COULD COMPUTERS DEVELOP COGNITIVE COMPETENCIES?

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Abstract - Cognition is the mental process of acquiring knowledge and understanding through thought, experience, and senses. ("Cognition - Wikipedia") Cognitive processes start with thinking and knowing and go all the way to remembering, judging, and problem-solving. They involve higher-level functions of the brain such as language, imagination, perception, and planning. Basic cognitive processes of perception, attention, and memory could lead to creativity.

Could the amalgam of integrated circuits and derived software that we call computers ever acquire and demonstrate cognitive competencies?

This is the focus of the following article.

The article starts with a definition of cognitive competencies. It explores their parameters and prime functions. It then proceeds to explore what we may refer to as the competencies of the computer or the amalgam of integrated circuits and their software capabilities. A comparison follows and gaps, overlaps and loopholes are identified.

Tentative and conditional conclusions are then derived.

The article relies on works on neurology, electronics, data science and psychology.

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