

An Examination of the Social, Cognitive, and Motivational Factors that Affect Automation Reliance

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In a series of laboratory studies in which students performed a target detection task, human operators consistently made suboptimal automation reliance decisions both overly relying (misusing) and underutilizing (disusing) an automated target identification tool. This paper will review the findings from these studies in terms of Dzindolet, Beck, Pierce and Dawe's (2001) Framework of Automation Use, which predicts automation reliance decisions are determined by cognitive, social, and motivational factors. Although this work was performed within the context of a target identification task, its results have implications for automation use across domains. In addition, recommendations for system designers of combat identification tools and suggestions for future research will be presented.