

Daniel's reflection for week beginning 24th October - STRANGER THAN FICTION

AlphaGo, a computer programme designed by the British Artificial Intelligence company DeepMind, beat Lee Sedol, the world's top-rated Go player. Go is an ancient chess-type Chinese board game. Why was this event so widely reported in social media? Because, as The Times leader reported, 'The computer was not programmed how to play the game; it taught itself . . . AlphaGo can act, but it can also react. It can use intuition and anticipate the possible long-term effects of its action. In short, it can think.'

In 2015, a socially-intelligent human-like robot, Nadine, was unveiled by scientists at Nanyang Technological University in Singapore. According to a news release at the time, Nadine has 'her own personality, moods and emotions, soft skin and brunette hair, good memory, smiling eyes when greeting you and shaking hands . . . like a real companion who is always with you.' Because of Japan's 35 million elderly people in care facilities, the government is leading the A1 research field, pouring millions into elder-care robotics development. Welcome to the cyborg society. It is claimed that robots such as AlphaGo and Nadine will transform everyday life for millions by 2025, and will match human intelligence by 2045! Such speculation about artificial intelligence (AI) is spreading excitement, wonder and anxiety on a daily basis. Two recent films offering startling insights into human/machine relationships and possibilities— *Her* and *Ex Machina* – have captured the popular imagination.

Bill Gates believes that 'robotics is the next big thing.' It will include 'a whole lot of complex apps, central to our lives, that we cannot even conceive of now,' according to Peter Donnelly, professor of statistical science at Oxford University. A remote-controlled Rolling Bot that acts as home security guard and child-minder has been unveiled by LG Electronics and was seen at the Mobile World Congress trade fair in Barcelona in February.

Hod Lipson, director of Cornell University's Creative Machines Lab, is exploring ways of developing a robot that can design itself, learning in the same way a child does and gradually evolving like a species. His team is developing self-aware robots – machines that can 'figure out how to walk, develop a sense of what they look like, and even learn to self-replicate.' He expects machines to emulate empathy and develop common sense, eventually outstripping human intelligence. Scientist Brian Cox is upbeat and positive about the current evolution of such expectations.

Many anxious observers wish to turn the spotlight on the threat posed by such a future. The dystopian forecast of many experts points to huge unemployment, to serious social unrest and, eventually, to humanity's destruction. Wendell Wallach of Yale University's centre for bioethics has warned that the technological advances have now made killer robots a possibility in that they could initiate lethal activity. Scientist Stephen Hawking warned the world in 2014 that AI is a threat to human existence. 'The development of full artificial intelligence' he said, 'could spell the end of the human race.'

But can that day ever come when artificial intelligence will equal or transcend emotional intelligence, spiritual intelligence, human imagination? Can robots be built that share our evolutionary biology? Most Christian research fellows believe that you can simulate aspects of the human experience in machines but you cannot actually recreate human subjectivity. From the moment you arrive in the world to the moment you die, you're learning and feeling, while evolving through the relationships around you. To imagine such a multiplicity being fully simulated in an artificial entity, they hold, is a serious misunderstanding of what it means to be human.

In the meantime, technological giants such as Google, Microsoft, Apple are investing billions in AI research. The focus is on practical possibilities and huge profit. But the deeper philosophical and theological issues are only now beginning to be debated in earnest. In the life of the world, for instance, could this human/machine

interaction constitute a most significant breakthrough in evolutionary progression? Given the astonishing implications of Incarnation, could AI be providential -aunifying,spiritual threshold in the unfolding spirit of the human quest?

In a recent BBC Radio 4 programme *Beyond Belief* there weremany such questions: Will advanced, supremely intelligentrobotsbecome self-aware, enjoy relationships – or simply simulate these human states? Will AI enable a sense of compassion, justice andwonder?If humanity is created in ‘God’s image’, will robots share that distinction too, their very invention seen as the work of the Holy Spirit incarnate? Will they one day enjoy free will, capable of opting for evil as well as good?Or is it still silly to ask such questions?

At a recent retreat a participant was describing a brief, profound and intense moment. ‘I knew it was a precious experience of love’, she said. ‘I had been present at the birth of my young friend’s son, Ala. He was lying on a mat, and I was looking into his eyes. I became aware that we were not just looking into each other’s eyes but into the depths of each other, and really communicating for a timeless moment . . .’ What would his nanny-robot make of that moment?

It is Sunday morning. The church is full of human beings, some in seventh heaven because they have had wonderful experiences of falling in love, passing an exam, holding a new baby, being deeply moved by a beautiful poem film; others carry a sadness, a loss, a failure, a broken dream, a new addiction. As he distributes the bread and wine with great carefulness, will the robot parish priest have enough ‘soul’ to resonate with the infinitecomplexities of the human beings lined up before him?

Pope Francis has said that we are not entering an era of change, but a change of era. The recent ripples of gravity detected from black holes have led scientists to herald a new age for astronomy. The expectation of finding intelligent life on distant planets may be the dawning of a radical transformation in human self-understanding. And the swiftly evolving expectations around AI are leading experts to predict another astonishing, though ambiguous paradigm shift for the human race.

(Tablet article)

