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Hubert L. Dreyfus's Critique of Classical AI and its Rationalist Assumptions

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Abstract This paper deals with the rationalist assumptions behind researches of artificial intelligence (AI) on the basis of Hubert Dreyfus's critique. Dreyfus is a leading American philosopher known for his rigorous critique on the underlying assumptions of the field of artificial intelligence. Artificial intelligence specialists, especially those whose view is commonly dubbed as "classical AI," assume that creating a thinking machine like the human brain is not a too far away project because they believe that human intelligence works on the basis of formalized rules of logic. In contradistinction to classical AI specialists, Dreyfus contends that it is impossible to create intelligent computer programs analogous to the human brain because the workings of human intelligence is entirely different from that of computing machines. For Dreyfus, the human mind functions intuitively and not formally. Following Dreyfus, this paper aims to pinpointing the major flaws classical AI suffers from. The author of this paper believes that pinpointing these flaws would inform inquiries on and about artificial intelligence. Over and beyond this, this paper contributes something indisputably original. It strongly argues that classical AI research programs have, though inadvertently, falsified an entire epistemological enterprise of the rationalists not in theory as philosophers do but in practice. When AI workers were trying hard in order to produce a machine that can think like human minds, they have in a way been testing—and testing it up to the last point—the rationalist assumption that the workings of the human mind depend on logical rules. Result: No computers actually function like the human mind. Reason: the human mind does not depend on the formal or logical rules ascribed to computers. Thus, symbolic AI research has falsified the rationalist assumption that 'the human mind reaches certainty by functioning formally' *by virtue of its failure* to create a thinking machine.

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