When Does Emotion Interfere? Task Demands and Language Experience in Cognitive Control

My Viet Ha Nguyen, The Hong Kong Polytechnic University

Benjamin J. Tamber-Rosenau, University of Houston

Arturo E. Hernandez, University of Houston

This study examined emotional interference in cognitive control using a multi-task approach designed to vary emotional, linguistic, and control demands. Heritage bilingual and monolingual young adults completed six cognitive tasks spanning lexical decision, Stroop, and working memory paradigms. Rather than a uniform pattern, emotional valence effects and cognitive costs were highly task dependent. Bilinguals often had similar or higher efficiency than monolinguals in tasks with higher control demands (e.g., nonword rejection, high-load working memory), while emotional interference showed limited group differences, likely reflecting bilinguals' English-dominant testing context. Critically, the multi-task design revealed substantial within-bilingual variability: performance was modulated by English and Spanish proficiency and age of second language acquisition in task-specific ways. By comparing emotional interference across multiple task contexts, these findings demonstrate that emotion–cognition interactions depend on task structure and individual experience, highlighting the value of multi-task designs for understanding cognitive control.

In G. Boleda, I. Dautriche, M. Maldonado, C. Saldana and T. Torrent (Eds.), *Proceedings of the 48th Annual Conference of the Cognitive Science Society*