

Sudden Singularity

THE POINT IN TIME WHEN ADVANCES IN AI WILL LEAD TO MACHINES THAT ARE SMARTER THAN HUMAN BEINGS MAY ARRIVE SOONER THAN WE THINK. **BY TONY O'DRISCOLL**

Amara's law states that we tend to overestimate the effect of a technology in the short run and underestimate its effect in the long run.

It is hard for us to track technological progress because our minds process linearly, while technology progresses exponentially. For example, if you took 30 exponential steps—as opposed to 30 linear steps—you'd go around the Earth a whopping 26 times. Another example: Let's say a lily pad in a small pond doubles in size every day. On day 99, it covers half the pond. On day 100, it would cover the entire pond.

In a similar exponential vein, Moore's law states that the number of transistors you can fit on a computer chip doubles every two years. One of the technologies that leverages this exponential computing capability is artificial intelligence (AI). While we have been tracking the gradual progress of AI for more than half a century—from its conception by John McCarthy in 1956, to IBM's Deep Blue beating chess Grandmaster Garry Kasparov in 1996, to IBM's Watson besting *Jeopardy* champion Ken Jennings in 2011—very few of us would be willing to say that AI is poised to achieve Ray Kurzweil's Singularity: That point in time when advances in AI will lead to machines that are

smarter than human beings.

While we aren't quite there yet, it appears that the AI lily pad is dangerously close to covering half the Singularity Pond.

LEARNING TO LEVERAGE AI

In 2016, more than 200 million people watched online as Google DeepMind's AlphaGo computer program beat legendary Go master Lee Sedol at the game that *Scientific American* describes as having “virtually illimitable complexity.” The difference here is that DeepMind taught itself how to play Go, and within three days of iteratively playing against itself, came up with new plays no human had ever conceived of in the 2,500 years we have been playing the game.

Here, we have a silicon-based neural network that applied a deep learning algorithm to find a new and novel way to solve one of humanity's most complex games—and it did so in less than a week!

As Learning professionals, we will have to rethink everything about how to leverage technology to improve human capability once AI goes mainstream. That moment of Singularity may arrive sooner than we think!

How will you leverage AI to enable the people in your organization to become the very best version of themselves? **■**



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