Formalizing an Argument: Writeup

There is a popular debate on whether machines can think as humans do, or in other words, " whether a computer has achieved human-like intelligence" (Harel, 2016). Although computers have made tremendous progress in the field of artificial intelligence, it is still uncertain whether they can be deemed as having human-like intelligence. Regardless of the ambiguity on both sides of the argument, the common answer to the question "have machines achieved human-level intelligence" is most often "no".

It is unclear why this argument stands since the debate implies that there is an accepted singular definition of human level intelligence, yet there is not. Relying on words to determine intelligence is not sufficient to answer the question of whether or not machines can think as humans do, and much less in establishing a universal definition of intelligence for our own race (Turing, 1950). Regardless of these facts, most maintain that computers have not reached human-level intelligence for the following reasons:

Computers lack autonomy.

Computers do not have biological systems that have all the same components which operate in the same way, like human brains.

Computers require an "external programmer" or someone else to create them.

If the previously mentioned critiques are sufficient to determine whether machines have reached human-level intelligence, then humans must not fail these assessments for their argument to be valid. If humans fail to meet their own criteria, then their argument is null. Based on these premises, it cannot be determined that machines cannot think as humans do. Therefore, I argue, machines have reached human-level

Argument:

If a humans fails any of these critiques, it cannot be determined that machines have not reached human level intelligence.

Premises:

P1: Humans lack autonomy.

P2: Biological brains and systems do not always have the same components, and they do not always operate in the same way.

P3: Humans were created by an external source.

C: Since it cannot be determined that machines have not reached human level intelligence, it can be said that machines have reached human level intelligence.

Premises Discussion:

Premise 1 states that humans lack autonomy. Autonomy is usually described through self-governance. However, there are arguably many levels to self-governance, which reconfirms that autonomy is not a viable premise to determine a lack of human like intelligence in machines. If that were the case, humans would fail to meet more than one criteria of autonomy. For example, humans lack autonomy for most of their childhood, especially in infancy. When infants are first born, they are not self-governing and require external resources to insure they are fed, put to sleep, and kept clean. Another example is humans who are tetraplegic and lack the ability to make voluntary movements. Would this not mean they lack autonomy in some form? Thus, humans fail this argument against machines.

Premise 2 states that biological brains and systems do not always have the same components, and they do not always operate in the same way. Consider individuals who are born without specific parts of their brain. Yes, there lives may be impaired, but they are alive nonetheless, which confirms that not all humans have the same biological components. Furthermore, not all brains operate in the same way. Consider individuals with attention-deficit/hyperactivity disorder (ADHD). Some researchers have found that participants with ADHD had increased retinal ganglion activity even in the absence of a stimuli, which is not typically seen in non-ADHD individuals (Werner et al., 2020). The aforementioned example illustrates how not all components of a biological system work the same. Thus, humans yet again fail this argument against machines.

Premise 3 states that humans were created by an external source. There is no clear consensus on how the human race began. There are some who support the notion of an 'evolutionary boom,' and there are others who ascribe our existence to a specific being or deity. Since neither viewpoint has been completely refuted, it can be said that humans were created by an external source or 'programmer'. Furthermore, all human existence is perpetuated by procreation, in which every parent is a 'programmer' or creator of sorts. Thus, humans have failed the last critique against machines.

In conclusion, since humans have failed every premise of their argument against machines having obtained human-level intelligence, their argument is not longer valid. Based on these premises, it cannot be determined that machines have not reached human-level intelligence. Therefore, it can be said that machines have reached human level intelligence.

References:

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