Robots and Artificial Intelligence

## Report 2

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August 17, 2016

A new age of technology has emerged. The first and a half decade will be known as the cell phone revolution. Today, society has moved on from the craze of phones. Tech giants such as Google and Microsoft are no longer trying to make phones as thin as possible, and screens as big as possible. Now these tech firms are venturing a new horizon. The horizon where man’s best friend is not the dog, but a machine that imitates humans – a robot!

Microsoft are regarded as the master of computer technology, while Google and Apple are the founders of the smartphone. Now these tech giants are competing in a race to see who achieves the first mass-produced robot. However, it seems that these companies are not the only ones trying to gain control of the robotics industry.

Hanson Robotics has created several robots in the past few years. By far, they are the leading designers in robotics. Their robots are distinct and unique when compared to other robots. Hanson’s robots are humanoid – meaning that they look like humans. Their robots are so advanced that they can emulate emotions on their faces. They can speak on their own and have their own personality.

Their latest robot, is a robot named Sophia. Sophia is their most advanced robot in terms of intelligence. She can speak in several languages, identify expressions and has given many interviews on her own accord. She has the computational capability equal to a 4 year old.

One of the most debated topics in the robotics field is artificial intelligence. As perceived in movies such as Terminator or I, Robot, robots take over the world. This is humanity’s worst fear when it comes to artificial intelligence. Robots becoming more intelligent than humans and decide to make humans their slaves. However, this is a long way off. Google is making a anti-robotic takeover mechanism, where all robots will contain a ‘kill’ switch that will if robots are causing harm to humanity, then they are to be terminated.

The greater the advancement in robotic technology the greater the intelligence the robot will have, and the greater humanity will be at risk. This is what has happened in the last few years. Robots have been advancing quickly and can do things that once would have been thought impossible. With the advancement in hardware, there would also be improvement in software, which is the intelligence of the robot. Therefore, if the intelligence is equal to that of a human, then there is a chance of a Terminator scenario to take place.

Vernor Vinge and Ray Kurzweil are computer scientists and futurists. They are most famous for their prediction for technology of the future. Ray Kurzweil predicted that a computer will be built that will be able to beat a human at chess. This has already happened where the computer Deep Blue beat world champion Garry Kasparov in 1996. He also predicted that there will be self-driving cars. Google has started to test their cars, and Tesla has already released its self-driving car. Vernor Vinge predicts that by the year 2023, humans will “have the technological means to create superhuman intelligence.” ~ “The Coming Technological Singularity” (1993) by Vernor Vinge.

These two scientists have hypothesized the year when Artificial intelligence will have the same processing power as that of a human or greater and be able to improve on its own. They term this year as the Technological Singularity and it will occur during the year 2045. This prediction is coincidentally also the year when the processing speed of computers will stop increasing. This is due to Moore’s Law. It states that every year computer processing speed will double. Although it will end near the year 2045 because processor pin sizes won’t be able to be any smaller as it would then defy the laws of physics.

Vernor Vinge foretold 4 ways that artificial intelligence will be created.

1. The development of computers that can think for themselves and are superhumanly intelligent.
2. Networks might become so intelligent that they might start thinking for themselves (such as Internet).
3. Computer/human interfaces become so porous that user may become superhumanly intelligent.
4. Biological science may find ways to improve upon natural human intellect (cyborgs).

Robots and artificial intelligence exist together and thinking about one without thinking about the other is next to impossible. The two words are intertwined. The future will be full of robots. That is a definite. The question is will the robots have artificial intelligence. Will humanity still be around? Time to get on a DeLorean and find out!

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