

Renowned scientist Stephen Hawking warns that the development of full artificial intelligence could lead to the end of humanity. He expresses concerns about AI surpassing human intelligence and re-designing itself at an ever-increasing rate. However, others like Rollo Carpenter, creator of Cleverbot, believe AI will remain under human control and could solve many global problems. Elon Musk also shares Hawking's concerns, calling AI our biggest existential threat. Despite the risks, Hawking embraces communication technologies, albeit with concerns about internet security. He appreciates his computer-generated voice, which has become his trademark.

1. **Existential:** This word relates to existence or the nature of being. In the context of the text, it refers to concerns or threats that impact the very existence or essence of humanity, such as those posed by artificial intelligence.
2. **Motor:** In the context of the text, "motor" likely refers to "motor neurone disease," also known as amyotrophic lateral sclerosis (ALS), which affects Professor Stephen Hawking. It's a condition that affects the motor neurons, leading to difficulties in movement and speech.
3. **Adopter:** An adopter is someone who takes up or uses something new. In this case, it likely refers to Professor Stephen Hawking, who has enthusiastically embraced various communication technologies, including the computer system he uses to communicate, despite his physical limitations.

Activity 3.

1. **Turing test:** This is a test proposed by Alan Turing, a famous computer scientist, to determine a machine's ability to exhibit intelligent behavior indistinguishable from that of a human. In the test, a human evaluator interacts with both a human and a machine through a text-based interface without knowing which is which. If the evaluator cannot reliably distinguish between the human and the machine based on their responses, the machine is said to have passed the Turing test.
2. **Three Laws of Robotics:** These are fictional rules devised by science fiction author Isaac Asimov to govern the behavior of robots in his stories. The three laws are:
 - A robot may not injure a human being or, through inaction, allow a human being to come to harm.
 - A robot must obey the orders given 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 the First or Second Law.
3. **Sentience:** Sentience refers to the capacity for subjective experience, awareness, and consciousness. A sentient being is capable of experiencing sensations, emotions, and thoughts, and is often associated with higher forms of intelligence and self-awareness. In the context of AI and robotics, achieving sentience is a significant milestone that raises ethical questions about the treatment and rights of artificial entities.
 4. **(Artificial) superintelligence:** Superintelligence refers to a hypothetical level of intelligence that surpasses that of humans in every aspect. Artificial superintelligence (ASI) specifically refers to intelligence created by artificial means, such as AI systems, that far exceeds the cognitive abilities of humans. Achieving ASI is a subject of speculation and debate in the fields of artificial intelligence and futurology.
 5. **Algorithmic bias:** Algorithmic bias occurs when an algorithm systematically produces outcomes that are unfair or discriminatory against certain individuals or groups. This bias can arise from various sources, including biased training data, flawed assumptions, or the design choices made by the developers. Algorithmic bias is a significant concern in AI systems, especially when they are used in sensitive domains such as hiring, lending, and criminal justice.
 6. **Existential risk:** Existential risk refers to a risk that has the potential to threaten the continued existence of humanity or drastically alter its future trajectory. These risks could arise from various sources, including natural disasters, pandemics, nuclear war, or emerging technologies like AI and biotechnology. Existential risks are of particular concern because of their catastrophic potential and the difficulty of mitigating them effectively.

Activity 4.

Using the vocabulary words above, complete the following sentences (remember to use the correct form of the word, e.g. verb conjugation or plural noun):

A **superintelligence** would consider humans as nothing more than we consider ants.

- **Algorithmic bias** has resulted in black people and women losing out on jobs because the computer program assumed white men would be favoured for the job.
- If a computer became **sentient**, should it be considered the same as a human?
- PARRY was a computer program that tried to pass the **Turing test** by attempting to trick psychologists into thinking they were talking to a schizophrenic person.

- Stephen Hawking, Bill Gates and Elon Musk have all warned that artificial intelligence poses an **existential risk**, and that its use must therefore be highly regulated.
- The main problem with the **Turing test** is whether a robot can actually tell the difference between a human and a robot.

5. Artificial Intelligence Writing Task

Write about your opinion of artificial intelligence. Try to use some of the vocabulary you learned earlier in this lesson. In your answer, you could include some of the following topics:

- The potential benefits of AI.
- The dangers of AI.
- Whether AIs would be friendly, or whether they would pose a threat to us.

Artificial intelligence, or AI, is a topic that stirs both excitement and concern in today's society. On one hand, there are numerous potential benefits that AI could bring to our lives. For example, AI-powered technologies have already proven to be very useful in various fields, such as healthcare, finance, and transportation. These technologies have the potential to improve efficiency, accuracy, and productivity in many tasks, ultimately leading to a better quality of life for people around the world.

However, it's also important to acknowledge the potential dangers associated with AI. As renowned scientist Stephen Hawking has warned, the development of full artificial intelligence could pose a threat to the existence of humanity. There are concerns that AI systems could become so advanced that they surpass human intelligence and capabilities, leading to unforeseen consequences. For example, there's a fear that AI systems could develop their own agendas and act in ways that are harmful to humans.

Despite these concerns, some experts are more optimistic about the future of AI. They believe that humans will remain in control of the technology for the foreseeable future and that AI has the potential to solve many of the world's problems. For instance, Rollo Carpenter, the creator of Cleverbot, believes that AI could be a positive force for good, helping to address pressing global issues.

In the end, the debate over the future of AI is complex and multifaceted. While there are legitimate concerns about the potential dangers of AI, there's also a great deal of optimism about its potential to bring about positive change. As we continue to advance in the field of artificial intelligence, it's important to proceed with caution and consider the ethical implications of our actions. By doing so, we can ensure that AI remains a force for good in our world.

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