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1. INTRODUCTION AND RESEARCH QUESTIONS

Chatbots are widely employed in various areas as an important product of artificial intelligence technology because they can simulate human conversations and satisfy business demands in various circumstances. However, users do not always appear to be satisfied with chatbot anthropomorphism. Although previous studies have already discussed that anthropomorphism has a positive impact on behavioral outcomes such as user satisfaction and persistent use intentions, there are still a few studies that suggest otherwise. Existing research results have not been able to determine the boundaries of technology use and how to provide personalized services to meet user needs. At the same time, users no longer accept a one-size-fits-all service model. Chatbots should dynamically adjust their technical strength to suit the needs of specific individuals for specific tasks, exhibiting tailored responses and services to enhance user perceptions and outcomes.

This study proposes a dual pathway by which anthropomorphism of chatbots affects user satisfaction from a theoretical perspective of task technology fit, and explores the key boundary conditions of individual characteristics and task characteristics in shaping user satisfaction. Our research questions are as follows: (1) How the anthropomorphism of chatbots shapes user satisfaction? (2) How does the path from anthropomorphism to user satisfaction for chatbots change when dealing with different users in different tasks?

2. THEORY AND RESEARCH FRAMEWORK

The research framework of this paper is shown in Figure 1.

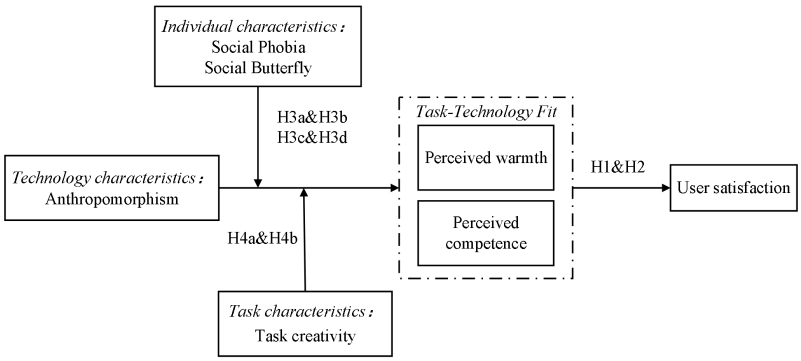

Figure 1. Research framework

A questionnaire study involving 615 participants and a between-groups experimental design in an e-commerce context have been investigated to answer the research questions.

3. RESULTS AND MAJOR FINDINGS

This study observed some valuable and interesting findings: (1) Perceived competence and perceived warmth play a fully mediating role in the relationship between anthropomorphism and user satisfaction. (2) Only social phobia positively moderates the relationship between anthropomorphism and perceived warmth. (3) When users employ a chatbot to perform a creative task, anthropomorphism is more likely to boost their perceptions of chatbot capabilities.

4. CONTRIBUTIONS

Our research provides an integrated perspective to analyze users' perceptions of how well anthropomorphic matches their task needs in terms of both warmth and competence. Moreover, we propose an interaction among social personality, task creativity and technical features based on the task technology fit theory to provide a reference for future research on the application of task technology fit models in the context of artificial intelligence. From a management perspective, service providers should focus their design on the two goals of improving the competence and warmth of chatbots, and use anthropomorphism properly to stimulate users to be infected by the intelligence and warmth of chatbots. Meanwhile, developers can mine information about the user's behavior to determine the user's social phobia level, allowing them to target specific marketing to people with different personalities. In addition, we suggest that marketers concentrate on activities that are more suited to their abilities and leave to AI those on which they underperform.

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