Swapnil Lad
CS 3790 TA: Lu Meng

Historic Artificial Intelligence

In his 1991 paper titled “Intelligence without representation”, Rodney A. Brooks dives deep into the goals, basis, and development of artificial intelligence, also attempting to describe some shortcomings that have recently plagued the field. A notable section of Brook’s analysis questions the basis of modern artificial intelligence if the field has failed to represent even neanderthal or prehistoric intelligence in its methods. Wolfgang Bibel of the Darmstadt University has written a paper titled “Artificial Intelligence in a historical perspective” which explores the development of various intelligence models and how Brook’s notion on the historic-intelligence shortcomings of artificial intelligence aren’t as harmful to the field as he puts forth.

A central pillar of Brook’s argument is that intelligence, and by extension artificial intelligence, “should do something in the world” and “have some purpose in being” (Brook 145), and the inability of models to match the intelligence and purpose of prehistoric humans shows a fundamental flaw in their development. Bibel challenges this assertion, claiming that attempting to develop these types of models is “a change in its long-term goal.” (Bibel 87) He notes that the basis of modern research has been “enhancing rather than simulating human intelligence”, and that the neanderthal simulation is one potential path towards reaching enhancement. Biebel claims that “nothing less than a third step in the evolutionary history is required” (Bibel 89) for strong models, and there are many paths towards reaching “long-term goals”. He also adds that the current path of AI development may have deviated from the pursuit of perfect “replication” but is still headed in the direction of improving and benefiting society as whole.

Bibel challenges Brook’s claims by noting the success of AI. He adds that failing to create perfect simulation isn’t a setback, but another way to reach the goal of modern AI.

Literary Sources

Bibel, Wolfgang. (2014). Artificial Intelligence in a historical perspective. AI Communications. 27. 87-102. 10.3233/AIC-130576.