Age of the Machine Human: The Choice Rests in the Hands of the Creator

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Abstract: Evolution is a continuous process that enabled humans to act and think in a certain manner. The cognitive evolution of man enabled him to develop tools to assist his survival. The advent of the technological progression perceived this development in form of "machine learning" and "artificial intelligence." The paper examines the nature of artificial intelligence and its impact on the lives of humans. This paper attempts to contemplate the difference between the humans that segregate them from AI. Over time the lines between the two have blurred. As the machine becomes more human-like, the human began to emulate the attributes of machines. There is, however, a sense of insecurity which has plagued the human due to the advent of AI, which is highlighted in the paper. Lastly, the paper identifies the role that a human plays in this "age of

plasticity" and the co-dependant relation of the human-machine and the human.

"The greatest benefit of the arrival of artificial intelligence is that AIs will help define humanity. We need AIs to tell us who we are." – Kevin Kelly

The story of the evolution of humans can be traced back to seven million years ago when the lineage of *huminis* separated from that of the chimpanzees. The *huminis*, accommodated almost twenty different species of the *homo* genus such as the *Homo erectus*, *Homo neanderthalensis*, *Homo habilis*, etc., some more human-like in nature than the others. However, of all species under the *Homo genus* only the *Homo sapiens* have survived to date. Alongside the physical evolution of the *Homo sapiens*, we have also experienced a cognitive and social evolution.

In each stage of human evolution, man invented tools and technique to make survival easier. The evolution of these tools happened when the primary goal of human life enhanced to include power, occupation etc. instead of only focusing solely on survival. The human has many properties, but one primary factor which actually influences the human decision-making process is the concept of 'fear'. As human evolved so did the concept of fear. If we create a timeline of the concept, we can observe that man learned to fear and demonize aspects of life that he wasn't able to analyse and comprehend. For instance, the fear of thunder and rain which plagued the primitive man disappeared when man understood the phenomena which govern them.

While humans create the technique, it would be ignorant to suggest that most of us can comprehend the magnitude of its impact. It is quite natural that those who do not understand a technique, fear the consequences of the said technique. This aspect of a clear lack of understanding of the creation and its consequences affronts us in the discussions and deliberations surrounding the concept of Artificial Intelligence.

Artificial Intelligence

Contrary to popular belief, the idea of artificial intelligence was conceived in the 20th century itself. The work of Alan Turning was particularly pivotal in these aspects. He was the first to have envisioned the concept of "thinking machines" in 1950. The word "artificial intelligence" on the other hand, was coined by John McCarthy in 1956, who furthered the work initiated by Turning. To actualise his thoughts and ideas, he formulated a proposal on 31st of August, 1955 as a part of the 'Dartmouth Summer Research Project of 1956.'

The scope of artificial intelligence, as envisioned by McCarthy and Turning revolved around the concept of Machine Learning. They were highly fascinated by the idea that a machine could learn and enhance its capabilities like that of humans. While the proposal formulated by McCarthy and others had much to offer, they faced obvious limitations owing to the technology or rather the lack thereof. McCarthy's work found merit with the advent of the age of computers, which not only simplified technology but essentially made it a part of our daily life.

A common man's understanding of Artificial Intelligence stems mostly from the science fictions and the popular culture surrounding it. Any artificial intelligence is seen as an object of doom and a product of the nasty pandora's box. Artificial intelligence, usually projected in the form of a robot, is presented as a superhuman which would eventually be the

downfall of humanity. And while an AI has the potential of being dangerous, is that all it is capable of?

To truly understand AI and the complications of drawing a limit to its impact, we must revert to the explanations provided by McCarthy. McCarthy laid the foundation of artificial intelligence not only on the ability of a machine to learn but also on its capacity to learn without human interference -i.e. autonomy of machines. He set the threshold as, "giving the computer to do things, which when done by humans, are said to involve intelligence."

For decades now this definition has been a source of controversy. Though McCarthy gave a cohesive definition to 'artificial intelligence', the terms used were as vague as they could get. There was no telling what the limit of the autonomy prescribed could be or essentially what could be categorised as "human intelligence". However, due to the non-availability of one common definition, we can rely on the general understanding between various scientists which is that: "Artificial Intelligence, is simply the ability of a machine to learn by itself."

Artificial Intelligence: The Semantics

The term "artificial" signifies that there is a human element involved, which creates a plethora of differences between artificial intelligence and intelligence in itself. The machine is designed for one particular purpose, therefore the scope of its learning is limited to the purpose alone. For instance, AlphaGo and AlphaGo Zero were created specifically to play certain kinds of games only. The ability to work is derived from a set of algorithms' and data which is programmed into the machine. They are programmed to not just store data but to analyse and use data to build and enhance their abilities.

AI is often seen as a culmination of data analytics and machine learning, the product of which is intelligent decision making. As specified earlier data is like the oil in the process of machine learning. Any machine learns by interpreting the underlying trend in the general decision-making process. The term "intelligence" in AI refers to this decision-making process that the machine arrives at by considering various conflicting values. In the process of developing an AI, this proves to be the most challenging stage, because it is seemingly impossible to imagine all possible outcomes of each decision that could be taken to ensure that a particular goal is achieved.

Is Artificial Intelligence Human?

Any machine whether designed to be an AI or not is constructed by a human mind but is not human. The debate to segregate an AI from a human begins here. The scientists and professors who envisioned the creation of AI wanted it to be as human-like as possible. For decades men and women strived to make the decision-making process of an AI emulating that of an ordinary, prudent human. Owing to their efforts we have now reached a point in time where an AI can be created to imitate humans or as Jacques Ellul remarked the "age of plasticity". With such a significant change in the times, new fears and new ideas emerge. The pertinent question now is that while AI is becoming more human-like by the day, can we envision a time where machines replace humans?

The answer to that question would have to be in the negative only. The main reason being that most of AI, presently being developed is narrow or weak AI. A weak AI is simply one work or is built for **one** specific purpose. No matter how much the AI develops, if we change fields and place them in differing situations, they would not be able to apply the knowledge they possess to adapt in the situation as easily as humans. Therefore, while AI can possess the qualities of humans and emulate them,

they are not human per se nor can they be considered as a potential replacement for humans.

Human and Artificial Intelligence

The entire debate surrounding the human-AI dynamics has developed recently due to the popularisation of technology in general. Today, most of us have or wish to possess a smartphone. Interestingly, most of us don't realise that the phone becomes "smart" due to the components of AI which are programmed into it. Essentially, it gives the various applications the power to interact not only with themselves and the user but also with one another. The applications observe the preferences of the user and offer them items similar to one often used by them. We interact with this form of AI almost daily without actually realising it.

The relationship between an average human and AI is almost inseparable. But we must proceed with the caveat that they are not the same. In this age of plasticity, as identified by the French writer Jacques Ellul in his book "The Technological Society," it is deemed necessary by the majority of the human folk to distinguish the AI and themselves. There is a need amongst the majority to showcase that while an AI is designed to emulate humans, it is not human.

The Definition by Distinction

While it is a human tendency to identify and attribute characteristics to their kind, there is also a tendency to exclude individuals or groups and communities from their definitions. It is imperative to understand this concept of differentiating "us" and "them," to understand the role of AI in the lives of humans. At varied points in history, humans have adopted a negative definition of "us." For instance up un till the 19th century, there was a culture to identify the women in society as property of men and thus,

not significant enough to be identified as "human" in their own right. The tendency to own people as slaves only due to a difference in place of origin and their skin colour also created a layer of distinction and differentiation in human. In the present time and age, the is a need to exclude Artificial Intelligence from the definition of humans, to define attributes of human themselves.

Analysing the above facts we might need to rethink whether there is much of humanity left in humans themselves. to concretely separate them from their machine counterparts. For instance, in the home for the elderly in the United States, there are bots deployed who not only interact with the elderly but also serve and please them. The elderly who have been cast aside on their own for varied reasons are looked after by machines who supposedly lack emotional quotient. Most elderly, feel more comfortable with these machines than with their own kind, so while we remain human, the ability to be humane must be analysed.

Role of Human in the Age of Artificial Intelligence

Despite having evolved through various stages, humans never felt the need to define what does it actually mean to be human? Is it just our physical attributes that segregate us or do humans have more to them than just biology? It is imperative to understand human and humanity to comprehend the need or the ability to stay human in the age of artificial intelligence.

The definition of the human starts as one purely biological. The term human comes from the Latin term *humanus* which means "man or human." Most definitions of human define a human as having certain characteristics belonging to mammals of humankind. It is these characteristics that differentiate humans from machines and machine learning in the present age.

Immanuel Kant, the German philosopher, identified one of the major attributes of humans to be – rationality. The ability to be rational is to differentiate between "what ought to be?" and "what it is?." Thereby, humans possess not just the ability to think but to think at various levels. For Viktor Frankl, the identity of a human includes the ability to assign "meaning" and the only way humans move forward is by assigning meaning to events in time. Humans emphasize the need for meaning to create a purpose in life. Without purpose, according to Frankl humans find it difficult to survive.

The paper analyses the role of AI in the increasingly technological world while simultaneously highlighting the relation and power dynamics shared between the Human and the Machine. A special focus is aimed at understanding the vulnerable and insecure position of humans and human relations in the "age of plasticity."

Machines decidedly do not fit in either of these definitions. Machines do only what they are programmed to do. They lack the ability to assign meaning to events as humans do. To humans, an object has not just physical meaning but the emotional meaning attached to it but the machine cannot emote in the same manner. They do, however, have a purpose but it is not something that they discover but are programmed to do. They do not have to think in multiple layers or rather they unable to. While scientists are working on the ability to develop rationality amongst the machines, they have little to no success. The machines unlike humans, accept and observe everything on the nominal value. They utilise data available to them or collected by them to learn and unlearn behaviour.

D. Garg: *Hands of Creator*

Humans, on the other hand, are complex creatures who are governed with an inherent sense of morality. Morality in its most basic sense would mean the ability to differentiate between wrong and right. For ages now, the most forceful argument against AI is that they lack morality, which for the most part is true. While morality is something that comes naturally to humans, it is difficult for machines to have the same despite being programmed for the same. For machines concepts like right and wrong are ironclad- black and white, their inability to see the grey area in the middle, would prevent them from being human in every right.

These abilities- rationality, morality and the ability to assign meaning to everything that happens, is natural to *Homo sapiens.* While not enough, but this creates a world of difference between a human and a human-machine i.e. artificial intelligence. To summarise, the ability to be connected to meaning, to identify the grey area and to preserve such qualities is essential in a world where being attached to a wire is gaining prevalence. In simple terms being human in the age of AI is the ability to emote and communicate without being pre-programmed to do so.

Conclusion

There is a new need within humans to distinguish themselves from machine humans due to a fear that they would eventually replace humans and take over human society. While many science fiction movies make it look plausible, the present technology is not to replace humans but essentially to assist them. The present generations of the machine are the new slaves. Most psychologists and scientists explain the power dynamics in simple terms. Never in the history of the world has anyone intended to create something more powerful than themselves. Similarly, the narrow AI which is being developed is not going to replace humans, simply because it cannot do so.

The present AI has a lot of flaws but it is a tool in the hands of humans at the end of the day. There is a possibility of evil but there is more potential for good. Whether we like it or not we have entered into the age of AI and not only has AI become more like us but we emulate their characteristics too. Thereby, we are inseparable and highly dependant on AI for everything. Needless to say, this AI shares our fears and our biases as well. When the creator is flawed the creation is equally flawed.

To be human in the age of AI should create a position of responsibility and not that of fear. The ability to make machines think like us is a great power that has to be limited by a keen sense of responsibility. Technology is responsible hands is always a boon. As Charles Dickens remarks, "It was the best of times, it was the worst of times," and it is more true for AI than we can perceive. The positive use of AI envisages great possibilities for development and in the same manner, AI is a weapon for mass destruction. The choice then rests in the hands of the creator and his capacity to be humane.

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