

March of the machines

adapted from an article by **James Dean**



- 1 The secrets of human life are quietly being transferred to the digital brains of machines. Every second, they learn more about our foibles by quietly digesting the vast amounts of personal information we put online. Social networks, smartphone apps and countless internet-connected services are helping machines to learn about us so quickly that by 2025 we will be able to talk to artificially intelligent personal assistants as if they were humans.
- 2 The evolution is being accelerated by a process known as “machine learning”, whereby a computer is fed huge amounts of data from which it is able to draw its own meanings, says Peter Donnelly, professor of statistical science at the University of Oxford. “Twenty years ago, a computer programmer would have to work out a problem and then type out the code that allowed the computer to solve it,” he explains. “With machine learning, they programme the steps that allow the computer to learn the solution to the problem.” He added that the expansion of the internet and the increased power of computers had revolutionised the field and that ten years from now we would be using and relying on complex apps beyond our current imagination.
- 3 Zoubin Ghahramani, a professor of information engineering at the University of Cambridge, said: “There are all sorts of forms of robot intelligence already affecting our lives. Every aspect of your activity on Facebook is controlled by this intelligence – what appears in your news

feed, what adverts it shows you. Your smartphone knows things about you – your priorities, what it should remind you about, clear recommendations it could make.”

- 4 There will be 32 the progress, however. Paul Newman, principal investigator at the University of Oxford’s mobile robotics group, said: “We’re not going to have something that helps us around the house. I don’t see generalist robots coming for a long time. Intelligent robots will first appear in places where they have a clearly defined role – that’s why there are already so many robots on car production lines. We have evolved extraordinary capabilities as humans, but look at how long it took us to evolve. The idea of a humanoid robot is distorted by science fiction, and at the moment, it is just that.”

The Times, 2015

Tekst 9

- 1p **30** How is the subject of this text introduced in paragraph 1?
A by describing an ideal
B by giving a warning
C by making a prediction
D by presenting an example
- 2p **31** In de tekst komen drie deskundigen aan het woord:
1 Peter Donnelly (alinea 2)
2 Zoubin Ghahramani (alinea 3)
3 Paul Newman (alinea 4)
Geef van elke persoon aan welke van de volgende beweringen aansluit bij wat hij zegt volgens de tekst.
a Computers worden al gebruikt om menselijk gedrag te beïnvloeden.
b Computers zullen voorlopig slechts bepaalde taken van mensen overnemen.
c De bruikbaarheid van computers voor complexe taken wordt onderschat.
d De ontwikkeling van kunstmatige intelligentie gaat snel vooruit.
→ Noteer de letter van de bewering achter de persoon in de uitwerkbijlage.
Let op: er blijft één bewering over.
- 1p **32** Kies bij 32 in alinea 4 het juiste antwoord uit de gegeven mogelijkheden.
A controls for
B doubts about
C limits to
D pressure on
- 1p **33** “The idea of a humanoid robot is distorted by science fiction” (paragraph 4)
What is this statement meant to make clear?
A A truly all-round robot will not be developed any time soon.
B Fiction has inspired researchers to start experimenting with robots.
C Interfering with artificial intelligence is a rather risky activity.
D People should realise that robots are already influencing our lives.

Bronvermelding

Een opsomming van de in dit examen gebruikte bronnen, zoals teksten en afbeeldingen, is te vinden in het bij dit examen behorende correctievoorschrift, dat na afloop van het examen wordt gepubliceerd.