No amount of ingenuity, however, will fully eliminate the threat of job displacement. Addressing this concern is the third goal of human-centered A.I.: ensuring that the development of this

35 technology is guided, at each step, by concern for its effect on humans. [...]

Adequately facing these challenges will require commitments from many of our largest institutions. Universities are uniquely positioned to foster connections between computer science

and traditionally unrelated departments like the social sciences and even humanities, through interdisciplinary 55 projects, courses and seminars. Governments can make a greater effort to encourage computer science education, especially among young girls, racial minorities and other

45 groups whose perspectives have been underrepresented

in A.I. And corporations should combine their aggressive investment in intelligent algorithms with ethical A.I. policies that temper ambition with responsibility.

No technology is more reflective of its creators than A.I. It has been said that there are no "machine" values at all, in fact; machine values are human values. A human-centered approach to A.I. means these machines don't have to be our competitors, but partners in securing our well-being. However autonomous our technology becomes, its impact on the world – for better or worse – will always be our responsibility.

1 imminent • 2 preoccupations • 3 aware of • 4 extent

Fei-Fei Li, , 7 March 2018

Text C: Stephen Hawking

If a superior alien civilisation sent us a text message saying, 'We'll arrive in a few decades', would we just reply, 'OK, call us when you get here, we'll leave the lights on'? Probably not, but this is more or less what has happened with AI. Little

- 5 serious research has been devoted to these issues outside a few small non-profit institutes.
- Fortunately, this is now changing. Technology pioneers Bill Gates, Steve Wozniak and Elon Musk have echoed my concerns, and a healthy culture of risk assessment and awareness of societal
- implications is beginning to take root in the AI community. In January 2015, I, along with Elon Musk and many AI experts, signed an open letter on artificial intelligence, calling for serious research into its impact on society. In the past, Elon Musk has warned that superhuman artificial intelligence is capable of
- 15 providing incalculable benefits, but if deployed incautiously will have an adverse effect on the human race. He and I sit 40 on the scientific advisory board for the Future of Life Institute, an organisation working to mitigate existential risks facing humanity, and which drafted the open letter. This called for
- concrete research on how we could prevent potential problems while also reaping the potential benefits AI offers us, and is designed to get AI researchers and developers to pay more attention to AI safety. In addition, for policymakers and the general public the letter was meant to be informative but not

- alarmist. We think it is very important that everybody knows that AI researchers are seriously thinking about these concerns and ethical issues. For example, AI has the potential to eradicate disease and poverty, but researchers must work to create AI that can be controlled. [...]
- 30 Recent developments in the advancement of AI include a call by the European Parliament for drafting a set of regulations to govern the creation of robots and AI. Somewhat surprisingly, this includes a form of electronic personhood, to ensure the rights and responsibilities for the most capable and advanced
- Al. A European Parliament spokesman has commented that, as a growing number of areas in our daily lives are increasingly affected by robots, we need to ensure that robots are, and will remain, in the service of humans. A report presented to the Parliament declares that the world is on the cusp of a new industrial robot revolution. It examines whether or not providing
- legal rights for robots as electronic persons, on a par with the legal definition of corporate personhood, would be permissible. But it stresses that at all times researchers and designers should ensure all robotic design incorporates a kill switch.

Brief Answers to the Big Questions, Stephen Hawking, 2018



Your 2 Should A.I. be regulated?

Imagine you participate in a TV debate about A.I. Each participant is assigned a different role: TV presenter, scientist, entrepreneur, professor of Computer Science. Discuss the following question: should A.I. be regulated?

HELP!

Expressions

- in my opinion...
- contrary to... ≠ like...
- I agree with... ≠ I disagree with...
- on the one hand... on the **o**ther hand...