

Nigel Shadbolt AI professor

'The danger is not artificial intelligence, it's natural stupidity.'

Shadbolt agrees that AI machines might do things we don't expect, but says they're not going to take control unless we're stupid enough to invite them to.

Stephen Hawking Cosmologist

'Success in creating AI would be the biggest event in human history. Unfortunately, it might also be the last.'

Hawking worries that the development of artificial 'superintelligence' could be the end of the human race.

Kim Simmons AI Consultant

'AI can help us to focus on what humans are uniquely good at.'

AI may mean that more jobs are done by machines, but Simmons says they won't be able to compete with us in creativity and human-to-human skills.

8.5 Is a robot going to take my job?

- Jessica** Some news stories are already written automatically – sports and business ones, where it's mostly the numbers and names that change. That'll happen more, but I don't think machines will ever replace really good journalists. And I'm going to take time off and write a novel next year. Now, a machine writing a truly great novel about what it is to be human – that's not going to happen!
- Rob** It's obvious machine intelligence is going to take over a lot of the work junior lawyers have done in the past. But I'm fine with that – I'll be happy for a machine to do all the boring research into past cases. A brilliant lawyer has to know how to play on human emotions in court, and a robot won't be able to do that!
- Derek** Well, they say these driverless cars could take over the roads, so my job's not safe. But there's gonna be accidents, for sure, and then there'll be big problems. I mean, like, who'll be to blame? The car? The bloke that programmed it? And I'll tell you what we should do – replace them politicians with intelligent robots! They might have some better ideas ... and tell the truth!
- Hilary** There are some restaurants now that are run by robots. People may go for it because it's new and different, so yes, my job is at risk, but they'll soon miss the human contact. And really, it depends on us to make the most of that. I mean, a slow, rude, unhelpful waiter or a robot – which are you going to choose? But ... a warm, friendly, funny waiter or a robot? The human's gonna win every time.

8.8 A brighter future

I = Interviewer N = Nicole Clarke

- I This week on Brighter Futures we're asking the big question – how can we keep the lights on? Where is our energy going to come from if we have to stop using fossil fuels? Our guest is Nicole Clarke, a professor in energy technology. Nicole, can we really make big cuts in the amount of fossil fuels we use?
- N We'll have to if we're serious about keeping the rise in global temperatures to below two degrees. But we don't have to be gloomy about it – we should start getting excited about other energy options because the possibilities are exciting.
- I OK, let's look at them then. Wind power – people have strong feelings about that, don't they?

N Yes. Some people are pretty negative about wind farms – saying they spoil the countryside. How do you feel about them?

- I Erm, ... I like seeing one or two wind turbines – they can be quite beautiful. But when there are a lot of them together ... I don't know, there is something a bit ... almost scary about them?
- N Mmm. Getting them offshore is the best solution – the UK now has the world's largest offshore wind farm, you know, it's in the Thames Estuary east of London.
- I Wow, I didn't know that!
- N Yes. Denmark is the leader, though. Forty per cent of its electricity comes from wind, and they're going to try and get to 80% by 2035.
- I What about solar power – who's the leader, there?
- N At the moment it's Germany!
- I Really?
- N Yes, which shows you don't need to be a very sunny country to make use of it! On some summer days, 50% of Germany's electricity comes from solar power.
- I But solar panels can look ugly on buildings, can't they?
- N Mmm, but they are getting much thinner, so you don't really notice them, and they can even be part of the windows of a building. It's an amazing fact that just one hour of the solar energy that lands on Earth is enough to power the whole world for a year, so we really do need to make more use of it.
- I And it's obviously great for sunny countries?
- N Yes. It's in those countries that you get the big solar parks that focus the sun's rays to heat water and produce electricity. The Ivanpah Plant in America's Mojave Desert is the biggest. It uses 347,000 mirrors – over a third of a million! It's incredible!
- I Yes, I've seen it – it looks like something from science fiction. It's amazing!
- N But the real dream solution is fusion energy, and that's a real possibility.
- I Fusion energy is nuclear energy, yes?
- N Yes, but it's not like the nuclear energy we use now. It's clean, and it uses hydrogen, which you can make from sea water, so we'll never run out of it. The problem is, you need to do it at temperatures of over 100 million degrees Celsius.
- I Mmm, that sounds like a big challenge.
- N Yes, but it's been done. Only for a minute or two, though, and very expensively. People think fusion energy could be a major source of electricity in 30 to 40 years, but I'm pretty sure we could do it a lot sooner with more research. We haven't spent nearly enough on research into new forms of energy. We just haven't made it important enough because we thought we could keep going with coal, oil and gas, but ... that's all going to change now.

8.11 Changing word stress

- A** The doctors are going to operate on my grandma's knee.
B Oh, dear. I hope the operation goes well.
- A** That's an amazing photograph, isn't it?
B Yes. It's by Mat Hennek – he's one of my favourite photographers.
- A** Do you think it would be preferable to phone people rather than email them?
B Yes, I'm sure everyone would prefer that.
- A** Did you explain the homework to Maria?
B I did, but I don't think she understood my explanation.

8.12 Arranging to meet

J = Jeff K = Kevin

- J Kevin, it's me, Jeff.
- K Jeff! Long time no see. How are you doing?
- J Good, thanks. Listen, I'm up in town later this week for a conference, and I might stay on till Sunday morning. I was wondering if we could meet?
- K Oh, ... I'd love to, but this weekend of all weekends, I'm incredibly busy.
- J Come on Kev! You must have some free time.
- K Hang on! Let me check my diary ... OK ... go for it!
- J Right. What are you doing Friday evening?
- K Let me see ... sorry, I can't do Friday evening – it's my tango class. I really don't want to miss it, 'cos ... well there's this girl in the class that I'm really interested in.
- J Say no more!
- K I finish work early on Friday, though, so I could meet you late afternoon before the class.
- J No, that won't work. The conference doesn't finish till 6.30 on the Friday. Have you got any free time on Saturday morning?
- K Er, ... No. I'm having my hair cut at 10.00 and then I'm meeting my sister. She's going to show me the flat she's thinking of renting, and we're having lunch after that. I'm free most of the afternoon, though.
- J That's no good, I'm afraid. I've arranged to meet some people from the conference – they could be useful contacts. So ... how about Saturday evening – but I'm guessing you're doing something then?
- K Yeah, sorry, the evening's out for me. I'm going to the theatre with some friends – it's been booked for ages. But ... I have an idea. What time are you leaving on Sunday?
- J Late morning. I'm getting the train at 11.55.
- K Well then why don't we meet at the station?
- J Yeah, that's a great idea. We could have a coffee there.
- K I've got a better idea. There's a café next to the station that does a really good full English breakfast. Let's meet there and have breakfast. Shall we say half nine?
- J Sounds good to me! But half nine? Can we make it ten o'clock? It is Sunday, you know!
- K Fine, 10.00 it is. I'll see you then! Bye, Jeff. I hope the conference goes well.
- J Thanks Kev. See you Sunday.

Unit 9**9.1 How nice are people really?**

- In a large online poll, 81% of people said they would hand the bag in. Most studies on selfishness show that generally, people are nicer than we think they are.
- People would be much less likely to help if there were other people around because they would expect someone else to help.
- People would be much more likely to help a child who said he was lost if they lived in a small town. Half of the people who lived in big cities said they'd worry that someone was using the child to get money from them.
- Drivers of cheaper cars would be three times more likely to stop for people.
- Many studies have shown that only-children are no more selfish than anyone else. They've often had so much attention themselves, they're good at giving it to others.