2023’s Mind-Bending Revelations in the Brain Sciences

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This year was full of roiling debate and speculation about the prospect of machines with superhuman capabilities that might, sooner than expected, leave the human brain in the dust. A growing public awareness of ChatGPT and other so-called large language models (LLMs) dramatically expanded public awareness of artificial intelligence. In tandem, it raised the question of whether the human brain can keep up with the relentless pace of AI advances.

The most benevolent answer posits that humans and machines need not be cutthroat competitors. Researchers found one example of potential cooperation by getting AI to probe the infinite complexity of the ancient game of Go—which, like chess, has seen a computer topple the highest-level human players. A study published in March showed how people might learn from machines with such superhuman skills. And understanding ChatGPT’s prodigious abilities offers some inkling as to why an equivalence between the deep neural networks that underlie the famed chatbot and the trillions of connections in the human brain is constantly invoked.

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