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UNDERSTANDING ATTITUDES TOWARD ARTIFICIAL INTELLIGENCE: THE ROLE OF SELF-EFFICACY AND SOCIAL PRESENCE

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ABSTRACT

The rapid advancement of Artificial Intelligence (AI) has revolutionized various industries by enhancing efficiency, streamlining processes, and transforming service delivery. While the integration of AI in sectors like healthcare, logistics, and tourism has been widely studied, its adoption within the corporate events industry remains underexplored. Existing research on AI acceptance often relies on traditional technology acceptance models (e.g., TAM), which were developed for non-intelligent systems and may not fully capture the socio-psychological nuances influencing users' attitudes toward AI systems. This study addresses this gap by investigating how socio-psychological factors – social presence, technological self-efficacy and perceived empathy – shape delegates' attitudes toward AI acceptance in the context of corporate events. Grounded in a user-centric perspective, this research examines whether these factors influence participants' intentions and attitudes toward adopting AI-driven systems during service delivery. Beyond providing insights into AI's role in the corporate events sector, this paper contributes to the broader understanding of human-AI interaction by exploring the psychological and social dimensions that drive acceptance. By empirically validating the significance of these factors, this study highlights the potential of AI integration as a strategic tool for enhancing attendee experiences and fostering innovation in modern business event management.

AI and Business Events

During the planning and execution of an event, AI emerges as a reliable assistant, alleviating the burden of repetitive and time-consuming administrative tasks. Leveraging machine learning (ML) algorithms, AI can suggest the most suitable venues based on factors such as cost, capacity, convenience, location, amenities, and availability (Causin & Scamacca, 2021). In the event phase, AI presents various opportunities to enhance efficiency and security. One valuable application is the incorporation of advance AI-enabled facial recognition technology and biometric registration into the security and event admittance process (Ogle & Lamb, 2019. Moreover, AI enables event professionals to

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monitor attendee entries into different sessions (Causin & Scamacca, 2021). In the realm of event venue security, AI can be employed to peruse attendees' emotions through video surveillance technologies. These technologies simplify the detection of suspicious behaviors and interpretation of body language (Ogle & Lamb, 2019). This capability enhances overall security measures, ensuring a safer environment for all participants.

Another valuable application of AI is the adoption of mobile robots in catering service areas. Robots are autonomous vehicles equipped with AI and environmental sensors, enabling them to make decisions and perform various actions (Bulchand-Gidumal, 2022). These robots have the potential to offer infotainment functionality, such as providing guided tours to visitors and encouraging unconstrained interaction (Ogle & Lamb, 2019). Additionally, chatbots are another powerful technology in the communication department as they help improve visitors' experience through instant support and information. The chatbot can be used to respond to questions, keep in contact with attendees, and provide information and reminders as requested. According to Causin and Scamacca (2021), AI-powered chatbots have become a networking instrument for "match-making", that connects event attendees with activities and experiences that align with their own interests and goals for the event.

However, despite the numerous potential benefits, implementing AI systems in event management is not without its challenges (Cheng et al., 2022). Research indicates that while personalized recommendations enhance user experience, they also raise concerns about privacy and information narrowing, making individuals hesitant to embrace such technologies (Cheng et al., 2022). From an organizational perspective, significant hurdles include the acquisition of high-quality data, which is often costly and difficult to generate (Bulchand-Gidumal et al., 2023), as well as the potential risks to a company's reputation if AI implementation falls short of expectations or leads to unintended consequences (Cheng et al., 2022).

Social Presence

A pivotal aspect of human-agent interaction is social presence, which refers to the extent to which an individual believes that someone is genuinely present (Priya & Sharma, 2023). In human-robot interaction, it has been conceptualized as the degree to which machines, such as robots, create an environment where consumers feel that they are in the company of another social entity. Social presence is also described as the extent to which technology is considered personal, social and friendly (Priya & Sharma, 2023). When interacting with technology, individuals often apply social roles and treat computers as social entities. This occurs when technology mimics human-like attributes. When virtual assistants use natural language, interact with users in real-time, and possess human-like characteristics (such as voice) it is likely that these interactions will elicit a sense of social presence (Pitardi & Marriott, 2021).

Due to their human-like conversational flow, AI devices may provoke a sense of social presence, which can serve as the basis for developing user's empathy. Specifically, when users interact with their virtual assistants or robots, the human-like communication may

influence the individual's perceived empathy and, consequently, attitude toward AI (Pitardi & Marriott, 2021).

Technology Self-Efficacy

Rooted in social cognitive theory (SCT), self-efficacy refers to an individual's belief in their ability to handle challenging situations (Wang & Chuang, 2023). Technology self-efficacy, the perception of one's aptitude to use technological tools, significantly influences technology acceptance and usage (Priya & Sharma, 2023). Individuals with higher technology self-efficacy exhibit greater confidence, reduced anxiety, and more frequent interaction with technology (Wang & Chuang, 2023). Research suggests that familiarity with AI or exposure to others proficient in AI enhances AI-specific self-efficacy (Morales-García et al., 2024). In the context of AI, self-efficacy reflects one's confidence in effectively employing AI to achieve personal or professional goals (Morales-García et al., 2024). Those with higher self-efficacy are more likely to trust AI systems and develop positive attitudes toward them. This underscores the importance of thoughtful AI integration in the business events industry, balancing its transformative potential with a critical assessment of its challenges (Morales-García et al., 2024).

Empathy

Empathy is a multidimensional construct that includes both emotional and cognitive dimensions. The emotional component involves the ability to share and understand others' feelings, while cognitive empathy enables individuals to adopt others' perspectives and adjust their behavior accordingly (Yoon & Lee, 2021). Just as empathetic human employees enhance customer satisfaction and strengthen relationship quality, Pelau et al. (2021) argue that embedding empathy in AI systems can boost consumer acceptance and trust. Social robots with high empathy are expected to exhibit interpersonal concern, mutual support, and consideration for individuals' well-being during interactions (Kervenoael et al., 2020). This not only fosters affinity but also improves interaction quality with the service provider. In the events and service industries, empathy is particularly critical for building mutual understanding and creating positive, trust-based relationships between consumers and service agents.

Methodology

Data for this study were collected via the Prolific platform in March 2024. A questionnaire was developed using the Qualtrics platform, targeting participants who had prior experience interacting with AI systems at business events. To measure the constructs, established scales were adapted, including Social Presence (Roy et al., 2022), Technology Self-efficacy (Hong et al., 2014), and Perceived Empathy (Simon, 2013).

A total of 152 valid responses were analyzed. The sample was evenly split by gender, with 50% female participants. Age distribution showed that 50% of respondents were aged 25–34, 19.7% were 35–44, and 16.4% were 45–54. In terms of education, 34.2% of participants held or were completing a bachelor's degree, while 30.9% held or were completing a master's degree.

Findings

Using structural equation modeling, the results (Table 1) demonstrate the pivotal role of socio-psychological factors in shaping attitudes toward AI systems. Social Presence emerges as a strong predictor of both Perceived Empathy ($\beta = 0.652$, $p < 0.001$) and Attitude Strength ($\beta = 0.472$, $p < 0.001$), suggesting that fostering a sense of human-like interaction enhances both empathy and positive attitudes. Technology Self-Efficacy also positively impacts Perceived Empathy ($\beta = 0.286$, $p < 0.001$) and Attitude Strength ($\beta = 0.207$, $p < 0.001$), indicating that confidence in using AI tools encourages more favorable perceptions. Perceived Empathy has the strongest influence on Attitude Strength ($\beta = 0.724$, $p < 0.001$), underscoring its critical role in forming robust positive attitudes toward AI. Overall, these findings suggest that enhancing social and emotional elements in AI systems could play a crucial role in driving their acceptance and adoption in business contexts.

Table 1. Results

Path	Beta	Standard deviation	T statistics	P values	CI	
					2.5%	92.5%
SP → PE	0.652	0.040	16.473	0.000	0.584	0.713
SP → AS	0.472	0.040	11.891	0.000	0.407	0.538
TSE → PE	0.286	0.063	4.520	0.000	0.186	0.392
TSE → AS	0.207	0.050	4.129	0.000	0.130	0.294
PE → AS	0.724	0.038	19.094	0.000	0.701	0.823

Note: SP= Social Presence; AS= Attitude Strength; TSE=Technology Self-Efficacy; PE= Perceived Empathy

Keywords: Artificial Intelligence, Technological Self-Efficacy, Social Presence, Perceived Empathy, Attitudes

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