benefit, because a good fit between an employee and their work is crucial for high job satisfaction rates and long-term good health. However, such processes also have their drawbacks. They can contribute to homogenisation of the workforce within a company, as candidates who fail the algorithmic test have no chance of proceeding to the interview stage. Those candidates thus never encounter a human being in a conversation via which their hidden potential could be recognised by chance.

One of the primary responsibilities of policy making is to safe-guard the privacy of any prospective employee. To date, a conventional personality test can only be applied, and the results analysed with the participant's consent. Such tests are also subject to quality control and licensing: the German standard DIN 33430 delineates who can apply what aptitude tests, and for what reasons. The ability of AI to outperform a human being in terms of speediness is no reason to let this standard slip for algorithmic tests.

The changes that AI is effecting in the workplace are not only obvious in the recruitment field. The relationship between an organisation and its employees is also changing. This is exhibited by, for example, platform businesses, a prominent one being Uber. On the one hand, Uber can provide a faster and significantly cheaper taxi service to its customers. On the other hand, Uber's drivers are mis-classified as self-employed, and therefore lack adequate unemployment and other such insurance that comes as standard with a regular employment contract. AI will continue to develop at break-neck speed in this field and offer a wide variety of services. Policy makers must not hamper these developments, yet they must ensure that work standards, relating to, for example, job security and minimum wage requirements, are met.

Replacing the human being in a variety of other fields will be the next step in AI-based automation of the workforce. So far Uber has increased competition for conventional taxi businesses, but look to the future and self-driving cars, perhaps even self-flying taxis as being tested in Dubai and Singapore (Hein, 2017) will relieve the need for a human driver (or pilot). Such developments will rear their head in other spheres of work, too. In the retail banking sector, customer service agents in bank branches have long started to be replaced by online banking. Other retail banking functions, such as mortgage and loan advisers, will increasingly be replaced by algorithms. Soon, we will find such developments affecting jobs that we cannot yet conceive of being

carried out by machines. Lawyers' and notaries' simpler tasks are already being automated. Automation is also happening in schools and in university-level education, where the introduction of digital teaching will erase traditional jobs. An experiment has shown that students being taught in a digital environment could not distinguish between the feedback received from a human teacher and that received from an AI-based system. Not only did the 50% of students who were "supervised" by the AI system not notice any difference, they even judged their teacher to be friendlier and more trustworthy (Leopold, 2017).

AI-based automation will have a similar impact on the number and kinds of jobs in the service sector as the introduction of the steam engine and the conveyor belt had on the manufacturing industry and on agriculture. Considering current demographic developments, this new kind of automation might also offer some opportunities. Assuming no noteworthy increase in immigration and a continuation of current demographic trends, the German labour pool will decrease by 40% from around 44 million to 26 million employees (Institut für Arbeitsmarkt- und Berufsforschung, 2011: 2). Thus, increased automation and the ongoing development of AI provide important opportunities. The future will see us generating higher revenues with fewer employees. This same scenario has played out in agriculture and in major areas of the manufacturing industry in the last 100 years. There will be fewer jobs for those less qualified, however we will also see entirely new occupations emerge.

Policy makers must therefore be proactive in investing in and therefore paving the way to flexible and life-long education, rather than having education end with a middle school or university graduation certificate. Breathing spaces will need to be created by, for example, expanding paid educational leave, and financial resources will need to be made available to individuals, as well as to universities and other educational establishments.

In areas other than the workplace, the question of surveillance needs to be prioritised and addressed by policy makers, once a necessary broad-ranging public debate has taken place. Amazon and co., for example, know when we look at different kinds of web content and how long for. Technology and the processing of masses of data, practically turns people into an open book for entities collecting and analysing the collected data. In fact, this is not only the case when surfing the web for online shopping or otherwise, but also applies

to people as employees. Finally, policy makers need to develop new corporate and employment taxation models. Why not demand national insurance contributions to be made for machines that are replacing jobs formerly carried out by human beings? Furthermore, where people are mis-classified as self-employed while working for a platform business, whether the world is just or not will depend on how those who profit from the newly-gained flexibility are obliged to “give back” to society for the common good (Lenzen, 2018). This is no longer relevant to taxi drivers only, but also applies to programmers, lawyers, teachers and other professions.

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