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Aller au sommaire du numéro

Découvrir la revue

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Was The Spoken Word the First Form of Artificial Intelligence? A Probe

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We explore the notion that language, i.e. the spoken word, is the basis of most human thought and hence may be regarded as a form of artificial intelligence as opposed to the natural intelligence of all forms of non-human life and is quite different than computer-based Artificial Intelligence or AI.

Given that this article is about the notion of artificial intelligence the etymology of the words artificial and intelligence are in order. The direct antecedents of the word 'intelligence' lie in the Latin intelligentia or intellegentia meaning "the action or faculty of understanding," itself derived from the Latin intellegere meaning 'to understand (https://www.google.com/search?client=firefox-b-d&q=etymology+of+intelligence, accessed April 27, 2024).

Artificial (adj.) "not natural or spontaneous," from Old French artificial, from Latin artificialis "of or belonging to art," from artificium "a work of art; skill; theory, system," from artifex (genitive artificis) "craftsman, artist, master of an art" (music, acting, sculpting, etc.), from stem of ars "art" (see art (n.)) + -fex "maker," from facere "to do, make" (from PIE root *dhe- "to set, put") https://www.etymonline.com/word/artificial.

All forms of non-human life including animals, plants, fungi, and micro-organisms find solutions to the problems they face and hence they possess a form of intelligence, which we identify as natural intelligence. They seem to understand what is required for their survival and they execute actions automatically without any thought that enhance their survival and allow them to reproduce. All animals are problem solvers as they search for food and some are even tool makers especially chimpanzees that use twigs stripped of their leaves to fish for termites in a termite nest. Plants like trees solve the problem of acquiring more energy in the form of sunlight by shooting out their branches or limbs to capture more sunlight. Fungi and microorganisms form colonies when nutrients are in short supply or absent to solve their problem of survival. Given that all forms of non-human life solve problems to ensure their survival they all possess a form of intelligence, which we define as natural intelligence.

Certainly with plants, fungi and micro-organism there is no possibility of thought as they have no brains. As for animals who possess brains if there is any manner of thought it is not language based as is the case with humans. We therefore conclude that all forms of non-human life, possess what maybe, defined as a form of natural intelligence as it parallels Sternberg and Salter (1982) definition of intelligence, namely "intelligence is goal-directed adaptive behavior." Human intelligence, on the other hand is, for the most part, language based. This leads us to suggest that human language-based intelligence may be considered as the first form of artificial intelligence as opposed to the natural non-

verbal intelligence of all forms of non-human life and certain forms of human intuition.

Thinking or Intelligence Is Not Just a Human Attribute

Even lower forms of life including plants, fungi and micro-organisms find solutions to the problems they face that threaten their existence and that of their prodigy. They take actions to neutralize or deal with those threats and hence demonstrate a level of intelligence. Perhaps describing the actions of these non-human actors or organisms to ensure their survival and that of their prodigy as thinking is not the best way to describe how they take actions to deal with the problems and challenges they face. But it is certainly that these successful strategies to deal with the challenges they face from nature represent their form of intelligence. This way of defining intelligence parallels Sternberg and Salter (1982) definition of intelligence, namely "intelligence is goal-directed adaptive behavior." It also parallels Alfred Binet's (1905) definition which he formulated in his discussion of children's psychology but seems to me to apply to forms of life both human and non-human.

> It seems to us that in intelligence there is a fundamental faculty, the alteration or the lack of which, is of the utmost importance for practical life. This faculty is judgment, otherwise called good sense, practical sense, initiative, the faculty of adapting one's self to circumstances (https://www.azquotes.com/author/24674-Alfred_Binet).

Human forms of intelligence are, for the most part, language based in which solutions to problems are arrived at by reasoning through a set of logical steps and hence their intelligence is a form of artificial intelligence with respect to the natural intelligence of all the non-human forms of life. We have used the lower-case artificial intelligence to distinguish human reasoning from computer-based Artificial Intelligence better known as AI. Humans also have non-verbal forms of intelligence like other forms of life, which is usually referred to as intuition or intuitive intelligence, but human intelligence is for the most part verbal-based and hence artificial.

It might not seem that most of our thinking is language based but if you think about it, you will realize that every day thoughts and decisions are language based such as what will I eat, what will I do today; where is my computer/my smartphone/my shoes/; where will I go or do today, when will I go to bed and so much more. Feeling happy or sad is non-verbal but trying to understand why is always verbal. Emotions are non-verbal and not a form of intelligence but understanding why one is feeling a particular emotion requires verbal-based intelligence.

We therefore suggest that human verbal-base intelligence is in a certain sense a form of artificial intelligence. Note our use of the lower case to distinguish this form of artificial intelligence from Artificial Intelligence (capitalized) or AI which is computer-based. It is also the case that computer-based AI is not so much a form of intelligence as a tool that extends human intelligence.

This is the sense in which we say that the intelligence of humans which is language based is the first

form of artificial intelligence because it is artificial with respect to the natural intelligence of all the other non-human forms of life. Our language-based intelligence is artificial in the sense that it is unlike the intelligence of non-human forms of life which is exclusively intuitive. The artificial intelligence of human thinking is language based with the possible exception of certain art forms such as music, painting and sculpture. But there must be some connection with verbal language and these fine art forms in that the only living organisms to engage in artistic expression are humans, who are also the only ones who possess verbal language (Logan 2024b).

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