Title of the research: Toward an understanding of customer intention to co-create with anthropomorphic embodied conversational agents in customer-facing services.

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Abstract

The rapid pace of technological advances has enabled service firms to integrate AI-empowered conversational agents (CAs) into customer-facing service interfaces to complement or replace service employees. This integration has led to a phenomenon where service encounters are predominantly co-created by customers and these CAs. Although firms strive to adopt these CAs in customer-facing services, customers may sometimes be reluctant to accept them as co-creation partners. Compared to text-based disembodied CAs (DCAs) in the form of chatbots, which often behave in a machinelike way, recent technological advancements have enabled service firms to adopt an advanced type of CA, namely, digital humans, characterised by elevated levels of both form and behavioural realism. As these digital humans are designed to resemble humans and carry a virtual embodiment, this study uses the term 'anthropomorphic embodied conversational agents' (AECAs) to refer to digital humans.

Drawing on social response theory (SRT) and the related computers as social actors (CASA) paradigm, as well as mind perceptions theory and co-creation theory, this study aims to investigate how the humanlike appearance and behavioural capabilities (social interactivity and autonomy) of AECAs influence customers' intention to co-create during service encounters, considering the roles of perceived mind capabilities, social presence, trust, and customer task orientation in this process. To achieve the study's aim, a video and scenario-based method was adopted to collect data from participants recruited from Prolific. Data were collected by randomly distributing two video stimuli among participants: a male and a female AECA interacting with a service customer during a banking service encounter (home loan guidance) and asking participants to imagine themselves in the interaction. The data collection process resulted in 424 valid responses, which were analysed using SPSS version 29 and SmartPLS version 4.1.0.

The findings showed that an AECA's perceived humanlike appearance, social interactivity, and autonomy positively affected perceived agency, emotional intelligence, and social presence. This, in turn, influenced customer trust towards the AECA. Trust was found to have a positive effect on customer co-creation intention. Additionally, results from a combined importance-performance map analysis (cIPMA) revealed that perceived social interactivity, perceived autonomy, perceived agency, perceived emotional intelligence, and customer trust towards the AECA were necessary for triggering customer co-creation intention, while perceived humanlike appearance and perceived social presence were not necessary, though their presence could be beneficial. Moreover, findings from a multi-group analysis

(MGA) showed three notable differences in structural relationships between participants exposed to the male and female versions of the stimuli, indicating gender stereotyping effects.

By focusing on customer evaluations of AECAs during service encounters, this study extends the co-creation literature into human-nonhuman contexts, laying a foundation for future investigations into AECAs' role as a co-creation partner. Furthermore, this study adds to the existing literature on CASA and mind perceptions theory by showing the role of humanlike visual and behavioural design cues in influencing customer perceptions and subsequent co-creation intention. For practitioners, the findings highlight the critical role of behavioural realism over form realism, together with additional implications.

Keywords: Artificial intelligence, Anthropomorphism, Co-creation intention, Computers as social actors, Conversational agents