

Artificial Intelligence Yields No Language Barriers

...SO I read a news article last November that I have kept on my 'list' of topics to blog about here at NAU. Teaser: "Google's AI translation tool seems to have invented its own secret internal language."

Yes, read it again- Google's artificial intelligence (AI) program has invented its own language. Computers are only as smart as humans make them because humans program them; this means that humans write 'the rules of the game', or rather how smart computers are and how smart they can become. This article is one of the few that has provided us a glimpse into the future where software programs begin 'thinking for themselves' and expand beyond how smart humans programmed them to be.

The AI program is called 'Google Neural Machine Translation' (GNMT). It was launched in November, 2016, to assist in the Google Translator application that supports more than 100 languages. **The idea was simple**: Program the GNMT to learn from the requests that Google Translator receives...so the system learns to create better, more natural translations.

GNMT was less than a month old when Google's AI researchers realized that the program created its own language (which it was **not** programmed to do). GNMT created short-cuts while translating; it is these short-cuts that **are not a language as we conceive it**, but rather an *unknown* code, where the new language exists. The following is how it works:

Let's say that GNMT is programmed to translate English to Korean, and English to Japanese, but it is **not** programmed to translate Japanese to Korean. This would result in English being the 'base' language, so Japanese would have to be translated to English before it could be translated to Korean. English is the **gateway** language.

GNMT self-created what is called an 'interlingua', or an inter-language, to effectuate the translation from Japanese to Korean *without* having to use English. Google AI researchers have yet to decode the 'interlingua'.

Some of you may read this and see images of the Will Smith movie, AI, flash before your eyes. Why is it that every Science Fiction movie assumes that AI is out to conquer us? Anyway, I learned about GNMT and thought about how this could connect the entire world because language would no longer be a barrier. **Think about it**: If you could talk and the other person could understand you, regardless of language, then international barriers would be quickly dissolved. How could this be accomplished?

This moves to the part of futurism that many people fear- computer chips in your brain, or at least in the Bluetooth which you wear to make phone calls. What would be required is the GNMT program which could 'hear' the language spoken to then translate it to the listener. GNMT would exist on a microchip. The microchip could be in a device that you wear in your ear, or it could be implanted in the brain so there is no interruption in the speaking/thought/reality process.

Scary or beneficial? Only you can determine the answer to this question.