

## AI and Data: The Gunpowder Revolution of the 21st Century

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According to many historians, around the 10th century, the chemical compound we know today as gunpowder came into military use in East Asia in China. While probably not originally intended for military use, it was rapidly discovered to be a powerful instrument of war.

Over the next several centuries gunpowder migrated toward Europe, where it was adopted and used in many forms, from explosive tools for mining, to early forms of artillery, to the eventual development of individual firearms and more. And as it proliferated around the world, the power of this substance enabled humans to radically reshape many aspects of daily life, from farming and agriculture to arts and sciences, and even the geography of the earth itself. Without a doubt, gunpowder changed humanity.

Now, less than a thousand years later, another innovation today promises to remake humanity. The emergence of digital data in the form of “bits and bytes” – and the artificial intelligence (AI) required to wield its civilization-changing power – are already creating a new world mostly unrecognizable to human beings born just a few decades ago.

When compared to the radical changes resulting from the widespread adoption of gunpowder, it is now foreseeable that AI could very well likely be more disruptive, cause more radical and widespread change across society, and have farther reaching effects.

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Aside from the profound and ongoing changes occurring all around us resulting from widely proliferating mobile devices, constant digital connectivity, and ever-improving digital networks that are literally connecting everyone and everything, we will also likely see humans perform previously unimaginable tasks. Thanks to the vast computational powers of AI, it is very possible we could soon see human beings changing or

modifying their own genetic structure at will.

Gunpowder's historic impact on humanity is now being rapidly eclipsed by the rising power of digital data and AI. Taken all together, the ramifications of AI advancement and the digital data that drives it are limitless, rapidly unfolding all around us, and sobering. ■