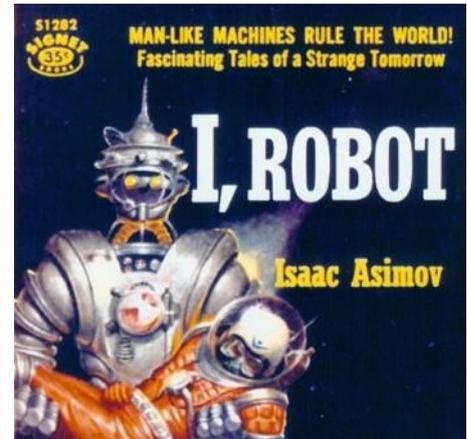


Artificial intelligence: the biggest science scare of all?

What do you most fear for the world's future? Nuclear war, environmental catastrophe, terrorism, alien invasion, asteroid collision, genetic modification – they've all been written about and explored in films and other popular culture. But for many people, the big scare is artificial intelligence (AI). While we benefit enormously from advances in automation and depend increasingly on rapid easy access to information, there are those who fear that it will grow out of human control. Will computers, robots and other machines take over the world?

A popular image is the android robot that eventually becomes indistinguishable from a human being but has greater physical and mental capability. It's perhaps one of the most common fears about AI developments and was a major ingredient of the writings of Isaac Asimov, probably my favourite science fiction author, with his 'Three Laws of Robotics'. The 2001 Spielberg film *AI* explored this with the story of a robot substitute for a young boy, programmed with the ability to love, with disturbing consequences.



Other fantasy has featured robots and machines resembling humans to a greater or lesser extent but easily told apart from them, from the humorous antics of *Short Circuit* (1986) to the cyborg menace of *The Terminator* (1984 onwards) deriving its terror from its power and seeming indestructibility. The Machines of *The Matrix* Trilogy (1999–2003) didn't need to look human: they dominated by subjecting humans to the artificial reality of a cosmic computer simulation.

Outside fiction, nobody has yet come anywhere near developing a convincingly humanoid machine. The world actually contains many, many robots, but most have shapes designed to suit their particular tasks and purposes, like the multi-jointed arms of production lines such as those in car factories. This form of AI, with a specific focussed application, is certainly of concern to many because they see their livelihood threatened by such machines that can do their jobs more efficiently and accurately. And it doesn't just threaten manual workers: some delicate surgery is now being done successfully by robots, for example, and financial stock dealing is increasingly being done by computer programs.

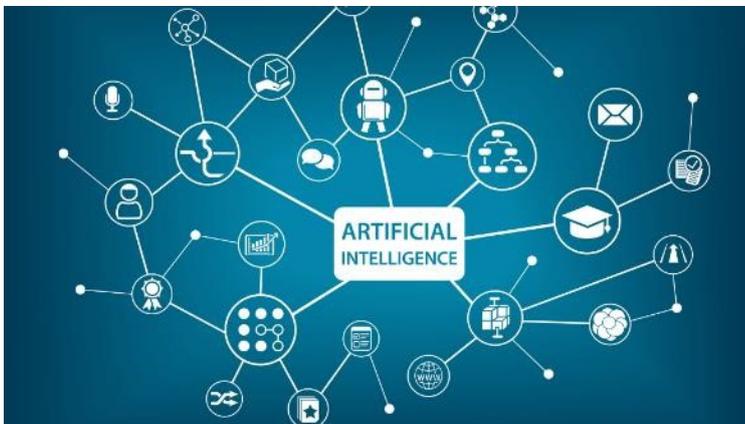
I went to a 'Christians in Science' conference in November on the topic 'What it means to be human in an age of machines'; it tackled a number of issues connected with AI, including ethical as well as technological matters. One speaker, a leading computer scientist, gave his opinion that robots, of whatever design and appearance, are not the



greatest AI threat we face. We should instead be concerned about what is known as 'Big Data', the collecting together and analysis of masses of information that can be put to all sorts of purposes. We constantly give away information about ourselves through our electronic activities, whether it be internet searches, online shopping, store loyalty cards, or payment methods such as credit cards and Paypal. Have you ever thought how much about



you is known by the likes of Google, Amazon and Facebook? And what will they do with it all? The Chinese government is well known to tap into the country's centrally controlled main social media service. It could never happen here... could it? Electronic and digital security – personal as well as national – is one of the major problems of our time.



Artificial Intelligence is, of course, rather like many other areas of science and technology, such as nuclear energy, medicinal drugs, transport systems, communications and the internet. In itself it is morally neutral: it is the development and practical application of underlying scientific knowledge about how things work. But the applications can be for good or bad, and sometimes it can be rather ambiguous.

The potential benefits of AI include greater efficiency and productivity, safer operations, more leisure, and a generally better quality of life across the world. But this won't happen without conscious deliberate decision based on a desire to do good by those who have it in their power to do so. Wrongly used, it can increase inequality, exploitation, and disadvantage for many. Those who make the decisions need to be held to account and not allowed to hide behind huge faceless organisations, corporations, and government agencies. We've seen a lot of blame shifting and heard many lame excuses from powerful people in this area recently.



Just think what you're doing when you use social media and the internet, or swipe a plastic card across a reading device. What are you telling someone about yourself, and what might they do with the information?

Bill Clegg

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