

# **Smarter or Scattered? The Impact of AI Multitasking on Human Intelligence**

Yuhmiin Chang

Distinguished Professor, Department of Advertising,  
College of Communication, National Chengchi University

This study develops a theoretically grounded conceptualization of human-AI multitasking and examines its role in enhancing cognitive functioning and psychological outcomes.

Guided by the Human-AI Interaction Theory of Interactive Media Effects (HAIITIME) model, the study investigates multitasking frequency and multitasking types as distinct behavioral antecedents of human-augmented intelligence, which is hypothesized to mediate their effects on self-esteem and well-being. Data were drawn from the third wave of the Taiwan Communication Survey, Phase III (Face-to-Face Interview). After excluding participants without human-AI multitasking experience, 732 weighted cases (738 unweighted) were retained for analysis. Cluster analysis identified three types of human-AI multitaskers: task-specific, cognitive-intensive, and translation-focused. Significant differences in multitasking frequency and human-augmented intelligence emerged across the three groups, with cognitive-intensive multitaskers reporting the highest levels, followed by task-specific and translation-focused multitaskers. However, self-esteem and well-being did not significantly differ among the groups. Mediation

analyses further revealed that human-AI multitasking frequency enhances human-augmented intelligence, which in turn predicts higher levels of self-esteem and well-being across the overall sample and among task-specific AI multitaskers, but not among cognitive-intensive or translation-focused multitaskers.

**Keywords:** human-AI multitasking, human-augmented intelligence, multitasking frequency, self-esteem, well-being, HAII-TIME model