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Joint Use of Information Technologies: Laboratory Investigation of Dyadic Use Experience in E-commerce Context

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Joint Use of Information Technologies : Dyadic Use Experience

Explorative Laboratory Investigation of Dyadic Use Experience in E-commerce Context

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Despite extensive research on human-computer interaction and information technology (IT) use, the literature lacks insights about collaborative use of IT systems by two or more users through a shared system interface display, a phenomenon referred to as joint IT use. Hence, little is known about antecedents and consequences of joint IT use experience. Calling for more interest by researchers in the investigation of joint IT use, recent research has empirically demonstrated that this phenomenon is common and important (Tchanou et al., 2020). We conducted a mixed-method exploratory laboratory study in an inductive perspective, based on a 2x2x2 within-subject design. We used self-reported, automatic facial analysis, and electrodermal activity measures, and we illustrated synchronized dual eye-tracking technique for one of the first times in IS. In a laboratory setting, thirty-five couples jointly shopped online, i) interacting with webpages with or without vertical scrolling feature, ii) agreeing or not prior to experimental tasks on product preferences, and iii) sharing system display or not, with only one partner user controlling input devices when sharing display, making input device control a between-subject factor. Results suggest that webpage vertical scrolling degrades dyadic visual coordination and emotional valence, increases required effort for joint decision-making, and deteriorates user satisfaction with joint product choices; agreeing prior to tasks promotes higher user satisfaction with product choices for users with no input device control; and users who do not control input devices experience higher satisfaction and higher serenity (i.e., lower cognitive load and lower electrodermal activation). Based on our study's emerging construct relationships, we discuss several implications and recommendations for researchers and IT system designers.

Keywords: joint system use, joint IT use, user dyad, couples, user experience, scrolling, shared display, synchronized dual eye-tracking, laboratory experiment, electrodermal activity, automatic facial analysis, psychophysiological measures.

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