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THE QUEST FOR HUMANITY IN THE CHANGING FACE OF THE FUTURE WORKFORCE

Projected statistics on the workforce of the future present a confronting outlook; humanity is literally at risk of being under siege by robots. Some scientists predict that half of the human workforce will be replaced by machines in the next 20 years. Even worse, we may be answerable to robots. Hire Vue, a US based organisation that produces robo-interview software, reported that in 2016 2.5 million robo-interviews were conducted, a significant increase from 13,000 five years ago.

Robo-interviews as the name suggests, are interviews conducted by computer software and sent to HR managers to preview the responses at their own convenience. Others, however, have dismissed these statistics as dubious. University of Cincinnati Economics Professor Michael Jones for example, firmly believes that the technological advancements will create a new set of jobs that we may not be able to currently predict, and in this way, humans will remain an integral part of the future economy.

The raging debate has given rise to two groups: the optimists and pessimists. The two groups are sharply divided on their views over how 'the second machine age' will impact humanity. The pessimist point of view believes the human race should anticipate unprecedented levels of unemployment. The rise of the gig economy where more people are engaged in part time work rather than full time work supports these fears. More and more graduates are unable to find full time work and this they argue will in turn negatively impact the economy in the long run.

Optimists on the other hand believe that artificial intelligence and increasing automation will render employees to be of more use to their employers. They believe that, as machines take over the monotonous tasks, more time is available for humans to work on creative projects.

Machines will in that case act as facilitators making employees more efficient and better informed whilst still requiring our constant supervision in order to function properly. Jesuthasan, Malcolm and Zarkadakis[1] give a possible example of how we can work alongside machines in their article "*Automation will make us rethink what a 'job' really is*" published

[1] **Jesuthasan.R, Malcolm.T & Zarkadakis.G, 2016 'Automation Will Make Us Rethink What a "Job" Really Is', *Harvard Business Review*, 12th October, Viewed 13th December 2016.**

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in the Harvard Business Review, October 2016 - "*Imagine flight attendants wearing a version of Google Glass, through which they can access customer data and personalized preferences*, eg. "No nut dishes served to Charles in 3C given his allergy, but black coffee and a predisposition for onboard duty free. Early seating meal for Sarah in 2A so she can get to sleep quickly." And so on.

The use of machines is not a new phenomenon - during the industrial revolution they replaced muscle power resulting in large scale production. It is machine learning - the ability of machines to learn and mimic human behaviour based on high volume historical data that has caused widespread unease. Machine learning dates back to the 90's where machines performed simple tasks such as sorting mail. They can now perform increasingly complex tasks including diagnosing diseases such as diabetic retinopathy with higher precision and efficiency than a human!

Of even greater concern is the expected dramatic revolution of traditional professions such as medicine, law and accounting, which require a high level of judgement, creativity or empathy and therefore could be expected to be unaffected. Machines now threaten to replace even human intelligence and the speed at which this could happen is astounding. Massachusetts Institute of Technology (MIT) researchers Erik Brynjolfsson and Andrew McAfee[2] say "The computer processor doubles in power every 18 months, 10 times greater every five years, it's a very different scale of advancement and it's affecting a broader set of the economy than the steam engine did, in terms of all the cognitive tasks. It's happening a lot faster and more pervasively than before," they write. "Science fiction is quickly becoming reality."

Supporting the above concerns, research shows a rise in visits to health websites as opposed to doctors, the use of online dispute resolution by traders on eBay instead of presenting at court, and reliance on online software to file tax returns instead of tax accountants. These examples, are only the tip of the iceberg; it is predicted that in the future machines will perform audits and even create legal documents as they will be able to read boilerplate. You may also be confessing your sins to an app (as opposed to your priest) as in 2011 the Vatican authorised the use of an app to help one prepare for confession!

[2] Ehisen,R 2016 'Artificial Intelligence, Lawmakers And The Future Of Work', *Capitol Journal,* Viewed 13 th December 2016.

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The standardization and systematization of professional services as opposed to personal tailor-made solutions has given impetus to this trend. The increased use of checklists by doctors, reliance on precedents by lawyers and methodologies by consultants has taken hold. Standardization and systematization of these services available online is reducing the need to exercise judgement, creativity or empathy, creating room for machines to replace the human touch when delivering professional services .

Anthony Goldbloom[3], a machine learning expert, still argues that, despite this encroachment of the professional services industry by artificial intelligence, the inability of machines to tackle new situations as the human brain

does puts a limit as to which jobs can be displaced. He says "Accountants and lawyers are still needed….. for complex tax structuring, for pathbreaking litigation. But machines will shrink their ranks and make these jobs harder to come by." In this way, aligning to jobs that present new challenges as opposed to frequent high volume tasks (that can be more easily mimicked) should help safeguard a place in the future workforce.

Susskind and Susskind[4], an IT adviser at the Oxford internet institute and a fellow in economics in Balliol college Oxford, disapprove stating that, in spite of machines not being able to reason as effectively as humans, they are still superior. According to them "human professionals are already being outgunned by a combination of brute processing power, big data, and remarkable algorithms. When systems beat the best humans at difficult games, when they predict the likely decisions of courts more accurately than lawyers, or when the probable outcomes of epidemics can be better gauged on the strength of past medical data than on medical science, we are witnessing the work of high-performing, unthinking machines."

The University of California Davis Economics Professor Ann Stevens emphasises that digital literacy is necessary to smoothly transition into the future workplace, especially for the older cohort of the workforce. Both Government and the private sector can play a crucial role in helping people in the workforce improve their digital literacy skills through

[3] Goldbloom, A 2016 'The jobs we will lose to machines and the ones we won't', *TED talks,* August 2016, Viewed 13th December 2016.

[4] Susskind.R & Susskind.D, 2016 'Technology Will Replace Many Doctors, Lawyers, and Other Professionals', *Harvard Business Review*,11th October,Viewed 13th December 2016.

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TAFE and IT in house training programs. Statistics still paint a grim picture for the future workforce despite all efforts to upskill. A World Economic Forum report released in January 2016 predicts the loss of 7.1 million more traditional jobs worldwide, but to only be offset by the creation of 2 million IT related jobs.

So perhaps the real antidote is to focus on being human and let machines be machines. Tim Leberecht[5], a business romantic and humanist in Silicon Valley, advocates that as machines take over the only way to survive is by creating organisations that embrace our raw humanity.

This means embracing inefficiency and chaos within our organisations as opposed to efficiency and structure. He suggests four subjective principles on how this can be done: doing the unnecessary by extending unexpected acts of kindness to one's employee's, creating more intimate relationships by doing away with hierarchies, encouraging authenticity by daring to speak the ugly truth about issues, and to remain incomplete by continuously asking questions.

In his own words "to do the unnecessary, to create intimacy, to be ugly, to remain incomplete - these are not only the qualities of beautiful organizations, these are inherently human characteristics. And these are also the qualities of what we call home. And as we disrupt, and are disrupted, the least we can do is to ensure that we still feel at home in our organizations, and that we use our organizations to create that feeling for others. Beauty can save the world when we embrace these principles and design for them. Because if we don't, we might end up feeling like aliens in organizations and societies that are full of smart machines."

"To be or not to be" - the Shakespeare classic question still rings true as we approach the brink of radical technological advancement. We now have to choose whether to be human and embrace the imperfections of humanity. Alternatively, we can choose to continue to insist on perfection, efficiency and structure in competition with the machines, and rightly so, as embracing our imperfections may mean, make do with substandard performance. However, this can only be done at the expense of the survival of humanity. So what will it be?

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