

NEURALINK: QUESTIONS ARISING ABOUT THE UNIVERSAL LANGUAGE.

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Annotation

The technology today is highly efficient and has been upgraded every day. Technology is advancing to solve the biggest challenges that human beings face today, which are insane and incurable diseases people suffer from, and reducing the time and increasing the speed at which we internalize a skill or acquire new knowledge. However, the advent of neural technologies might pose unprecedented challenges - concern for all aspects of life but particularly the sensitive area of language, which is inextricably interwoven with culture and identity, and cybersecurity and safety, where a long tradition of ethical principles applies. All considered, it is vital to raise such issues and keep people alert as it has not yet known whether it will improve the future of humanity to better or not.

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“We get this virtuous cycle between neuroscience, cognitive science, and AI because we are trying to study the same thing, which is intelligence”. — Jess Hamrick, Research Scientist at DeepMind

Imagine a technologically utopian society in the upcoming future during which people no longer learn languages, art, crafting, or maybe sports. Instead, we stream these skills from the net directly to our neural chips implanted in our brains, much like many of us, today, stream songs, books, or movies, on demand to our PC. Sounds pseudo-futuristic, isn't it? A science revolution or science fiction? Only time will tell. Surely, for decades, Neuralink technologies, Artificial Brain, Artificial General Intelligence, Android and gynoid have been the dreams of computer scientists, or fiction stories from children's books. However, these particular science fiction tropes are following in the footsteps of the telephone, computer, and flying cars and are becoming less and less fictitious day by day. Who knows, perhaps one

day we treat AI like humans and address the robots with human replicated intelligence, using the proverb “who” rather than “what” or even there won’t be a need for language to communicate at all, only brain to brain communication since they would read our minds perfectly. As it has become the biggest concern of today, let’s give us some time to ponder the future of languages influenced by the emerging state of art technologies.

Historically there has been a little or no interaction between neuroscience and technology. Today AI has become a paramount paradigm which is having a powerful impact on many fields, including language, culture, psychology, and society. Whatever the application areas of AI be, its general purpose stays the same. Namely, building the machine’s capacity to keep progressing its performance without human interaction and creating technology that allows computers to work intelligently. Have you ever thought that there are artificial brains behind our search engines that imitate human intelligence? Or have you ever come up with a question about why there are so many ads pop up on my screen which is closely related to my searched queries on Google, even if those queries are not in the English language? Google sees such promise in virtual reality that is helping computers think like a human. In 2015 Google takes its first attempt to use an AI algorithm under the name of RankBrain, which turned into a pivotal change in the global search engine. To be precise, its primary function is to understand and process queries in terms of language, keywords, ranking, and region and turn them into concepts sorting the search results accordingly. Can you imagine that before inventing RankBrain, 100% of Google’s algorithm was hand-coded and required a plethora of manually working staff? Nowadays, thanks to RankBrain Google tries to figure out what you mean even if you search in your native language, perhaps Uzbek, and provides a relatively accurate set of results, outperforming brainy Google engineers by 10%.

The multi-billionaire entrepreneur Elon Musk is going even further with the products and services that do not exist outside laboratory settings. The future aspirations of his company are oriented toward digital immortality, motor skills, and strengthened sensory and telepathy. Musk visualizes a world where brain-computer interfacing technology (BCIs) makes it so that the human brain and artificial intelligence can combine to be indistinguishable from one another (Golembiewski), 2020.

It should be highlighted that his initiatives are already moving quickly towards real-world success. In 2019, Elon Musk presented his latest venture Neuralink, unveiling a brain chip that uses small threads to detect neuron activity and so allowing users to control computers with their minds. A year later in 2020, he presented a neural link surgical robot, a special machine used to insert the neural link into the brain. Musk said in a tweet that the product “will enable someone with paralysis to use a smartphone with their mind faster than someone using thumbs.” A few months later, his team completed a successful brain chip trial, illustrating the first fully-implanted brain-machine interface. And for the experiment, a monkey named Pager was in the first lines which had the link implanted. To the surprise of many, the animal was able to move a cursor on a computer screen to play a mind pong - a video game in which nothing was involved in planning and executing movements to catch a ball but the enhanced neural activity in its brain. That assures that his mobility-enhancing solution might enable people with neurological conditions, various disabilities, and paralysis to communicate easily, to follow their curiosity on the web, operate digital devices quickly through direct use of their neural activity, and more than that improve their lives of those with neurological disabilities.

Elon Musk’s Neuralink brain implant is highly predicted by many scholars to become the future of communications. But how actually it works? Once it’s in there, the Neuralink can read the neural impulses in your brain. Every action you take begins with a neuron firing in your head. Having a computer wired into your brain opens up a whole world of possibilities, like controlling any technology using just your thoughts alone, no need for a keyboard, mouse, or touchscreen, just mind power. They’ve already shown a proof of concept of this idea by implanting two devices into the skull of a monkey and teaching him how to play the video game Pong with only his mind. But the aspect that we really want to drill down into today is how we can radically change the way that people communicate. How we might be able to replace speech and maybe even writing with a literal neural link between humans.

Elon didn’t invent the Brain Computer Interface, that’s been around for a surprisingly long time. Scientists have been sticking probes into brains for over 50 years now. But Elon has been the first to imagine how BCI fits into the modern world that we’re building. And he’s had this idea of replacing language for a while now. The basic concept is pretty sound, Elon’s idea is that talking is just a very inefficient

way of communicating information. Our brain spends a lot of effort compressing a complex concept into words and there's a lot of loss of information that occurs during that compression. So, imagine if you could send that concept straight from your brain into an app, which would then broadcast it directly into the brain of another Neuralink user. As Elon says, you would be able to communicate very quickly and with far more precision using the device. You wouldn't need to talk in order to get your ideas across. I could take whatever knowledge is encoded in my brain, and instantly transfer it into your brain. In Elon's mind, this kind of digital communication would become so ubiquitous that we eventually reach a time where language is practiced only for sentimental reasons - like the way some people still practice blacksmithing, it's not a necessary service anymore, we could all do just fine without it, but it's fun to keep old traditions alive.

No doubt that neurotechnology stands out today as a new field of knowledge in which research, human intellect, psychology, and state-of-the-art technology are combined in an attempt to uncover the mystery and power of the mind. Despite much research has been done, few have focused on the linguistic peculiarities of the recent innovations in the area. And there is a big need to analyze the attitudes of societies towards the perspective of language-oriented uses and repercussions of neuroscience-inspired artificial intelligence, and its effect on language evolution. Within the frame of the research purpose, such an endeavor as Neuralink that aims to increase the ceiling for humanity's potential, and competing visions for the existence of a neuro-enhanced world, obviously raises several unignorable questions which shouldn't leave unanswered:

1. In what ways do you expect the language evolution to change overall, being heavily influenced by Neuralink in the future?
2. Once, Neuralink becomes available, how do societies react to the superheroes knowing multiple languages or even having the ability of telepathy? How will Neuralink change the competition between humans?
3. If given an option, would you be willing to try Elon Musk's Neuralink once it's accessible, why?
4. If there will be access to a universal language, what will happen to the profession of translators, language teachers?

5. If we lose our traditional languages, does it mean we are going to lose our culture and identity as well?
6. If the brain chips can read our minds, collect our thoughts and transfer this data to others in real-time, aren't we having too much faith in this potentially invasive innovation?

We cannot put the questions off anymore, we need to address them as immediately as possible since Neuralink will soon begin clinical trials with humans. It is detrimental thoroughly address the mentioned above issues and give potential solutions from scientific and empirical perspectives before making any decisions about its application. We live in a world where information and knowledge are power. And unless there is a product demand from a certain group of people with communication disabilities, we should not expose our traditional languages to extinction- has become our national and cultural identity and thereby become the victim of hackers. which is inextricably intertwined with privacy, culture, and society.

Bibliography

1. Singh N, "Neuralink; A cheat code for evolution?", 2022.
2. Parks N, "Brain chips and the future of human evolution", 2022.
3. Stockmeyer J, "Are brain interfaces leading us into a technological utopia?", 2022.