Tales, Myths and Fairytales of Artificial Intelligence: Clarification and Decryption

by Michael Haenlein and Andreas Kaplan

Artificial intelligence has made a comeback, and has become an essential technology underlying many of today's businesses. But there are many misconceptions about AI that require clarification.

☑ **INSIGHT** | **NOTE**   25 Jul 2019

After an initial spring, a couple of summers, and some cold winters, we may have finally arrived in artificial intelligence's fall season: where we can harvest from the investments made over the past six decades, when the term Artificial Intelligence (AI) was first coined during the famous Dartmouth Summer Research Project in New Hampshire in 1956. Many claims and forecasts exist regarding AI, ranging from scenarios worthy of a Hollywood sci-

fi blockbuster to a mere experimental indie art-house romance movie. There are so many misconceptions surrounding AI that one could write an entire article about them, maybe even a whole book. In this post, we will try to decrypt and clarify three of them.

First, what exactly is Artificial Intelligence again?

This simple-looking question is actually a difficult one, since it is already hard to define human intelligence. In addition, there is the so-called AI effect: as soon as we get used to what a machine can do, its intelligence ceases to impress us. By consequence, what might have been considered AI ten years ago, might not even be seen as an valid application of the technology today. Moreover, since there are different types and evolutionary stages of AI, sometimes it can feel like comparing apples and oranges. As is often the case when faced with too many choices and a variety of available definitions, we decided to create our own, defining AI as *"a system's ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation."*

Second, soon to come: Artificial Superintelligence?

Or to put it differently: when will systems and robots be truly self-aware and able to outperform humans in literally anything and everything? Responses to this question go from "definitely this century" to "never." In 1957, Herbert Simon predicted that during the following decade a computer would become world champion in chess. This eventually happened – about 30 years later than predicted – when Gary Kasparov was defeated by IBM's Deep Blue in 1997. Then again, some experts predicted several years ago that achieving the level of balance necessary to ride a bicycle would never be possible for a robot. Now it is a reality. And when you were a kid, didn't you dream of owning a self-driving and speaking car such as David Hasselhoff aka Knight Rider's KITT, described as an advanced artificially intelligent, self-aware and nearly indestructible car? Just to say: anything is possible, only the future will tell.

Third, a bright future with AI: Heaven or Hell?

While Raymond Kurzweil, Google's chief engineer, is persuaded that AI will enhance human intelligence and be beneficial for us, Elon Musk believes that Artificial Intelligence and its advances could lead to nothing less than World War III. And the recently deceased theoretical physicist Stephen Hawking called AI either the best, or the worst thing, that could ever happen to humanity. In other words: AI could lead to heaven or hell. The range of potential scenarios is very broad, and in the end we have to admit that we actually only know that we know nothing – to apply the Socratic paradox. However, we can all agree that the progress of Artificial Intelligence will certainly result in unique ethical, legal, and also philosophical challenges that will need to be addressed – ideally sooner rather than later.

Some concluding remarks about Regulation and Research

Regulation is undoubtedly needed on the micro, meso, and macro levels: regulation with respect to algorithms and organizations, with respect to the labor market, and also concerning peace and democracy: think about the recent surge in fake news, deepfakes, and the like. However, such regulation, while urgently needed, should not be a barrier to further innovation in the field – striking a balance will definitely not be an easy task. More research is needed on regulation in particular in addition to the ongoing research in Artificial Intelligence in general. To that end, some of the latest research about AI's applications in business can be found in our Special Issue on AI, where experts in the field, world class scientists, and practitioners give insights and knowledge about this exciting area. The issue will be published in August 2019.

Michael Haenlein (Follow)

Michael Haenlein is Professor of Marketing at ESCP Europe, the Scientific Director of the ESCP Europe Research Center on Big Data and the Associate Dean of the ESCP Europe Executive PhD Program in Art Management. Michael counts among the top 50 most cited marketing academics worldwide and holds Visiting Positions at Kozminski University in Warsaw and the Trinity College in Dublin. His research interest and expertise deal with the subjects of CRM, Social Media, Word-of-Mouth and Artificial Intelligence.

Andreas Kaplan (Follow)

Andreas Kaplan is Professor of Marketing at ESCP Europe. Kaplan's research focuses on analyzing and decrypting the digital world, in particular the areas of social media and artificial intelligence. Regularly acting as a keynote speaker, his work is featured in various national and international press and media outlets such as the Financial Times, Harvard Business Review, La Tribune, Les Echos, and La Repubblica. Professor Kaplan serves as Dean and Rector of ESCP Europe Business School in Berlin.