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Enhancing Human Cognition: The Role of Technological Integration in Cognitive Upgrading

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Abstract

This research aims to systematically investigate the concept of cognitive upgrading through the integration of technological tools with human cognition. Two experimental studies are proposed to examine how technology impacts cognitive abilities when integrated into cognitive processes, and the outcomes of offloading cognitive load to technology to engage in higher-level thinking. Based on theoretical frameworks of cognitive load theory, cultivation theory, cybernetics and the extended self, four hypotheses are formulated predicting enhanced cognitive performance and a symbiotic relationship between humans and machines. The experimental designs employ random assignment and within-subjects comparisons to measure the effects of technology on cognitive tasks. The expected findings suggest cognitive upgrading results in improved cognitive functioning, efficiency and a feedback loop advancing both human and technological capabilities. The research seeks to advance understanding of cognitive augmentation while informing cognitive technology development and policy.

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