Artificial Intelligence (Part II of III)

We will explore the subject of Artificial Intelligence (A.I.) in three parts. Part One will accentuate the need to focus on A.I. Part two will detail the evolution of A.I. and its impact on Human Resources. Part three will offer some solutions to the needs of humans as A.I. unfolds upon us.

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Before we dive into the thesis of this article, we feel that it's important to consider the following timelines in providing the reader some context to our discussion herein:

- Persia (825 AD) - a mathematician penned (or quilled) the first recorded mathematical algorithms;

- 1930's - Alan Turing promoted his early theories on computers and used them to crack the infamous, Nazi Enigma code during WWII;

- 1980's - the Canadian Institute for Advanced Research (CIFAR) was created with a major focus on Artificial Intelligence (AI);

- 2018 - Canada announced its strategic plan for AI.

- Recently, Pegasystems surveyed 6,000 individuals in six (6) different countries to report that 70% are fearful of AI, 25% believe it will take over the world and enslave humanity and 31% believe robots will replace humans on the job. So much for progress…

Algorithms are procedures for solving mathematical problem in a finite number of steps that frequently involve the repetition of an operation. A commonplace algorithm sits in Excel to calculate additions with a formula such as [=sum (D4..D26)].

And with the advances in computer science, the miniaturization, speed, capacity and portability of automation, the evolution of algorithms has been complimenting the censor-trigger-movement circuitry of robotics at levels of complexity that are only understood by specialized information engineers and technologists. And even then, AI has been known to get away from these specialists to dart into unintended areas, where the only recourse was to cut the power, turn off the machine and reflect on what just happened.

At this stage, unprecedented roomfuls of data are being stored and collated and the capacity for storage is accelerating incrementally. But circuitry storage will meet its limits and that is why there is now a growing focus on storing data in common, biological DNA. With the limitations of storage and associated costs, data is selectively stored with a predetermined purpose. However, with DNA storage, the capacity may not necessitate a predetermined purpose since it could store everything indefinitely, there to be plucked for any unanticipated purpose.

The advancement of technology always progresses through risk of error or failure, which is exacerbated by the acceleration of that progression. Usually, these failures are not as significant as crashing Boeing 737 MAX. However, reversals and unanticipated change undermine predictability and the pre-emption of planning to deal with estimated impacts - regrettably with more uncertainties for managers and their human resources.

In many respects, mere humans are already outmatched, outmanoeuvred and outgunned by new forms of AI. So, what of them?

Predicting what jobs will be replaced by AI and robotics has become a business in itself. Once again, anyone who predicts she/he can map out the future of the job market with AI is selling another made-by Mexico wall or Y2K solution. Google and YouTube provide multiple sources of information on the subject. A safe prediction is that AI and robotics may

potentially replace all jobs; all depending on the freedom granted to the AI industry to expand and multiply. The tricky part is to determine which jobs and when they will succumb to automation. One of the many websites predicting these probabilities in terms of the job loss is https://willrobotstakemyjob.com/about. This site lets you ask what probability of replacement exists for specific jobs.

A gradual, but vicious circle is emerging. AI is and will be replacing people. Displaced human resources and newcomers realize and will realize that the InfoTech industry is expanding; and the interest in coding software is growing exponentially. Certainly, more jobs will become available in this industry, but the industry's growth will also accelerate the intrusion of AI in the job market to create more job losses.

Change, job losses, displacement and uncertainties have always affected people in different ways, in different places and at different times, but not to the extent that is looming over the horizon. The impact of AI will be compounded by climate change, immigration, fluctuating economies and whatever other global instabilities emerge in our lifetimes. What is next, does beg the question – what *can* we do for our human resources?

Part three in this series of articles will offer some responses to the needs of humans as A.I. unfolds upon us.