IS ARTIFICIAL INTELLIGENCE THE FUTURE OR JUST FICTION?

STEPHEN OZANNE, SENIOR ASSOCIATE AT WALKERS, EXAMINES THE WAY IN WHICH WE USE ARTIFICIAL INTELLIGENCE AND HOW IT MIGHT AFFECT OUR LIVES IN THE FUTURE.

Artificial intelligence (A.I.) has been popularised in science fiction for decades. Remember Max from Flight of the Navigator, Jonny Five in Short Circuit or HAL from 2001: A Space Odyssey? Perhaps you are more familiar with the Terminator or C-3PO and R2-D2? These are just a few of the famous A.I. heroes and villains who have caught our imaginations on the big screen and perhaps shaped our perceptions of A.I.

CAN MACHINES THINK?

There are many thoughts on what A.I. actually means. However, it is typically used to refer to machines that can mimic the cognitive functions of the human mind, something that, in itself, is difficult to measure. The famous computer scientist Alan Turing considered this problem when he sought to answer the question 'Can machines think?' by creating the Imitation Game (popularised by the movie with the same name). The Imitation Game is played with three participants, an interrogator, a man and a woman. Without being able to see or hear the man or the woman, the interrogator must identify which one is which by asking them various questions via a messaging system. Turing then proposes to replace the man with a computer to see if it would affect the number of times the interrogator gets the wrong answer. Turing believed that if the computer could imitate the man and fool the interrogator the question 'can machines think?' would become meaningless, because the computer could mimic humans to the extent that we could no longer tell the difference between the two. In the past it has been very difficult

to program a computer to imitate humans convincingly. However, A.I. is no longer just fiction and we are starting to see it fast becoming reality, although the transition may have almost been unnoticed. There are computers imitating humans all around us. In our homes, pockets and handbags, the latest smart devices and phones are programmed with different forms of digital personal assistants, such as Apple's Siri and Amazon's Alexa. Apple says that you should 'Talk to Siri as you would a friend', whilst Alexa is billed as 'always getting smarter' so that 'the more customers use Alexa, the more she adapts to speech patterns, vocabulary,

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and personal preferences.' Both systems use human-like voices and responses to answer questions and to perform various tasks, such as setting calendar reminders or ordering products online.

Whilst it will be interesting to know how Siri and Alexa would perform playing the Imitation Game, they are not advertised as being artificially intelligent. This is possibly because current research suggests that we prefer to avoid algorithms and instead rely on human judgement (perhaps we have been influenced by what went wrong with Skynet or HAL). There is also a generational divide, as those of us who have grown up with A.I. devices adapt to make the most of them, whilst others may perceive the technology as a threat similar to the industrial revolution, which is potentially for good reasons. Oxford University has calculated that about 47% of total US employment is at high risk of computerisation within the next 20 years.

HUMAN V COMPUTER

In any event, the rapid adoption of A.I. in many types of devices and for different uses is likely to continue. For example, IBM's Watson computer shot to fame as the winner of the TV game show 'Jeopardy' against human contestants. Yet, Watson is now being used for more practical tasks, such as legal research, weather forecasting and decision-making in relation to cancer treatments. According to IBM, over 800 organisations and individuals have expressed an interest in creating applications that use Watson. Further, there is appetite in the investment community to develop the sector. According to CB Insights, in the first half of 2016 nearly $1.5 billion was invested in over 200 A.I. focused businesses.

As a lawyer, I would replace Turing's question 'Can machines think?' with 'When does a machine have legal personality or capacity?' Legal personality is the concept of having legal rights and obligations, but it is not limited to humans. For example, companies have legal personality and they can enter into agreements in their own name. However, a company will have one or more humans (directors) who have the capacity to make decisions and act on the company's behalf. If we were to give an A.I. device legal personality, it would be able to make decisions and act on its own, without human input. Perhaps only when we can trust machines enough to grant them legal personality will we consider them as being able to imitate humans to sufficiently be classed as artificially intelligent.

In the meantime, expect to see more products and services, from children's toys (check out Anki's Cozmo) to elements of medical or financial services, and even self-flying planes, which to some extent use A.I.