Examining the Impact of Distinct AI Perceptions on Professionals' Task Effort and Decision-Making: The Dark Side of Opportunity Perceptions

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Abstract

AI decision aids are becoming increasingly critical to the daily operation of organizations. Yet, while scholars have extensively discussed various opportunities and threats posed to employees by such AI decision aids, none have examined how employees' perceptions of AI – as an opportunity or a threat – affect their decision-making behaviors. Three studies revealed an adverse impact of opportunity perceptions (but not of threat perceptions) on employees' behavior. Study 1, a correlational field study using Prolific employees working alongside AI decision aid systems, revealed that AI opportunity perceptions (controlling for threat perceptions and the interaction between opportunity and threat perceptions) were positively related to AI- (vs. self-) reliance preferences, leading to higher employees' self-report of technological loafing tendencies (i.e., putting forth less effort on the task when the AI can do their work). Studies 2 and 3, using simulation-based experiments, found that HR professionals (Study 2) and medical students (Study 3) randomly assigned to AI as opportunity (vs. threat, or control) condition showed greater AI- (vs. self-) reliance preferences (amplified for employees high in self-efficacy [Study 2] or medical expertise [Study 3]), leading them to invest *less* effort in a simulated-task within their work domain and *greater* compliance with a fictitious AI decision. This research provides managers with insights on psychological factors affecting employees' active decision-making and independent thinking in human-AI interactions.

Keywords: AI decision aids, Opportunity versus threat perceptions, Human-AI interactions, Task effort, Decision compliance