

MAN AND MACHINE

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ABSTRACT

Computers can beat world chess players, control satellites and spaceships thousands of miles from earth. Human beings on the other hand are gifted with creativity, that makes them remarkably distinct and superior to even super-fast computers.

The paper addresses logical scientific arguments that describe the behaviour of artificial intelligence (AI) to think, act, understand and behave as conscious entities. All these arguments subsequently indicate the lack of concrete decision making ability for machines.

The paper also provides insights from Vedanta to outline remarkable distinctions between conscious and mechanistic intelligence.

INTRODUCTION



1996: Gary Kasparov defeated Deep Blue, IBM's Chess Computer

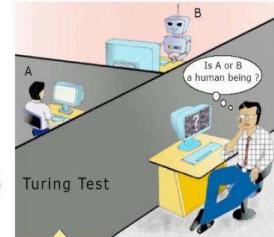
1997: IBM's Chess Computer defeats Gary Kasparov.

Kasparov suggested that humans may have helped the machine during the match.

The algorithm was modified in between games to understand Kasparov's playing style and avoid a trap that the AI had fallen into before.

Mechanistic processing through AI though fast does not constitute thinking or intelligence.

MACHINES ACTING HUMANLY



AI machines would fail to generate correct emotional responses when interrogated by well-trained judge.

No computer so far has passed the Turing test.

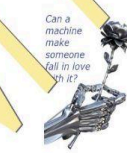
MACHINES THINKING HUMANLY



WORD GAME: According to AI, using a simple set of rules, the words "CARPET" and "MEAT" are considered equal, and the words "LAP" and "LEAP" are considered to be unequal. However, none of these pairs has any equality nor inequality relation as understood by the machine.

AI performance is good with information games (such as Chess). However, some games such as Poker, AI in perfect information games that involves bluffing, cannot be well performed by AI when compared to humans.

CAN MACHINES BE CONSCIOUS ?



Objections to possibility of intelligent machines:

- i) Argument from Disability: Eg: Machines do have kindness, friendship etc.
- ii) Mathematical Objection (Goedel's theorem): Machines cannot establish their truth of existence where as humans can.
- iii) Argument from Informality: Human behaviour cannot be captured into a simple set of rules.
- iv) Argument from Consciousness: Machines are unaware of their own mental states and actions.
- v) Chinese Ball Room Argument: Just carrying out the steps of a computer program does not guarantee cognition.

CAN MACHINES BE CREATIVE ?

Most AI models of creativity only explore spaces, not transform them, as they do not have self-reflexive maps enabling them to change their own rules.

Inducing creativity using heuristic strategies or through "creativity training" has very limited success.

AARON, is a 20 year long project by H. Cohen in machine creativity, producing original art work. Cohen conveys that AARON is not truly creative. He conveys that "Program can be written to act upon anything the programmer wants", but that's not the same as the individual human acting upon what he wants himself"

INSIGHTS FROM VEDANTA



- Consciousness uses brain as its computing instrument, just like we use paper or a calculator.
- Human intelligence not produced from Mechanistic process. It is property of the conscious living force within the body, the spiritual particle, soul. Human beings have advanced intelligence than animals and all life forms are intelligent to various degrees.

CONCLUSIONS

- A broad outline of AI is presented to defy the claim that one day machines will have characteristics like man.
- There is a fundamental difference between man and machine and this gap can never be bridged.
- Insights from Vedanta provide proper guidance and direction to humanity. Man can understand the purposes of Vedanta where as Machines cannot.