What Is the Fourth Industrial Revolution?

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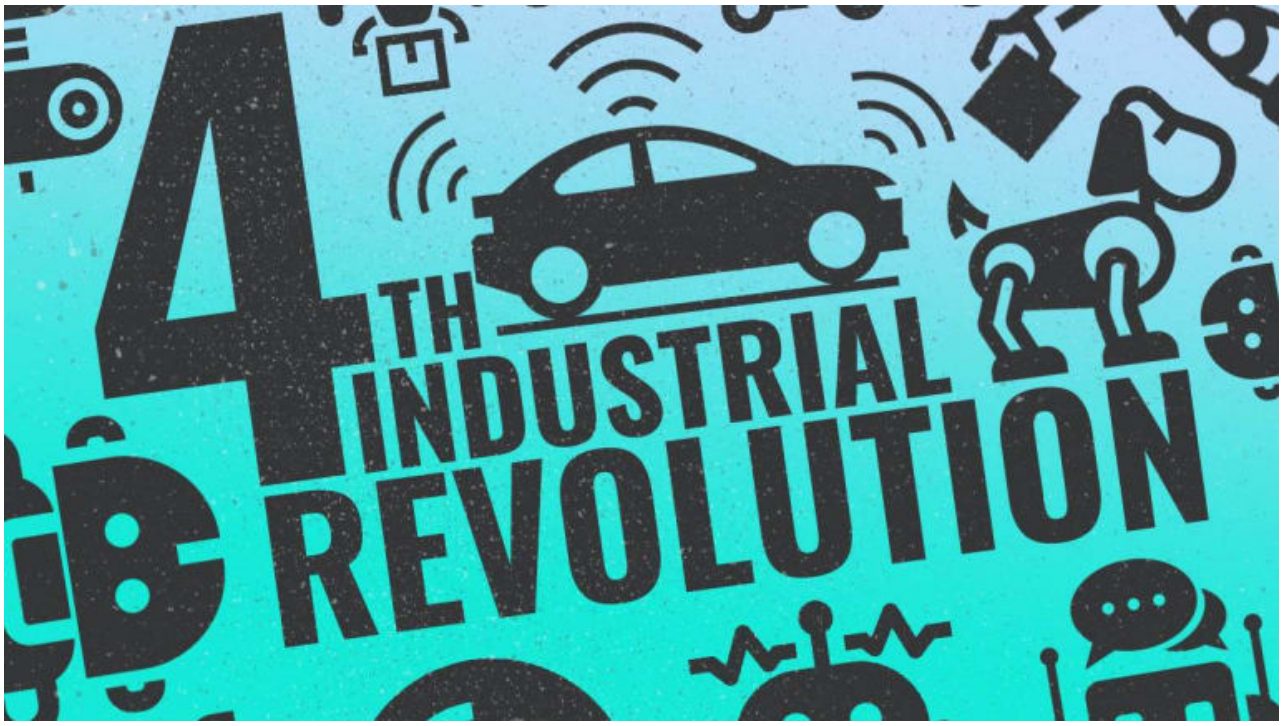

Technology develops faster than ever these days. As it develops in new and unexpected ways, we're left to wonder the implications of what it can mean for our everyday lives and how it will change them.

Some have argued that the technological advancements of today place society in an industrial revolution, the fourth since the late 18th century. What would separate this fourth industrial revolution, though, is the direct relation it has to the preceding one - the "digital revolution" - before it.

So, what is this fourth industrial revolution? What technology is a part of it and what is its impact?

Fourth Industrial Revolution

The First Industrial Revolution is famous for industrializing agricultural work with advances like the cotton gin and steam engine. The Second Industrial Revolution, in the late 19th and early 20th century, brought iron and steel into industry. The Third Industrial Revolution, the Digital Revolution, is the age of the computer and the internet.

That is an age we still live in, but a supposed Fourth Industrial Revolution seeks to develop digital technology further. It takes the digitization of our society and seeks to explore new uses for it while still advancing the technology. From smart technology to

cyber-physical systems, this age of technology seems to be more about pushing the limits of what digital technology can do throughout any possible field. This is another thing it shares with the Digital Revolution; while the First Industrial Revolution was primarily for agriculture, both the Third and Fourth Industrial Revolutions are marked by technological advancements that can affect all industries in astonishing ways.

Who Coined the Term?

Certainly it wasn't difficult to call it the Fourth Industrial Revolution, considering there were three before it. So who decided that we had officially entered this new era?

The person who coined it in its most relevant sense was Professor Klaus Schwab, the founder and executive chairman of the World Economic Forum, using it as the title of a 2016 book. Due to the high-tech nature of this age, it has also been referred to as Industry 4.0, or I4.0.

The Technology of the Revolution

We're being told we're entering a Fourth Industrial Revolution, but the technology we use the most - our computers, our phones, our video game consoles - are part of the Digital Revolution. What burgeoning technology of Industry 4.0 is on the horizon, and what is already here?

Some of the more fascinating advancements that have already begun are virtual reality and artificial intelligence, or VR and AI. In addition to the VR technology now available in video games, most notable with Oculus Go, it is now available for live television. BBC made it possible to watch the 2018 World Cup via virtual reality. A VR headset wasn't a necessary purchase, as it worked through smartphones and tablets as well.

AI, meanwhile, has gone from a crazy futuristic thing in movies to something that autocompletes sentences and responds when you ask for Siri on your smartphone. It has been casually integrated into your everyday technology, and will be integral to self-driving cars, a technological advancement that people have anticipated for years. It's an interesting quirk to contemporary society that AI went from something many feared to something that corporations gave a cute human name to so you'd feel comfortable asking it to help you shop.

In the Fourth Industrial Revolution, we've applied the internet to our outside lives. Order a package from Amazon (**AMZN**) - Get Report or a pizza from Domino's? (**DPZ**) - Get Report Now you can stare at your computer or phone and track it from start to finish.

The rapid advancements of technology's capabilities are affecting our warehouses, farms and hospitals as robotics gets more and more impressive. It has, though, led to ethical questions about automation.

Potential Impacts of the Fourth Industrial Revolution

This industrial revolution brings potential for incredible change worldwide - both good and bad.

In many ways, these advances can bring incredible innovations. Information is more convenient to find, and new strides are being made in productivity and efficiency in a number of industries. Communication is faster and more readily available around the world. Some have high hopes of using the technology from this era to improve the world in ways like limiting carbon emissions. There are lots of ways to look at the way technology is advancing and teeming with potential to better our earth.

However, we would be wearing some awfully rose-tinted glasses by saying that is all it can do. There is tremendous risk in all of this. There is fear that continued automation in so many industries could lead to millions finding themselves out of work. This is also arguably true about aspects of Industry 4.0 that "disrupt" other industries, which can lead to less consistent work and lower wages.

With all the data used to enhance and personalize AI, we have also become a far less private society. This data can include personal information, and data breaches in large companies are more common than anyone would prefer.

Bioengineering and biotechnology are impressive on a scientific level, but how are they being used? Biotechnology can be of great use in improving prosthetic limbs, but the potential for genetic modification brings up an ethical dilemma. Bioengineering and robotics can cause great strides in the medical field among other industries, but they can also be used to destructive ends as well.

This is the confusing and fascinating element of being in the beginning of a new technological revolution. So much is evolving so fast, and so many people have different intended uses for these innovations. In his book, Schwab calls on everyone, those in charge of these new technologies in particular, to think critically about the ends to which they can be used, and how they can benefit the people.

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