# Geoffrey Hinton warns AI’s rapid knowledge sharing far outpaces human ability



Geoffrey Hinton, a Nobel Prize-winning computer scientist and widely regarded as the "Godfather of AI," has raised significant concerns about the capabilities and rapid evolution of artificial intelligence systems, particularly their ability to share knowledge far more efficiently than humans. This perspective comes at a time when AI technology is advancing at an unprecedented pace, bringing both promise and potential peril to society.

In a recent discussion, Hinton outlined the dramatic difference between human and AI knowledge transmission. He explained that while humans are constrained by biological factors and can only transfer information indirectly, AI systems can communicate vast amounts of data in remarkably short periods. "Now, you and I, when I want to get some knowledge from my head into your head, I can’t just take the strengths of the connections between neurons and average them with the strength of the connections between your neurons," he stated, illustrating the inherent limitations of human communication.

Humans typically communicate only a few bits of information per second due to these biological constraints. In contrast, Hinton noted that "these large language models running on digital systems can communicate trillions of bits a second." This staggering difference in information bandwidth raises critical questions about the scalability of AI systems as they evolve and adapt at speeds that surpass human understanding.

Hinton's anxieties stem from the implications of this rapid information transfer. He highlighted a scenario where a single AI could develop a harmful capability, which could then be disseminated quickly across numerous AI networks. "They’re billions of times better than us at sharing information," Hinton remarked, summarising the potential risks associated with such efficient communication.

The issue of knowledge dissemination becomes even more pronounced when juxtaposed with human development. Humans take years to learn basic communication skills and often spend decades subject to education and vocational training before achieving a level of expertise comparable to their peers. Conversely, AIs can replicate and create new systems almost instantly by copying their underlying parameters, leading to exponential growth in capabilities.

The rapid advancements in AI technology, combined with this efficient mechanism for sharing knowledge, paints a concerning picture of the future. Hinton's warnings indicate that humans may struggle not only to keep pace with AI's evolution but also to manage its potential risks. This perspective reflects an urgent need for dialogue regarding the implications of artificial intelligence and evolving technologies, as highlighted by one of the foremost pioneers in the field.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

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