

Who knows what you are thinking?

Our closest friends and family might not know what we are thinking, but a lot of machines probably do. **Nigel Toon**, author of *How AI Thinks* talks to **Fergus Byrne** about the future of AI and what we need to do about it.

As the co founder and CEO of one of the top companies making critical components to power the field of artificial intelligence (AI), you might expect Nigel Toon to promote the benefits of AI. And he does. But he also asks questions that rock the foundations of our tenuous hold on freedom of expression and privacy.

In his first book, *How AI Thinks*, he takes us on a fascinating journey from the early days of computing to a world where new technology companies, and the governments of countries all around the world, may need to go to war about who should control the content of our day-to-day communication. Like many great books it leaves us with many more questions than answers, but how to regulate an industry that, with the benefit of artificial intelligence, is becoming more powerful by the day, is one of those questions that he feels we urgently need to address.

After the recent spat between Elon Musk and—well just about anybody that he can pick a fight with—you might be forgiven for thinking that the war between tech businesses and governments has only just begun, but it has been brewing for some time, and preliminary skirmishes have already led to proposed regulation that many think threatens our personal freedom.

However, the question that must be answered is whether we want our personal information and our business communication to be read by and regulated by private companies or by governments. Neither of these sound like a good option. But the reality is that, as it stands, businesses that are not based in this country have enormous amounts

of power over data that can already be manipulated in shocking ways. And as AI develops, and countries that invest in its benefits grow more powerful, those of us that are not on the cutting edge of its development will fall behind. The fact is that right now we are already controlled by a foreign power, it just isn't a government.

Nigel uses messaging apps as one example of something that need regulation to stop the spread of misinformation or disinformation. He says there are obvious things that should be illegal such as deep fakes, where people are currently allowed to take another person's image or a video of them speaking and change the message. But other issues are knottier. He points to the messaging app owner's argument that if they change their policy and go into our messages to see if we're doing something bad, 'according to the values or the law of the country in which that message is being passed', then they've broken the trust that they have with their customers. 'So is that right or is that wrong' asks Nigel. 'They would need to look at all of your messages and determine if what you're saying—in somebody else's mind—is bad. And then the issue becomes, do we want Elon Musk to be the person making that decision? Or should that be you and your representatives in government who are making that decision?'

As a businessman at the forefront of the technology that is driving AI forward, Nigel spends much of his time talking to companies and governments around the world and points out how different belief values drive the way regulation can be, and is being, implemented. In China, for



CEO of Graphcore Limited and author of 'How AI Thinks' Nigel Toon

example, he says control over people's use of technology and the internet is highly regulated. This control allows the government to keep crime, and of course dissent, suppressed. But 'suppressed' is the issue. We have grown up in an 'Abrahamic environment' with 'Christian values' says Nigel. 'Everybody is equal, we should all be independent and free thinking etc. It's a values judgement. But in China, people have grown up under a Confucius based system, where it is more authoritarian. They rely on the leaders to keep them safe. And so, the Chinese leaders would say, "we're doing this because we want to keep everybody safe."'

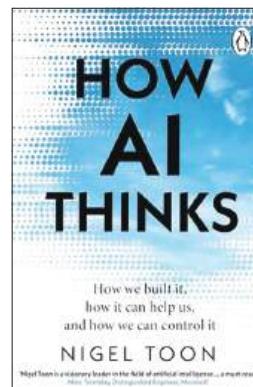
It works from the point of view of reduced crime, but as Nigel says it could pose a problem 'when you become a person of interest because you've said something that goes against the state'. That is of course a worrying scenario, but what is more horrifying is that, whatever the transgression, with current technology that 'transgression' could have been planted and be a complete fake, and that might be very difficult to disprove.

Whilst Nigel points out that the benefits of AI are vast, including advances in education and environment, as well as healthcare in diagnostics and even drug discovery, the need for regulation and ethics-based thinking is vital. He suggests a framework for governments to use to assess and develop a structure to make the use of AI and technology-based initiatives safer. This includes ensuring that users are aware of what they are giving away. One suggestion is more clarity in the use of cookies and clearer warnings from social media companies, search engines and shopping sites

about the potential use of data on customer activities. He says we must learn about the many ways that privacy issues might manifest and work towards creating a framework for protecting individual and business privacy.

Nigel Toon's own business, Graphcore Limited, is one of those companies that could hold the key to advances in the digital age, but in *How AI Thinks* he shows a valuable depth of understanding of the issues facing a future assisted by artificial intelligence. I say 'assisted' rather than 'run', especially because Nigel makes the point that AI is still run by humans and is a long way from coming close to replicating the complexities of consciousness and the human brain. But by explaining the history of how we got to where we are today, and how elaborate our brains are, he goes some way toward placating our fears of AI.

However, as is often said in the world of difficult situations—we're making progress, but challenges remain.



*Nigel Toon will be speaking about his book *How AI Thinks* at the Dorchester Literary Festival on Tuesday October 15th. For more information or to book tickets visit <https://dorchesterliteraryfestival.com/>*