To arrive at the edge of the world's knowledge, seek out the most complex and sophisticated minds, put them in a room together, and have them ask each other the questions they are asking themselves.

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Printed On Wed April 20th 2016

2016 : WHAT DO YOU CONSIDER THE MOST INTERESTING RECENT [SCIENTIFIC] NEWS? WHAT MAKES IT IMPORTANT?

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Diana Deutsch

Professor of Psychology, University of California, San Diego; Author, The Psychology of Music

The Longevity Of News

A remarkable thing about any piece of news—scientific or otherwise—is that it's very difficult to determine its longevity. Surely the most important news is long-lasting, and in turn generates further news.

A prime example of "important" scientific news that turned out to be mistaken is the "discovery" of N-rays by the physicist René Blondlot in 1903. This was hailed as a major breakthrough, and led rapidly to the publication of dozens of other papers claiming to confirm Blondlot's findings. Yet N-rays were soon discredited, and are now referred to primarily as an example of a phenomenon in perceptual psychology—we perceive what we expect to perceive.

On the other hand, scientists often hugely underrate the practical importance of their discoveries so that news about them does not begin to do justice to their implications. When Edison patented the phonograph in 1878, he believed it would be used primarily for speech, such as for dictation without the aid of a stenographer, for books that would speak to blind people, for telephone conversations that could be recorded, and so on. Only later did entrepreneurs realize the enormous value of recorded music. But once this happened the music industry developed rapidly.

The laser provides another example of the initial underrating of the practical implications of a scientific discovery. When Schawlow and Townes published their seminal paper describing the principle of the laser in *Physical Review Letters* in 1958, this produced considerable excitement in the scientific community, and eventually won them the Nobel Prize. However, neither these authors nor others in their group predicted the enormous and diverse practical implications of their discovery. Apart from their many uses in science, lasers enabled the development of fast computers, target designation in warfare,

communication over very long distances, space exploration and travel, surgery to remove brain tumors, and numerous everyday uses such as bar code scanners in supermarkets, among other things. Yet soon after his theoretical discovery, Arthur Schawlow frequently expressed strong doubts about the laser's practical implications, and several times quipped that the only use that might be found for this device was for safecracking by burglars. However, advances in laser technology continue to make news to this day.

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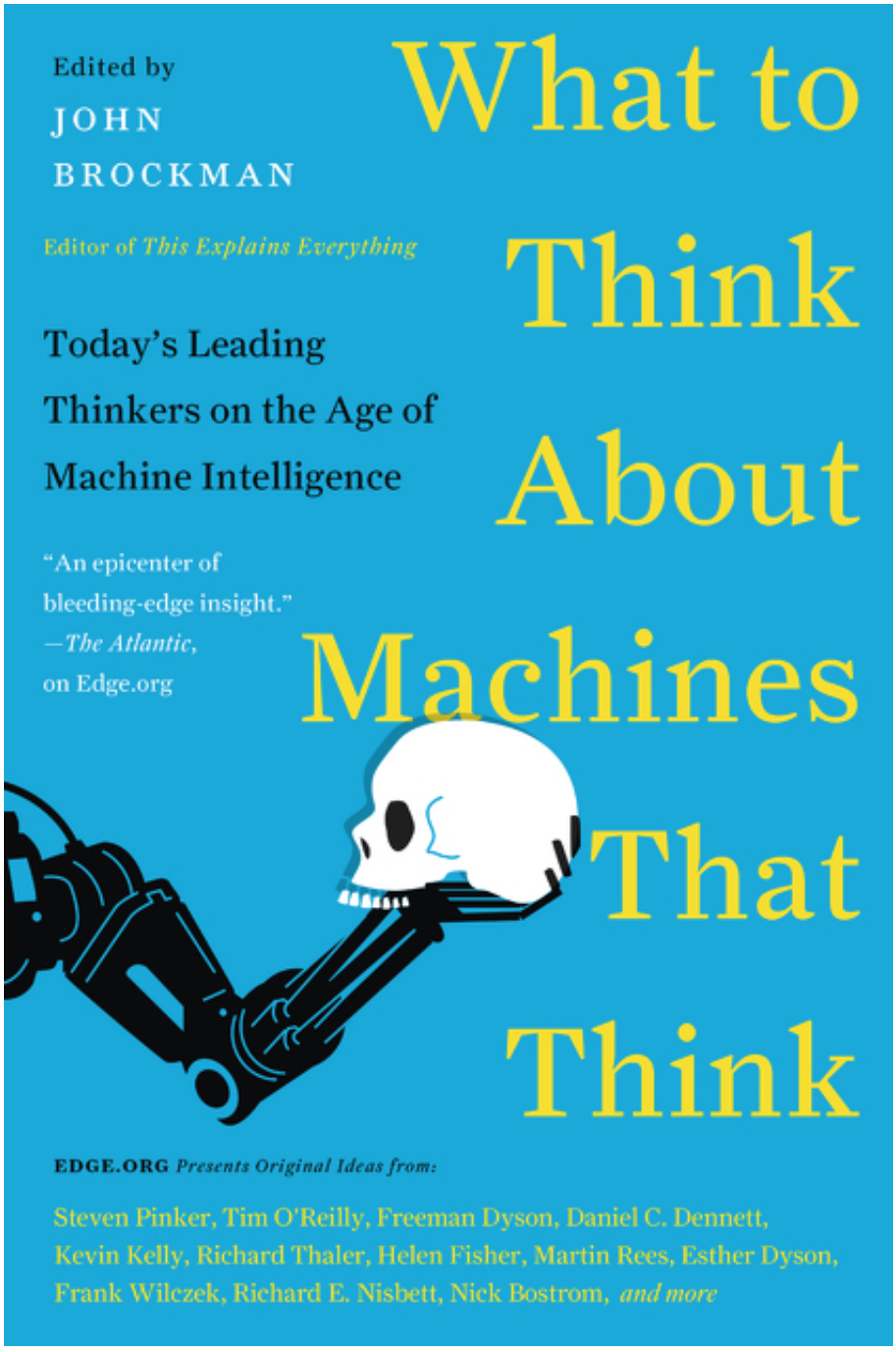

2015 : **WHAT DO YOU THINK ABOUT MACHINES THAT THINK?**

2014 : **WHAT SCIENTIFIC IDEA IS READY FOR RETIREMENT?**

This Idea

Scientific Theories That Are Blocking Progress

Must Die!

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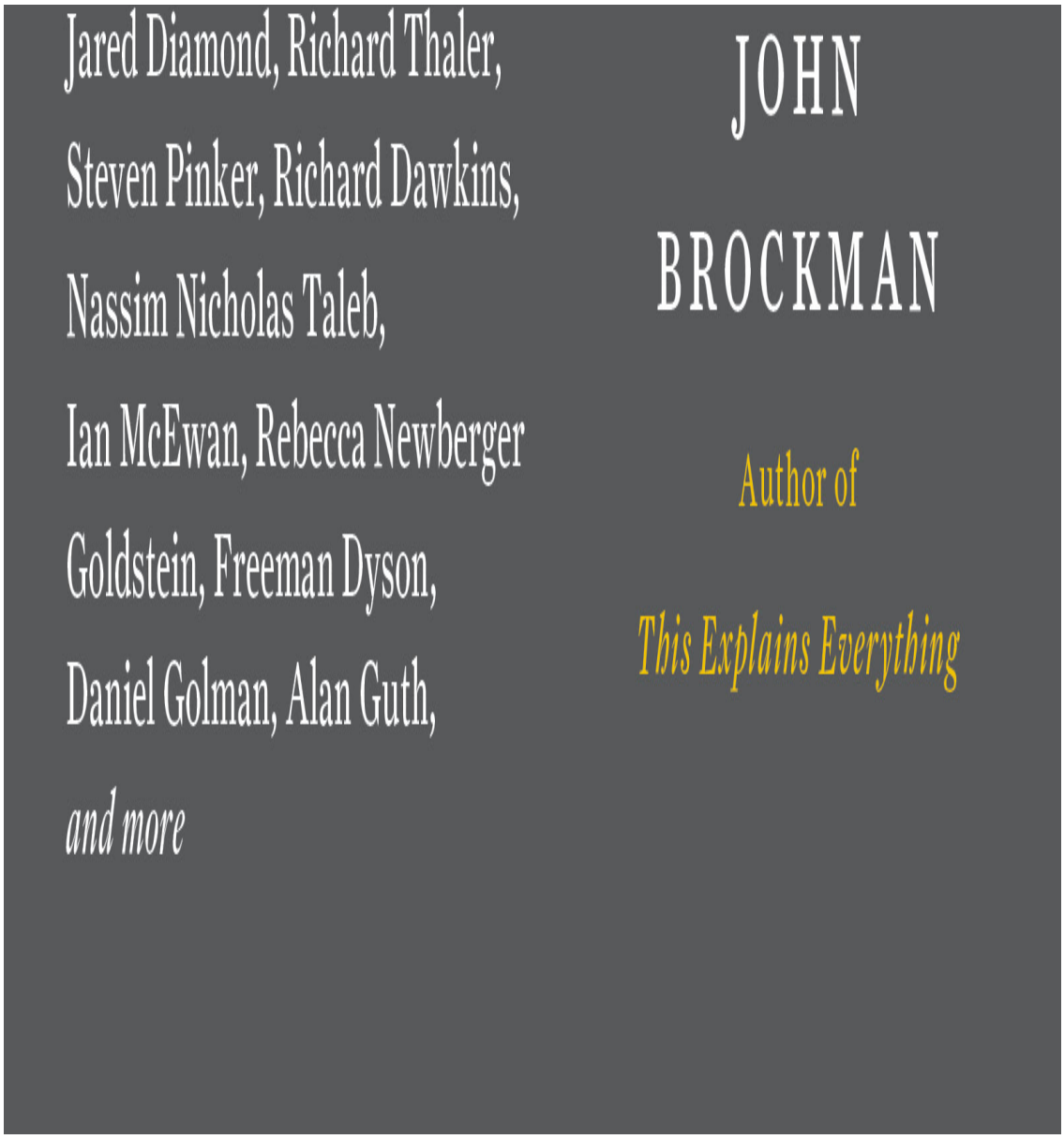

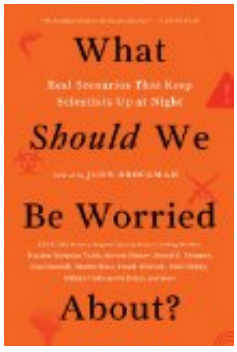

2013 : **WHAT *SHOULD* WE BE WORRIED ABOUT?**

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TOOLKIT?

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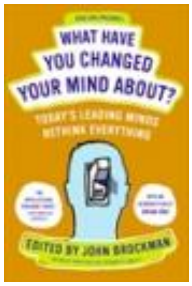
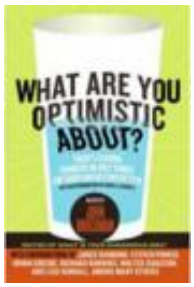
2009 : **WHAT WILL CHANGE EVERYTHING?**



2008 : **WHAT HAVE YOU CHANGED YOUR MIND ABOUT? WHY?**



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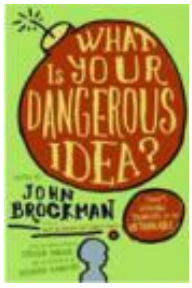

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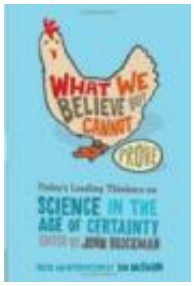

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