Vyvyan Evans Ph.D.
Language in the Mind

PARAPSYCHOLOGY

Could Digital Telepathy Render Language Obsolete?

"Fitbits" for the brain and the future of communication.

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Reviewed by Abigail Fagan

KEY POINTS

- It has been predicted that new brain technology will lead to “digital telepathy,” making language obsolete.
- But this presumes a universal set of concepts, a "language of thought," which turns out to be a myth.
- New technologies are more likely to enhance how we learn language, perhaps even enabling us to stream it, just as we do music or movies.
- But the demise of language by would-be brain tech gurus has been greatly exaggerated.

come obsolete in the near future. This follows Neuralink's pioneering research into new brain technology that will likely usher in an era of what we might refer to as "digital telepathy" (see Musk's interview on the Joe Rogan experience here where he discusses this). Under this vision, brain-to-brain communication is the future of communication. Humans will no longer just wear digital tech, such as smartwatches and fitbits. They will have it implanted in their brains. And the advent of such technology would, accordingly, spell the end of language, perhaps even within a decade.

What is "digital telepathy"?

Neuralink is developing neural implants that have been likened to a Fitbit for the brain. The implant, in fact consisting of hundreds of tiny wires, each smaller in width than a human hair, aims to link across the neurons that make up the brain's grey matter. The research seeks to enable the brain's thought centres to become linked to the neural implant, in effect, turning a human into a cyborg. If successful, such neural implants would, ultimately, enable us to communicate directly with other human brains without needing to use language. This would herald a form of digital telepathy, which, according to Elon Musk, would render language obsolete.

Brain Computer Interfaces

The science behind Neuralink is known as a Brain Computer Interface (BCI), and has been around for a relatively long time. For instance, using a BCI it is possible to insert a tiny computer into a brain with damaged vasculature, allowing it to communicate directly with another computer, such as a robotic

fication centres.

But what is new about Neuralink's research program is the idea that neural implants might ultimately enable humans to communicate not just with computers, in a remedial medical capacity. In addition, healthy brains might ultimately be able to become directly linked to other people's minds, making language itself redundant.

But outside the realm of science fiction, is this vision of direct brain-to-brain communication really plausible?

What is the function of language?

To examine whether "digital telepathy" is scientifically plausible, let's first check in on what it would be putatively replacing, namely language. Language's primary function, in the absence of telepathy, is to facilitate communication by allowing us to get ideas across from one mind (or person) to another. Language does this by encoding and externalizing concepts.

of a signed symbol or gesture. This then enables another person to decode the spoken concept, and thereby interpret what the communicator intended to convey. In effect, language conveys thoughts.

The myth of a universal "language" of thought

For direct brain-to-brain communication to be feasible, making language obsolete, then a neural implant would need to rely on a common or universal system or language of thought, shared by two brains. Just as two speakers of English can communicate with one another, while they cannot communicate with a speaker of, say, French or Chinese, then a neural implant would require an underlying system or “language” of thought, a system of concepts, that could be communicated directly from one brain to another, using digital telepathy. But for neural implants to work, as envisaged by Elon Musk, there would need to be some kind of universal “language” of thought that the neural implants could make use of in direct brain-to-brain communication. But does such a system, a “language” of thought exist?

In the 1970s, the philosopher Jerry Fodor famously proposed exactly that. His Language of Thought (LoT) hypothesis proposed that there is a common set of universal concepts shared by humans, which we are born with. In the 1980s, linguist Ray Jackendoff tried to map these presumed universal concepts onto language, in his theory of conceptual semantics.

The idea was that as we share a universal set of concepts, the “meanings” expressed by language relate to these universal concepts. Hence, from this perspective, language learning is reduced to learning words, which are basically labels for the same underlying concept, that, ultimately, we all share. For instance, the concept of CAT is encoded in English by the word ‘cat’, but by the word ‘billi’ in Hindi.

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the same principle? Unfortunately not. And that is because the notion of a putative language of thought is a myth. Let's see why.

Concepts are not universal; they are embodied and individual

It turns out that concepts are not something with which we are born. We acquire them through lived experience. In short, they are embodied.

What this means is that each concept, across individuals, is slightly different, a consequence of our own lived experiences in the world. Some concepts will be broadly similar across individuals. For instance, my concept of the mundane concept HAMMERING, as in the action required to hammer a nail in a piece of wood, will be a function of using a specific tool, namely a hammer, and the physical motor requirements of deploying the hammer in a characteristic hammering. This is a consequence of the nature of the artifact, the physical tool, and human physiology, common to us all. We all have arms and hands, for instance, both essential for the requisite hammering action.

But other concepts, especially more abstract ideas, such as LOVE, PEACE and JUSTICE, will be much more variable across individuals, a function of their unique lived, and life experiences, as well as their age, gender, and even the era in which they have lived.

A further complexity

An additional complexity is that concepts are not only highly individual, subject to embodied differences, they are also culture-dependent, which provides a form of social divergence in the formation of concepts. In short, concepts are culture-specific and even culture-dependent.

For instance, as I explained in my 2017 book ***The Emoji Code***, 'Tingo' is a word from Pascuan, a Polynesian language spoken on Easter Island. It means: to gradually steal all the items from your neighbour's house by borrowing items one by one without ever returning them. This concept is entirely absent from English.

Other culture-specific concepts can be adopted by borrowing the word that encodes the concept. An example of this is the

What then might the future of communication look like?

While it is unlikely that language will be rendered obsolete by technology anytime soon, there is no reason to think that in the future neural implants won't impact the nature and function of language in human communication and society.

For instance, in my science fiction novel, ***The Babel Apocalypse***, I describe a near future in which language chips, implanted at birth, enable humans to stream, rather than learn, language. This allows language to be leased, via monthly subscription. This also takes the pain out of learning a language. By simply subscribing to a multi-language package, an individual can enhance their employment opportunities, where they can live and work, and even with whom they can interact, socialize and even fall in love.

Inevitably, such as vision entails a smaller number of languages, just 250, rather than the 6,000 or 7,000 extant languages that exist today. But even in this brave new world, language isn't rendered obsolete, merely streamlined.

But, and here comes the bleak warning, a future in which neural implants enable language to be streamed does not come without risk. If people choose to have neural implants to facilitate language streaming, such implants, like any computer, can be hacked. This potentially leads to a dystopia where our brains can be hacked, with potentially catastrophic consequences.

About the Author

Vyvyan Evans, Ph.D., is a language and communication consultant. He received his Ph.D. from Georgetown University.

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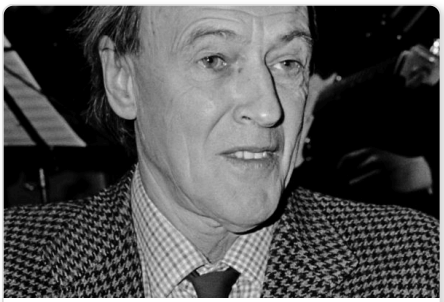

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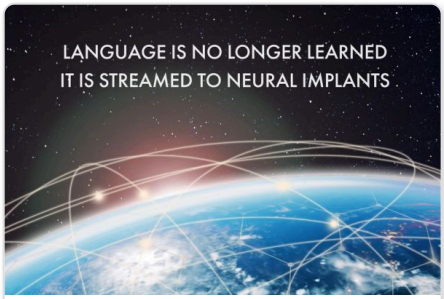

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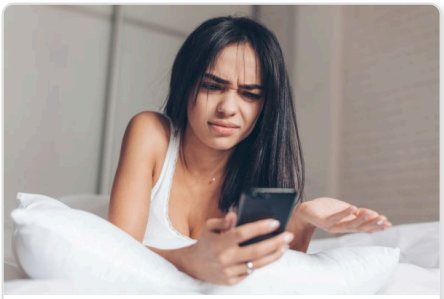

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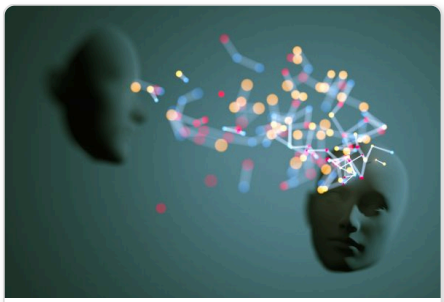

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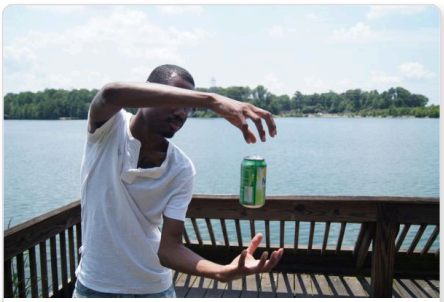

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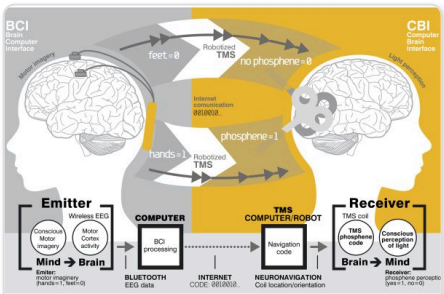

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Mental Telepathy Is Real

Mental telepathy is the process of transferring thoughts from one mind to another.

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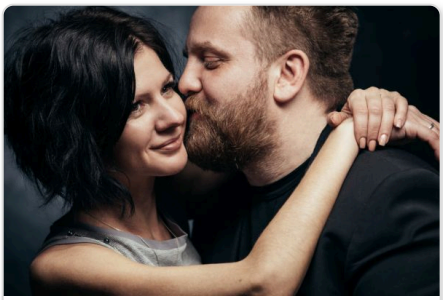

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