

SINGULARITY JUST A DREAM....!

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Abstract

This paper is an analysis for and against the term SINGULARITY. Singularity is an era in which intelligence will become increasingly nonbiological and trillions of times more powerful than it is today—the dawning of a new civilization that will enable us to transcend our biological limitations and amplify our creativity. Ray Kurzweil in his book 'The singularity is near' discusses on the possibility of technology becoming too smart like robots working as a household machine. Robots are machines with programmed brains, so what will happen if its brain becomes like the human brain? If it commits mistakes like we do at times then what will happen? He also talked about reverse engineering of the human brain that is understanding the secret of human brain. If Moore's law continues to hold true then possibly in 2045 computers will become so smart that they will not need any human interaction. Possibly, machines may program themselves as they wish. This paper is an attempt to prove the excellence of human brain than robots and artificial intelligence.

Introduction

Each day is a day of new inventions. Every blink gives us a new view to see things differently. Thus, technology is advancing very fast. Technological developments are no more surprising to us. We all now belong to a silicon valley, where each and every work we do depends on technology. We are hung up completely without technology, this techno virus has effected every human being and we all are now its victims.

In the past 40 years there has been an explosion in technological advancement all leading to the technology that we use today, weather it is a cell phone, TV, car, AC or any other thing that we use. The way we keep making things smarter, we have to ask ourselves how smart it is to be smart? Surely all these machines make our life easier but what happens when they become too smart? What effect will it have on how we communicate or how we interact? How will we correct our mistakes? According to "singularity summit 2007" the term "singularity" means the point where computer or artificial intelligences stops behaving in a predictable way.

Kurzweil also discusses the possibility of robots becoming smarter than human brain. But if something like that were to happen, how would we make sure they are what we want them to be? If you give something a brain that works similar to ours what happens if it makes mistakes like we do?

Talks on technological singularity since some time is hot news. Even though we cannot say what will be on the other side of singularity, that is, what kind of world our super intelligent brains will provide us, Kurzweil and others believe that our human minds, at least, become immortal because we'll be able to either download them, or internally repair them with our collective super intelligence. Our minds will continue with or without our upgraded bodies. The singularity, then, becomes a portal or bridge to future. Technological singularity refers to the hypothetical future emergence of greater than human intelligence through technological means. The term was coined by science fiction writer Vernor Vinge, who argues that artificial intelligence, human biological enhancement or brain-computer interfaces could be possible causes of the singularity. The concept is

popularized by futurists like Ray Kurzweil and it is expected by proponents to occur sometime in the 21st century. Now several questions arise in mind when we talk of singularity:

- Will this happen?
- Will machines take over humans?
- Will they fight with each other and end up with destruction?
- How nano technology is the biggest threat to singularity?

All these questions end up with several answers or views like :

- It may happen.
- Machines may try to overtake earth.

Machines are slaves to technological advancement which come out of innovative thinking, combining senses with brain which only human beings have. Some people like Steve Talbott author of "Devices of the soul" "battling for ourselves in an age of machines" for instance suggests that machines play a very important role in our lives which we might not see as dangerous. He is worried about the future that technology might bring. His book tell a lot of stories which conclude that technological advancement would lead to destruction of humans. A 1993 article by Vinge, "The Coming Technological Singularity: How to Survive in the Post-Human Era", was widely disseminated on the internet and helped to popularize the idea. This article contains the oft-quoted statement, "Within thirty years, we will have the technological means to create superhuman intelligence. Shortly after, the human era will be ended." Vinge refines his estimate of the time scales involved, adding, "I'll be surprised if this event occurs before 2005 or after 2030."

Vinge predicted four ways in which singularity could occur:

- The development of computers that are "awake" and superhumanly intelligent.
- Large computer networks (and their associated users) may "wake up" as a superhumanly

intelligent entity.

- Computer/human interfaces may become so intimate that users may reasonably be considered superhumanly intelligent.
- Biological science may find ways to improve upon the natural human intellect.

Vinge continues by predicting that superhuman intelligences will be able to enhance their own minds faster than their human creators. "When greater-than-human intelligence drives progress," Vinge writes, "that progress will be much more rapid."

Vinge named this event "The Singularity". In 1993, Vernor Vinge associated the singularity more explicitly with I. J. Good's intelligence explosion, and tried to project the arrival time of (Artificial Intelligence) using Moore's law, which thereafter came to be associated with the "Singularity" concept.

In 2009, leading computer scientists, artificial intelligence researchers, and roboticists met at the Asilomar Conference Grounds in California. The goal was to discuss the potential impact of the hypothetical possibility that robots could become self-sufficient and able to make their own decisions. They discussed the extent to which computers and robots might be able to acquire autonomy, and to what degree they could use such abilities to pose threats or hazards. Some machines have acquired various forms of semi-autonomy, including the ability to locate their own power sources and choose targets to attack with weapons.

Some experts and academics have questioned the use of robots for military combat, especially when such robots are given some degree of autonomous functions. A United States navy report indicates that, as military robots become more complex, there should be greater attention to implications of their ability to make autonomous decisions. Some support the design of "friendly AI", meaning that the advances which are already occurring with AI should also include an effort to make AI intrinsically friendly and humane.

Isaac Asimov's three laws of robotics is one of the earliest examples of proposed safety measures for AI:

- A robot may not injure a human being or, through inaction, allow a human being to come to harm.
- A robot must obey orders given to it by human beings except where such orders would conflict with the first law.
- A robot must protect its own existence as long as such protection does not conflict with either the first or second law.

Additional laws included in some stories were described as follows:

- *Zeroth Law*: A robot may not harm humanity, or through inaction allow humanity to come to harm.
- *Minus-One Law*: A robot may not harm sentience, or through inaction allow sentience to come to harm.
- *Fourth Law*: A robot must establish its identity as a robot in all cases.
- *Alternate Fourth Law*: A robot must reproduce, unless such reproduction would interfere with the first or second or third law.
- *Fifth Law*: A robot must know it is a robot.

The laws are intended to prevent artificially intelligent robots from harming humans.

Google has introduced the Robot Operating System (ROS) for controlling robots and machines via cloud computing. Increasingly our machines will refer to the cloud for their object recognition, control and other processing functions. As the cloud develops singularity, will humans find it necessary to plug themselves in too, to survive and compete with the machines? Will we, by plugging in to the cloud, lose, forget or have taken from us, that which makes us ourselves?

Humans are very good at recognizing patterns. We even think we find patterns in places where no pattern really exists. Some good examples are the

constellations. An astronomical constellation is a manmade concept. The different points of light that make up Orion or the Big Dipper bear no natural relation to one another -- in fact, the stars that make up these constellations are billions of light years apart. Yet when we look up at the night sky, our minds begin to group stars into patterns and shapes. It is this pattern-seeking behavior and imaginative vision that allows us to recognize people and objects.

'They are copying a brain without understanding it'

The brain is still the overall winner in many fields when it comes to numbers. However, because of its other commitments, the brain is less efficient when a person tries to use it for one specific function. The brain is as we can put it, a general purpose processor when compared to the computer. It therefore loses out when it comes to efficiency and performance. We have given the estimate for total human performance at 100 million MIPS, but the level of efficiency for which this can be applied to any task may only be a small fraction of the total.

Consciousness in human and robot minds

Scientists have tried to develop intelligence and common sense in robots but they are not able to understand the consciousness of human mind and its predictions – its sixth sense.

Conclusion

Inventions are an ongoing process. We cannot stop it. So, definitely we need to think about a way to keep science in human favour. Singularity seem to be approaching but it can never overtake human mind, as the mind that can develop a machine can also develop another advanced machine. There is no end to advancement. Scientists are aware of such things, so as to keep the machines subordinate to our minds. Like a source code can be programmed, accordingly, another computer can be used to keep an eye on our machines. For e.g. Doctors are replaced by machines to prescribe medicine to patients but it can only prescribe programmed medicine. But lacks

an IQ which is an human element. We can develop touch sensitive machine but it cannot differentiate between touch so machines can never be as intelligent as human brain.

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