Is Artificial Intelligence safe without regulations?

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ABSTRACT
Nothing has brought so much excitement in disruptive technology as the Artificial Intelligence (AI). It is creeping into every aspect of human life. There is no area of human existence which remains untouched by artificial intelligence whether it is education, medicine, research, social life and others. In fact, it is interweaving the life on planet and promoting globalisation to make the world into a global village. The benefits are enormous and so are the risks. The two latest threats of AI looming on the horizon are the Trade war between US and China, and the technological manipulation of US elections. These are tip of the iceberg but deeper could lurk more predators waiting to misuse and abuse AI to promote their devious interest. Management thoughts are taking backseat allowing AI to go amuck like a runaway trojan horse. There is lot of confusion in reflecting the impact of the AI concepts by policy thinker due to lack of research. This paper has attempted to investigate the subtle interpretation of AI in minds of the public through the secondary research, empirical evidence and online survey indicates to understand whether there is a need for AI regulations. The intention is to open a platform for more research, discussion and collaborative environment so that the runaway AI trojan horse has the necessary positive resistance to keep on track towards making safe planet. The initial finding confirms that AI fears are real in people's mind and regulations are desired. However, deeper examination may be required to support and validate the findings of this paper.

INTRODUCTION

The AI technology is exciting the business and social world by bringing paradigm shift to the very fundamental ways to manage a business and conduct life. The hope created by AI is like a bright light suddenly appearing inside a tunnel where no hope was left. On a serious note, it should not happen that the bright light in the tunnel turns out to be an oncoming speeding train running over and crushing every hope. The AI concept has come like a tsunami of potential on the horizon but can leave a blaze of unimaginable destruction if left on its own. If past is any indication, the industrial revolution, the information age and many other waves in the past have come and gone with more disappointment then hope. Global warming is just one of its many side effects. On closer observation, it is not the technology at fault but the lack of proper management in technology which is creating the havoc and failure. The reins of management have failed to stop the runaway technology horse like the Ashvamedha in epic Ramayana which is marching ahead snuffing out the very existence of humans on earth (Chowdhury, 2002). When standing at the cross-roads, humanity can only look in the direction of India which has the secret art of management in its bag of ancient marvel and a strong sense of democratic regulations. Right now, the key question is whether the democratic regulations in management can contain the excessive freedom to which the AI is being subjected, so that the planet becomes a sustainable and hospitable place to live.

RESEARCH HYPOTHESIS

The research question hypothesis that this investigation will indicate need to regulate AI technology and concepts. This will spinoff the enactment of proper regulations for development of AI management area based on concepts, research and deeper evaluation.

PURPOSE AND AIM

The key purpose of this enquiry is to understand and realise the need for a strategic shift in regulations to make AI technology framework effective in management thought process for better social accountability, decision-making and control. The problem in modern times is that the balance between technology and management skills are falling apart. The technology is moving forward rapidly through application of technological concepts and research but the pace of development and research of management thoughts have failed to keep up. The result is the technology has developed but the technology management is lagging far behind. The technocrats without application of management thoughts are developing AI devoid of ethics and social responsibility, control leading to misuse of decisions like the one we see in Brexit and US elections.

The purpose of this investigation is to search for a solution whether there is a need to regulate the thought process involved with technology by infusing regulations. This will improve the quality of decision making in the area of AI for better control and, ethical and social responsibility compliance. Therefore, this investigation aim is to help entrepreneurial technocrats to put the horse before the cart and not the other way round. The AI products need to be subject to managerial compliance and due diligence. The risk of AI are detected before and not after the damage is caused. This makes it necessary to explore if there is a need for regulation of AI thought process. The first step is reviewing the relevant management concepts such as ethics and social responsibility, decision-making and control. The second step is conducting secondary research to understand the benefits and drawbacks of the AI. The third and final step is the primary research of the stakeholders from various strata of the society to understand their viewpoint towards AI. The key aim, however, of this study is to confirm that there is a need for regulating AI uncontrolled growth mentioned in step one so that proper regulatory standards can be made for the development of AI in a positive way.

The investigation will be directed to focus on key concepts and its relevance to apply it to AI. This will be reinforced with secondary and primary research findings. The need for proper regulations based on findings is what this presentation will explore and confirm. This will provide a better clarity for the development of AI in a healthy and positive manner. It will also be an effective thinking tool for entrepreneurial technocrats and managers to deal with AI for the benefit of mankind.

The investigation will explore this concern and gather relevant facts from different primary and secondary sources to comprehend the issue and conclude whether there is a need to develop AI specific management thought process which includes concepts and regulations.

THEORETICAL BACKGROUND

The key to success and sustainability of any AI idea is to build it on conceptual framework. The concepts are like seeds which have to be sowed in order to get good results in the long run. AI by itself will be like making a structure without a foundation of conceptual framework. AI no doubt will work but the triggers will be pulled by the bad guys. The conceptual framework will take care of the ethical issues, accountability, social responsibility, regulations and quality decision making leading to better control. Therefore, it is necessary to understand some of the relevant concepts briefly before the research is conducted.

The first and foremost is the **decision-making** concept. AI success depends on how the policy makers and other stakeholder's leverage the trade-off between the gains to businesses and the goals of the society. The gains should not be at the cost of the society and vice versa. Decision-making is a skill and not common sense and follows a sequential logic called rational decision making. This is known to every professional manager but not necessarily to an entrepreneurial technocrat. A technocrat develops the idea from technology point of view. The developed idea is commercialised and passed to the consumers without the rational process of management decision making.

The second concept important for AI is the **ethics and social responsibility**. A proper code of conduct needs to be developed for the managers, entrepreneurs and technocrats handling the AI environment. There need to be due diligence process which filters the AI products into those which are good for the society and which are not. If a decision turns out to be deliberately or otherwise irrational, the accountability should be clear. Society should not be considered an experimental playground for the technocrats who are rich and powerful but lack management skills and ending with rash and reckless decision. Mankind need to understand that the cost of bad leadership and managerial skills is costing the humanity its survival. Due to polarisation by the powerful technocrats everything looks fine on the surface, with danger lurking underneath. No one should take the AI impact for granted as the consequences of it will be multiple times more dangerous than the consequences of all the technological advancement put together. It could even destroy mankind as Stephen Hawking opined (Kharpal, 2017). Therefore, technocrat entrepreneurs eager to bring their toys to the market must face automatic resistance through the special management environment and made to go through a due diligence process. The current regulations may not be strong to withstand the apocalypse impacts of AI technology abused or misused. A more stringent managerial policing may be necessary which can look through the self-interest of the left and liberal lobby of entrepreneurs, politicians and media and make them pay for the damages and hold them accountable.

The final management concept which acts as a supportive safety net for any industry is the concept of control. It is an effective tool for the managers and the leaders in the government when they know how to use it. When the above two concepts are about to fail the control function will activate and nudge them back on track in time to avoid disaster. This concept is an effective system control which is all inclusive of feedforward, concurrent and feedback control. It is professionally managed democratic tool used by managers, leaders, organisations, industries and government for good governance practice and regulatory framework. Such a system could be necessary specifically for the AI industry in the form of social audit and good governance practices. The guidelines and framework need to be put into place.

SECONDARY RESEARCH

One of the ways to understand the application of concept by AI industry is to find out how it is being applied at ground level. The secondary research is the best diagnostic tool in this respect. It will set a direction to know if AI the way it is being applied is hurting mankind or needs regulations. The findings from various sources are explained below:

In an article in Science Daily, it is reflecting on an AI technique developed which will allow scientists to understand thousands of time faster the complex quantum system of particles. The research could be beneficial to fundamental research as well as developing a self-driving car which is inspired by quantum physics (Simons Foundations, 2018). In an article on artificial intelligence, it is reported that development of AI could help in the prediction of the probability of life on other planets. This is being done with the help of artificial neural

networks (ANNs) which will help in estimating the probability of life on other planets and undertake interstellar space missions (Royal Astronomical Society , 2018).

An interesting research being done in AI is in the area of eye care. AI technology will prove to be an invaluable diagnostic tool in future to detect and adopt corrective approaches in vision care. Also, the repetitive tasks such as refraction, bio-microscopy, tonometry and other functions can be automated by computer driven AI with the neural network machines. AI is also helping in development of medical robots to enhance capabilities of doctors for new diagnostic and treatment procedures. According to the researchers this is only the beginning in eye care and medical field (Nicolitz & Catania, 2017).

The AI is making a difference to every aspect of human life. The University of Maryland has reported that they have developed Robotic systems which can teach themselves. They can grasp intricate and complex movements and manipulate them. They can think for themselves and can carry out a task efficiently on their own. For example, these robotic systems are able to watch a recipe online and can mimic them and make the dish through self-learning. In other words if no help is forthcoming, these robots can learn to make omelette by watching videos on YouTube. The AI technology known as deep-learning neural network has been applied to get the desired results. These robots can be extended into other fields such as automobile manufacturing, warehouse management or in mundane chores in and around the house. These robots will finally be taken to the next level of tasks such as defusing bombs and cleaning up nuclear wastes (University of Maryland, 2015).

As can be observed, the bots are entering every aspect of human life. The potential of growth is limitless. There is lot of excitement about what else the AI can do. The concern could be that very little attention is being paid to the other dimensions of the technology such as ethical questions about its misuse, abuse, cost and availability to the poor in the society and what will be done to prevent any fallout if at all it happens? These are the questions which every stakeholder could be nervous about. No one knows with certainty what is right from wrong and vice versa. One also needs to know what the risks which have been encountered are, and what the experts have to say about it. This section carried out secondary research and the findings are given below which are startling by all standards.

The technocrat expert, Elon Musk considered as the next Mark Zuckerberg of hi-tech has spoken against AI. According to him AI is the most serious threat to human race. He said this as far back as 2014. He made a profound eye popping statement that his interest in AI more to keep an eye on it than to think of it as a viable investment. He has gone to the extent of stating that pursuing AI is like inviting the demon (Gibbs, 2014). Another great thinker in his interview to BBC has stated even more startling things than Elon Musk. Stephen Hawking feels that AI is now at primitive form and should be left alone in this stage. If not stopped now the consequences could be creating something equal or more powerful than humans which could have consequences. He opines that AI could take off on its own and could re-design itself rapidly which the human cannot match given their slow biological evolution (Cellan-Jones, 2014).

Another viewpoint is that the AI by itself may not be dangerous and risky but it could be programmed to do something disastrous out of human greed. There could be terrorist who could buy autonomous weapons from a greedy technocrat and unleash unimaginable terror (Tegmark, n.d). As recently as March 22, 2018, there has been admission from Facebook CEO Mark Zuckerberg admitting to making mistakes in protecting user data. Some data of 50 million users was compromised through political advertising to manipulate 2016 presidential

election in the US. There has been a breach of trust charges between Cambridge Analytica and Facebook. The breach of trust can also be extended to Facebook not able to protect its stakeholders. Facebook has stated that it was a learning experience and they now will secure their platform further for safer community (NZ City Ltd. , 2018). In 2013, a trial was launched to investigate into a scandal in a Germany pharmaceutical sector where patients were recruited for drug trial without their consent. The major drug companies made huge payments to the Government to test products on more than 600 products on more than 50,000 patients without their knowledge. It may be argued that the trials may ultimately give hope to many to improve their health and quality of life (Hyde, 2013). The above research reflects that it is not the drug which is a problem but the decision makers who are bypassing ethical and moral considerations for drug testing. The AI technology may not be at fault but the decision makers could misuse it with all good and bad intention and call it a learning experience. There has also been case of "diesel dupe" as it is known, where Volkswagen to push sale of diesel cars fixed a defeat software which could manipulate emission performance to improve results. The sophisticated software performed well under test conditions but once on the road the engine emitted 40 times above limit the nitrogen oxide pollutant. The company having being caught is restoring to usual rhetoric "that their company has broken trust of public and customers" (Hotten, 2015).

All this shows that things may be working fine on the surface but there could be a danger lurking underneath when it comes to AI. It is a different ball game all together. Humans making mistakes with AI may not get a second chance as they have been getting so far with other innovations.

METHODOLOGY

There are many ways to collect first-hand information for making primary research decision. Some of the options are interviews, surveys, observation, questionnaire and other techniques. The primary research methodology applied in this investigation was online survey. The factors considered for survey was to target wide spectrum of participants from different walks of life. Of the 100 participants targeted, 79 responded. The participant were selected at random and constituted academicians from various background namely in the field of Art, IT and Management area of interest. The students of various background who have part time working experience also participated in the survey. The idea of Artificial Intelligence is new to many but the general awareness is good. Therefore, the participants from varied academic and cultural background is a desirable route to get broad opinion about the topic of research for wider viewpoint. The focussed selection of participants for survey was based on this criteria. The findings of the survey results are briefly explained below:

Findings of Online Survey

In total eleven objective questions were asked to the participants. The focus of the primary survey question was to know whether participants were aware of the topic of AI. The ten remaining questions reflected on the different dimensions of AI which the general public is aware of. Some of the questions related to awareness of their experience with AI in day to day life. The other questions were about the impact of AI in future and whether there is a need for any regulations to manage AI positively.

The online sample size was 100 of which 79 (79%) participants responded.

Figure 1 indicates the feedback whether AI could have dangerous impact on mankind if not managed well. The response of whooping 82.1% was Yes while 15.4% were nor sure and balance 2% felt the impact would not be dangerous.
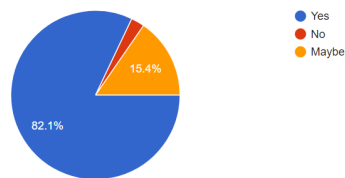
Figure 1: Impact on Mankind

To the question that there is a need for strict due diligence and regulation in development of AI, the response according to Figure 4 showed that 80.8% of the people was positive. 14.1% of the participants were not sure while 5.15 felt that strict regulations were not necessary.
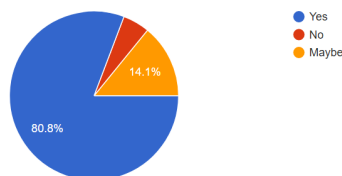

Figure 2: Need for due diligence/regulations

The outcome of the online survey, finds that most participants nearly 89.7% are concerned about AI falling into wrong hands. They feel the need for proper controls in development of AI. Of the participants 6.4% are not sure and only 3.8% of those surveyed feel that AI will not fall into wrong hands. See figure 3 below.
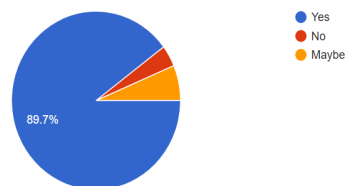

Figure 3: AI falling into wrong hands

About 69.2% of the participants also feel that AI falling into wrong hands could additional impacts in the form of increased global warming, terrorism and diseases. Around 24.4% are not sure and only 6.4% do not agree with the majority view as can be observed from Figure 4 below.
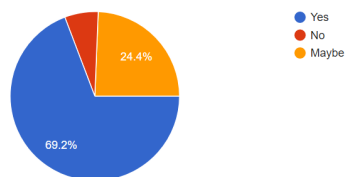

Figure 4: Additional Impacts of AI misuse

When participants were asked whether they feel that a proper management information system for better decision making is required, nearly 74.4% responded positively. Only 5.1% did not agree while 20.5% were not sure as can be observed from Figure 5 below.
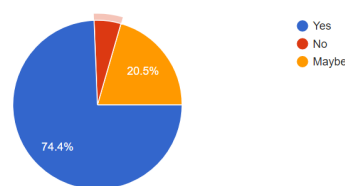

Figure 5: AI and decision-making

Finally, when the members were asked whether AI development will lead to massive unemployment, 48.7% feel that it will. About 30.8 5 of members were not sure while 20.5% feel that they do not agree that Ai will lead to massive unemployment as observed from Figure 6 below.
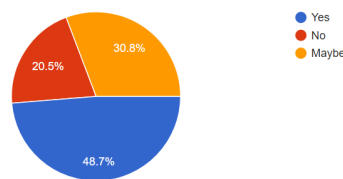

Figure 6: AI and Unemployment

CONCLUSION

To conclude the discussion and findings reveals a distressing pattern. The decision makers may be lacking the skills to apply managerial concepts in handling AI development. The feedback from theoretical viewpoint reveals that managerial concepts are essential to quality outcome. The key concepts of decision-making, ethics and social responsibility and, controls are the foundation block to build AI. The concepts will consider all dimensions of AI not just technology and will generate more alternatives keeping the interest of all stakeholders. The secondary research reveals that leaders are strong in rapid development of AI technology but lagging in regulatory framework which could lead mankind to the edge of disastrous consequences with no return to normalcy. The primary research has revealed that the general concern of key stakeholder – the common people, is not about AI rapidly surpassing human capabilities nor they are worried about looming unemployment. Their main fear is that AI will somehow reach the wrong hands and it will lead to unimaginable catastrophe. Their expectations from legislators is to introduce regulations which will lay down code of ethics and good governance practices in addition to due diligence certification from skilled conceptual management thinkers before, during and after the AI technology products are being tested and developed followed by audit certification. A comprehensive regulations with quality management systems need to be in place to avoid health and safety risks in AI technology. AI could be a very dangerous technology making nuclear risks look like a fire cracker in comparison to its own impact. The danger is lurking stealthily underneath the beautiful artificial and manipulated world with the AI handle in the form of Facebook, Cambridge Analytica, Volkswagen and others. An anti-dote in the form of regulatory framework is imminent.

ACKNOWLEDGMENTS

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