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The Future and Artificial Intelligence: A Threat to Humanity?

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Abstract: This paper will briefly review the history, the emergence and the use of Artificial Intelligence. It will also show that the research in AI, which has enhanced human capacity incredibly, has proved to be the height of human intelligence. We will go on pinpoint the serious implications of AI, showing how, on the one hand, it is a boon to society, while, on the other hand, it can turn out to be disastrous for human life and society. While exposing the ever-growing human need and desire for advancements in this area and also human limitations in preventing its further growth, we will point out the alarming controversies

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involved therein and the havoc it can cause in different spheres like economic, political, social and cultural. However, it would discuss also the predictions it can make for the development of society admirably. Without fail, It will also expound as to how it can cause serious violations and invasion to human privacy, thus, alerting us, humans, to be realistic about all possible eventualities. Finally, the paper would end with a warning, or rather a personal note of caution that if we fail to address the challenges it brings with it with the seriousness it deserves, it would, no doubt, be at the risk of the existence of the humanity itself.

Keywords: Artificial intelligence (AI), Cosmotheandric (God-Man-World) vision, HLMI (High-Level Machine Intelligence), Future of Humanity

Introduction

Indisputably, modern science and technology have brought marvellous advancements to society; they have caused fast movement of ideas, understanding and knowledge that have helped all the people of the world. They have created comfort and convenience for people. Human beings have become more capable of doing

This paper gives a short historical sketch of the pros and cons of Artificial Intelligence. It also serves a caution to the society about the possible dangers of the same!

amazing things with advanced technologies than ever before. And, yet, undeniably, they have also created havoc in society. They have created Artificial Intelligence (AI) for computers a decade ago. Now, humanity has gone completely dependent on Artificial Intelligence machines. Finding humans among humans has become so rare these days. They are working with

AI, sleeping with AI, interacting with AI and ultimately have miserably failed to do any of these activities with fellow human beings. Advancements in technology have made humans lose their sensitivity totally and forget who they really are. In short, in my point of view, being human in this present scenario is really an accomplishment in this world of AI.

Approaching Artificial Intelligence?

Merriam Webster's online dictionary defines Artificial Intelligence as "A branch of computer science, dealing with the simulation of intelligent behaviour in computers or the capability of the machine, to imitate intelligent human behaviour."

History of Artificial Intelligence

The field of AI research was born at a workshop at Dartmouth College in 1956, where the term "Artificial Intelligence" was coined by John McCarthy to distinguish the field from cybernetics and escape the influence of the cyberneticist Norbert Wiener. Attendees Allen Newell (CMU), Herbert Simon (CMU), John McCarthy (MIT), Marvin Minsky (MIT) and Arthur Samuel (IBM) are well-known founders and pioneers of AI research. They and their students produced programs that the press described as "astonishing." Computers were learning checkers strategies, solving word problems in algebra, proving logical theorems and speaking English. By the middle of the 1960s, research in the U.S. was heavily funded by the Department of Defence and laboratories were soon established around the world. AI's founders were optimistic about its future. Herbert Simon predicted: "Machines will be capable, within twenty years, of doing any work a man can do". Marvin Minsky said in a similar

vein: “Within a generation ... the problem of creating ‘artificial intelligence’ will substantially be solved”.

But, they failed to recognize the difficulty of some of the remaining tasks. Progress slowed down and in 1974, in response to the criticism of Sir James Light hill and ongoing pressure from the US Congress to fund more productive projects, both the U.S. and British governments cut off exploratory research in AI. The next few years would later be called an “AI winter,”- a period when obtaining funding for AI projects, indeed, became a serious challenge.

In the early 1980s, AI research was revived by the commercial success of expert systems, a form of AI program that simulated the knowledge and analytical skills of human experts. By 1985, the market for AI had reached over a billion dollars. At the same time, Japan’s fifth-generation computer project inspired the U.S and British governments to restore funding for academic research. However, beginning with the collapse of the Lisp Machine market in 1987, AI once again fell into disrepute, and a second, longer-lasting hiatus began.

In the late 1990s and early 21st century, AI began to be used for logistics, data mining, medical diagnosis and other areas. The success was due to increasing computational power (Moore’s law and transistor count), greater emphasis on solving specific problems, new ties between AI and other fields (such as statistics, economics and mathematics), and a commitment by researchers to mathematical methods and scientific standards. Deep Blue became the first computer chess-playing system to beat a reigning world chess champion, Garry Kasparov, on 11 May 1997.

According to *Bloomberg’s* Jack Clark, 2015 was a landmark year for artificial intelligence, with the number of software projects that use AI Google increased from a “sporadic usage” in 2012 to more than 2,700 projects. Clark also presents factual

data indicating the improvements of AI since 2012 supported by lower error rates in image processing tasks. Around 2016, China greatly accelerated its government funding; given its large supply of data and its rapidly increasing research output, some observers believe it may be on track to becoming an “AI superpower”. However, it has been acknowledged that reports regarding artificial intelligence have tended to be exaggerated.

The Interesting Controversies in the Present

In the book *In Our Image: Artificial Intelligence* many controversial and alarming questions were raised. It is a really challenging one for all humanity to live happily at this moment of destruction. The further questions may explore and shed the light to be aware of this techno-ethic age. What sort of future do we want? What career advice would we give today’s kids? Do we prefer new jobs replacing the old ones or a jobless society where everyone enjoys a life of leisure and machine product wealth? Will we be able to control intelligent machines or will they control us? What does it mean to be a human in the age of artificial intelligence? These are some of the thought-provoking questions we need to reflect on urgently.

The Desire for Artificial Intelligence

Genesis 1 states that human beings are created in the image of God. But God is not the only one to create in the creator’s own image. As humans, we too have shown a perennial desire to create things in our image. We have created machines that mirror human activities through their own actions. While aware that these images are both partial and superficial, they still have exerted a tremendous influence on how we view ourselves and our place in the world. Despite this influence, most of us would not consider an artistic or literary image of the human being to

be an image of humankind in the way we are the image of God. The advent of the digital computer in the mid 20th century has given us a new medium with which to create images of ourselves. The field of artificial intelligence, in particular, explores the use of that medium to create an image of the human being in a way that extends far beyond the merely physical or the static. The potentiality of the computer to mimic human thought has opened the door for a new era of self – imaging.

In Our Image: A Culture's Hopes and Fears

Interest in creating an artificial human, a dynamic alter ego that makes decisions or engages in human activities, has been a part of Western culture from its beginnings. Artificial humans appear in western literature as early as Homer. In *Iliad*, robots appear both in the guise of mobile serving tripods and as the copper giant. Medieval Jewish folklore introduces the Golem, an artificial human-constructed item of clay, which comes to life through the inscription of a holy word on its forehead. Moving beyond myth and story, the actual design of machines that appear to talk, move independently, play chess, or compute sums interested some of the greatest thinkers of the Renaissance and the Enlightenment.

Some Problems Related to Artificial Intelligence

Artificial Intelligence has impressive capabilities today but they are narrow. However, as researchers are fighting to widen up those capabilities to make it as general as possible, it seems that AI will eventually reach HLMI which then will facilitate machines the ability to solve any intellectual task which a human can solve. Looking into the future from here makes it difficult to figure out, how much benefit HLMI can bring to society and it is legitimate to ask, how much harm it could bring to society if we build or use it incorrectly. In the near term, automation of services is also going to impact

employment and AI is going to play a major role in making that possible which apparently seems to bring more benefits to big enterprises rather than to society as a whole.

Considering for a moment what will happen when, in the near term, we have a reliable driverless car system. Thinking about all the drivers -whether they are Uber drivers, train drivers, plane pilots or ship captains -- how long will those jobs be held by humans? Besides, our dependency on AI-based services like using navigation, voice assistance, etc. is also putting our privacy on the verge. There are many such issues that are connected to AI and its development which nowadays are in the debate.

End of Humanity?

Once AI reaches human-level intelligence, further development of self-optimizing AIs is unpredictable. The output will then no longer be approvable by humans for errors and conclusions drawn might be beyond human understanding capacities or even beyond human ethics. The main issues here are problems with the agency, where autonomous machines need to become a legal entity like companies at one point – independently of the question if a code (algorithm)¹ can be fined in the end. This connects to the possibility of failure and responsibility of such AIs. The second main issue is formed by moral implications, especially since machine learning does not necessarily include human teachers anymore and, if not asked to do so, AIs will not necessarily focus on learning what humans count as valuable acts. Prof. Stephen Hawking, one of Britain's prominent scientists, warns that our efforts of creating a thinking machine pose a threat to our very

¹ A process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer.

existence. He said that the development of superhuman intelligence could spell the end of humanity.

Some Moral Issues

As soon as AI is able to compete with humans, it will not only lead to a fight for jobs on an economical level but it may even intrude into human relationships in the way that an AI-friend will only focus on its owner's needs, whereas a human relationship flourishes through the exchange of favours (e.g. portrayed in the movie "Her"). Another interesting scenario has been portrayed in the very recent movie called Ex-Machina, where a humanoid robot named Ava who already passed a simple Turing test and eventually shows how she can emotionally manipulate humans. Ultimately, the question that arises here is: What will happen when our computers get better than we are in different areas of our life?

Economic Impacts

A recent bid for the acquisition of a German robotic company Kuka by a Chinese company called Midea Group was \$ 5 billion. Kuka is one of the world's largest robotic companies. China is famous for low-paid migrant labour and Chinese enterprises want to automate the manufacturing process because they do not see any point to rely on such a huge low-paid migrant labour. According to the International Federation of Robotics, China is the largest importer of robots. The IFR's² calculations show that China has 326 robots per 10000 workers while the US and South Korea have 164 and 478 robots respectively for the same number of workers. Thus, enterprises are seeing a lot of potential in the automation of their processes but it will have a negative impact on employment. The Figure

² Instrument flight rules (IFR) is one of two sets of regulations governing all aspects of civil aviation aircraft operations; the other is visual flight rules (VFR).

below statically explains the impact of technology on employment.

If not consciously planned, power structures especially the widening of the scissor between powerful and powerless will, in all likelihood, hurt the political and social freedom both locally and globally. Surveillance, intensification of economic power, etc. are some of the other issues of our serious concern. On the other hand, AI is delivering to humans what is suitable for them rather than what humans like, which will intensify their views and most likely lead to boost extremism in all directions.

Political and Social Issues

AI is helping us, on one hand, and creating really serious issues on another. Considering the scenario from Baidu and its web search and map services, Baidu has around 700 million users out of which around 300 million use its map services every month. Baidu's research indicates how digital footprints can be used to determine city dynamics. Baidu is mining its data for the city planners to suggest to them the right spot to put transportation, shop, and other facilities etc. On the other hand, such a kind of mining might also help the government to put control society. Baidu's researchers are training their machines to predict crowd problems based on the analysis of user's online map queries. They can predict three hours before when and where a huge number of people might gather. While Baidu claims that the data is anonymous, this could also be used towards destructive ends, such as doing malicious research etc. Some examples might include influencing elections based on data that reveals a lot about the behaviour, trend, interest of people, etc. This, in my opinion, is nothing but a serious threat to democracy.

Policies and Laws

Besides the general scepticism to new technologies, it is remarkable that drone usage is highly regulated, while big data is not – while it might be a bigger threat to privacy. Is it because the threat can be visualized? Another policy problem arises when errors committed by AI's fall under the range that would not have happened if done by a human – even if the total number of human errors avoided by the AI is still bigger. Yet, this emotional unbalance can even be reversed. If robots look anthropomorphic, people might feel like they deserve rights and some soldiers risked their lives to save the team robot. Would AIs claim rights or would humans start the first “AI rights” movement?

Considering that animals during the medieval ages were moral agents in front of the law to the extent that companies are today, it would be possible to see AIs confronted by law. This will bring further issues. There is a question as to whether individual learning machines will exchange in a cloud-like manner their knowledge and thus should be collectively law suited or individually. While this might be an issue to deal with in the remote future, coping mechanisms to handle job displacements and unequal capital access caused by the widening imbalance of labour and capital are going to be in dire need way earlier. The same applies to current bank algorithms using machine learning to evaluate creditability and, consequently, automatically judge on race etc. While child labour and other issues during the industrial revolution did not get solved by the market, but by politics, the same will likely be the case with current new technologies. Unfortunately, Silicon Valley is way faster than political bodies.

A Few Suggestions

It is vividly clear that it is too late for humanity to protect its nature and avoid artificial intelligence in use. However, we have a little hope to imbibe the relationship with others by following the possible solutions for all the problems we discussed throughout this essay:

- a. We have to consciously define how we are going to use AI as well as when and where it will be used. At the moment, it is really difficult to predict when we can reach singularity although there are several predictions by some AI experts. However, if we reach that point in the future, then it is really important to have a centralized global governing body, laying down the framework for prioritizing the positive outcome over its own interest.
- b. Initiatives like ‘One hundred years study of Artificial Intelligence’ by Stanford university is necessary to carry out long-term analysis of AI development. This can put us on our guard and thus help us to figure out the long term harm which AI might bring to society.
- c. We need to also build a system of checks and balances with several AIs so that they can check on each other and, as a whole, can act as a dependency network for decision making.
- d. As far as the ethics of AI is concerned, we certainly need an ethic charter for the further development of Robotic research and we need to set up operational ethics committees for robotic research advancements.
- e. Public bodies have to speed up the decision-making policies regarding changing technology. As of now, they are way too slow to cope with the exponential growth of technological advancements and that could be a possible solution to mitigate the challenges of the impact of AI on employment and the economy.

Conclusion

It seems that we are standing at the point on the timeline where it is really difficult to foresee the future of humanity in the context of Artificial Intelligence. We always embrace new technologies which seemed to be changing our way of living. However, the important fact here is that the kind of change we are embracing must bring a positive outcome for the welfare of society and eventually of humanity. Artificial intelligence is the kind of change that we certainly should not take for granted. It is different from any other technology which humanity has ever developed and the fact which makes it unique is its ability to act autonomously. It is the change which not only starts exhibiting soon its positive impact on society but equally its severe negative impacts as well.

So, if we are embracing it as a change that is expected to change the way we live, then we should be prepared also to face the consequences in different realms such as employment, privacy, and eventually, the very existence of humanity itself is being put into serious risk. However, whatever be the case, we certainly need a legal policy framework that can respond to mitigate the challenges associated with AI and compensate the affected parties in case of a fatal error. Hence, let me conclude with a note of caution that if we ignore social bugs of AI, it could be a serious threat to humanity. When we overpower God's image by trying to make something superpower than him, everything gets into a destructive one. It is a caution for all humanity to have cosmotheandric vision rather than making intelligible power than God. We need to stop overpowering others, instead promote a loving, living, and vibrant relationship with everyone.

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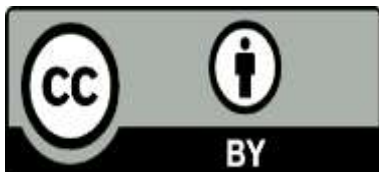
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