

BBC NEWSNIGHT. GEOFFREY HINTON. AI. TRANSCRIPT

Presenter: What is it that's triggered your concern?

Geoffrey Hinton: It's been a combination of two things. So, playing with the large chatbots, particularly one at Google before GPT-4, but also with GPT-4. They're clearly very competent. They clearly understand a lot. They have a lot more knowledge than any person. They're like a not-very-good expert at more or less everything. So that was one worry, and the second was coming to understand the way in which they're a superior form of intelligence, because you can make any copies of the same neural network, each copy can look at a different bit of data, and then they can all share what they learned. So imagine if we had 10,000 people, they could all go off and do a degree in something. They could share what they learned, efficiently, and then we'd all have 10,000 degrees. We'd know a lot then. We can't share knowledge nearly as efficiently as different copies of the same neural network can.

Presenter: Okay, so the key concern here is that it could exceed human intelligence? Indeed, the massive human intelligence.

Geoffrey Hinton: Very few of the experts are in doubt about that. Almost everybody I know who's an expert on AI believes that they will exceed human intelligence. It's just a question of when.

Presenter: And at that point, it's really quite difficult to control them.

Geoffrey Hinton: Well, we don't know. We've never dealt with something like this before. There's a few experts, like my friend Yann LeCun, who think it'll be no problem - we'll give them the goals, it'll be no problem. They'll do what we say. They'll be subservient to us. There's other experts who think absolutely they'll take control. Given this big spectrum of opinions, I think it's wise to be cautious. I think there's a chance they'll take control, and it's a significant chance. It's not like 1%, it's much more.

Presenter: What sort of society do you see evolving? Which jobs will still be here?

Geoffrey Hinton: Yes, I'm very worried about AI taking over lots of mundane jobs, and that should be a good thing. It's going to lead to a big increase in productivity, which leads to a big increase in wealth and if that wealth was equally distributed, that would be great, but it's not going to be. In the systems we live in, that wealth is going to go to the rich, and not to the people whose jobs get lost. And that's going to be very bad for society, I believe. It's going to increase the gap between rich and poor, which increases the chances of right-wing populists getting elected.

Presenter: So to be clear, you think that the societal impacts from the changes in jobs could be so profound that we may need to rethink the politics of, I don't know, the benefit system, inequality?

Geoffrey Hinton: Absolutely, yes. Universal basic income. Yes, I certainly believe in universal basic income. I don't think that's enough, though, because a lot of people get their self-respect from the job they do, and if you put everybody on universal basic income, that solves the problem of them starving and not being able to pay the rent, but it doesn't solve the self-respect problem.

Presenter: It's not how we do things in Britain. We tend to sort of stand back and let the economy decide the winners and losers.

Geoffrey Hinton: Yes, actually, I was consulted by people in Downing Street, and I advised them that universal basic income was a good idea.

Presenter: And this is, you said 10 to 20% risk of them taking over. Are you more certain that this is going to have to be addressed in the next five years? The next Parliament, perhaps?

Geoffrey Hinton: My guess is in between 5 and 20 years from now, there's a probability of about a half that we'll have to confront the problem of them trying to take over.

Presenter: Are you particularly impressed by the efforts of governments so far to try and reign this in?

Geoffrey Hinton: I'm impressed by the fact that they're beginning to take it seriously. I'm unimpressed by the fact that none of them is willing to regulate military uses and I'm unimpressed by the fact that most of the regulations have no teeth.

Presenter: Do you think that the tech companies are letting down their guard on safety because they need to be the winner in this race for AI?

Geoffrey Hinton: I don't know about the tech companies in general, I know quite a lot about google, because I used to work there. Google was very concerned about these issues and google didn't release the big chatbots. It was concerned about its reputation if they told lies, but as soon as OpenAI went into business with Microsoft, Microsoft put chatbots into Bing, google had no choice. So I think the competition is going to cause these things to develop rapidly and the competition means that they won't put enough effort into safety.

Presenter: People, parents, talk to their children, give them advice on the future of the economy, what jobs they can do, what degrees they should do. It seems that the world's been thrown up in the air by this, by the world that you're describing. What would you advise someone to study now, to kind of surf this wave?

Geoffrey Hinton: I don't know because it's clear that a lot of mid-level intellectual jobs are going to disappear and if you ask which jobs are safe, my best bet about a job that's safe, is plumbing. These things aren't very good yet at physical manipulation. That'll probably be the last thing they're very good at. So I think plumbing is safe for quite a long time.

Presenter: Driving?

Geoffrey Hinton: Driving, no, that's hopeless. That's been slower than expected.

Presenter: Journalism?

Geoffrey Hinton: Journalism might last a little bit longer, but I think these things are going to be pretty good journalists quite soon and probably quite good interviewers too.

Presenter: Okay, well.

VOCABULARY

competent (adjective) - able to do something well.

consult (verb) - to ask someone for advice or help.

elected (verb) - chosen by voting.

evolving (verb) - slowly changing or growing over time.

exceed (verb) - to go beyond or do more than expected.

expert (noun) - a person who knows a lot about something.

inequality (noun) - when things are not equal or fair.

manipulation (noun) - controlling someone or something in a tricky way.

mundane (adjective) - very ordinary or boring.

neural network (noun) - a computer system that works like a brain to solve problems.

no teeth (phrase) - having no power or strength.

parliament (noun) - a group of people who make laws for a country.

plumbing (noun) - the system of pipes for water in a building.

populists (noun) - leaders who try to get support by speaking for ordinary people.

profound (adjective) - very deep, important, or serious.

rapidly (adverb) - very quickly.

regulate (verb) - to control or set rules for something.

reign in (verb) - to control or hold back.

self-respect (noun) - feeling good about yourself and what you do.

significant (adjective) - very important or large.

spectrum (noun) - a range of different things or ideas.

subservient (adjective) - always obeying someone else.

superior (adjective) - better than something else.

triggered (verb) - caused something to happen.