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OF MICE AND MEN – SURVIVING THE DIGITAL AND A.I. REVOLUTION

'Nervous, quiet and shy'. That is the meaning of the word 'mouse' from the Cambridge dictionary when describing someone with such characteristics. Other meanings include 'timid' and 'fearful' and 'worried' as listed by Merriam-Webster.

Such descriptions currently can also relate to how the future is seen by many. The future where many jobs held by humans could be potentially replaced by automations or robots. This has created a sense of worry or fear of being dismissed or displaced with respect to means of earning a living.

Of course, there is also the ubiquitous 'mouse' found on every table with a desktop PC.

So, is man worried and afraid of being replaced by machines in the near future? What jobs could possibly utilise robots in place of people? Is the 'survival of the fittest' concept applicable in this context?

Man has been using machines and equipment daily in their personal and professional lives since they realised that tools can make their lives much easier. It has been that way ever since, from the simplest of gadgets to the most complex and sophisticated equipment, as they explore new boundaries and

traverse distances.

Now however, the A.I. (artificial intelligence) revolution and disruptive economy is looming ahead. Machines are continually replacing or taking over man's roles in doing many of the menial, laborious or dangerous tasks. Advances in technology have made it possible to create robots, types of machinery used to industries to assist in the production process, such as in carrying heavy boxes or transporting goods from one location to another. Further developments have resulted in robots becoming more society-friendly, being equipped with a certain level of built-in intelligence.

This is where the worry sets in. When previously man used to wield and use their tools (from primitive times until the modern age), now the 'tools' have the potential to replace man altogether in many of the tasks man was previously in charge. Even the wired 'mouse' used together with the desktop (which has 'evolved' separately into a trackball on a laptop) has developed into a wireless version. More developments are sure to come in the future.

For man to continue to be employable in the future he needs to be creative or having unique and highly-sought skills, said Phil Barker, Communications Head at the National Institute of Dramatic Arts (NIDA), Australia. Barker, who is also a creative director and brand specialist, said that in the future, critical thinking needs to be a key aspect to have.

"Man will need to be highly adaptable to survive," said Paul Mason, Director of Emerging Technologies at Innovate UK. Jobs will become multifaceted and changeable as technologies change and so does the way man works. This is echoed by Anand Chopra-McGowan, Head of Enterprise New Markets for General Assembly. "Man would be required to juggle multiple roles at a time," said Anand.

Will the future be in the hands of more intelligent machines then, and workers losing their long-held jobs? Will man perish in the near future? Not so, says Ernest Davis, a computer scientist at New York University (NYU). Davis said that while the current A.I. can be programmed to do specialised tasks, its capabilities are still far behind an average 7 year-old, in terms of common sense, vision, language and intuition in relation to real-life situations.

Kevin Curran, a technical expert and senior member of IEEE viewed the issue in a similar manner, and echoed by Michaela Cash, the Australian Employment Minister. She said that, "The future won't be about people competing with machines, it will be about people using machines and doing work that is more interesting and fulfilling."

There is still work available for man in the future, albeit of a slightly different nature, and requiring different skill sets. The Commonwealth Scientific and Industrial Research Organisation (CSIRO) has compiled a list of skills that would be highly valued in the future job market, as they would be unique and requiring human inputs. The skills, among others, include:

1. complex problem-solving
2. critical thinking
3. creativity
4. people management and coordination
5. judgement and decision-making
6. emotional intelligence
7. cognitive flexibility
8. negotiation and service orientation

There is still the inevitable introduction of intelligent machines into the workplace, mainly due to reasons of efficiency and effectiveness. 'Poppy' and 'Henry' are two examples of robots now accepted as part of the workforce at Xchanging, a global and publicly-listed company providing business and technology services.

"The two have been integrated well into the office community but the coexistence has undergone extensive planning and restructuring of tasks and workflow," said Rob Myers, Group Executive Lead for Robotic Process Automation at Xchanging. "Trust and communication are essential towards facilitating this process."

There are arguments on both sides when it comes to having robots as part of the workforce. Some worry about job cuts, while others see the robots taking over less desirable jobs and allowing man to perform more rewarding ones. Either way, the wave of change is coming, and businesses, service providers and employees will be optimising their operations through process improvements using robotic automation and digitisation. Man needs to be ready to work alongside robot colleagues and being in a hybrid workforce, as more automation would be introduced into various areas of the working circle.

Google's A.I. division, DeepMind, and the Future of Humanity Institute (FHI) at Oxford University have even gone one step further, developing a 'kill-switch' for A.I. Such measures, they argued, should be outlined to prevent the A.I. from overriding human inputs. This step is seen as necessary, with A.I. being integrated into many aspects of man's life, and to ensure that man would always remain in charge.

Said Dr. Laurent Orseau from Google DeepMind, "...our current situation doesn't require us to be worried," to which he added, "(but) it is important to start working on A.I. safety (measures) before any problem arises."

This view is supported by an A.I. expert, Professor Noel Sharkey from University of Sheffield. "Being mindful of safety is vital for almost all computer systems, algorithms and robots," he said. He added by saying that, "(It) would be even better if an A.I. programme could detect when it is going (to malfunction) and stop itself."

As with Steinbeck's 1937 literary work 'Of Mice and Men', where the focus was on the two main characters who travelled in search of job opportunities during the Great Depression era in the United States, man will likely face a similar situation of being replaced or displaced in certain work contexts by robots, resulting in the search for other job opportunities.

The mouse, currently used by man in many offices, is sure to be developed (as part of the office equipment) into more advanced types, and which in turn will take over man's job. The 'mouse' becoming more advanced, while man becoming more fearful and worried (like a mouse, the animal) of the threat from the advancements in technology, are the ironies that would accompany man's journey into the future. Only time will tell who will survive or perish in the next revolution.

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