

# Speculative Design for Emotional Support in Future Family Structures: AI-Assisted Memory Management

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This study examines the challenges of maintaining emotional support for families in the changing social structure anticipated in 2040. New challenges are posed to traditional family roles in providing emotional connections. Changes in family structure, including an increase in single-person households and diverse family types, may increase the distance between members and complicate the maintenance of family bonds. Research has shown that a lack of family emotional support can harm an individual's emotional regulation, social relationships, and overall mental health, especially for children, adolescents, and older adults.

In this regard, this study addresses the question: "How to maintain the emotional support function of the family in the future social structural changes?". Through literature analysis, questionnaires, and Kano modeling, this study identifies pain points and proposes solutions.

Utilizing a speculative design, this study proposes a "Future Family Memory Management System" that integrates artificial intelligence technologies to address the challenges of emotional connection and memory sharing. The system focuses on memory storage and family image cohesion, emotional accompaniment and interactive response, memory transmission and ritual visualization, digital roles, and privacy protection. The literature and questionnaires also show the relationship between strengthening family cohesion and family emotional support functions.

This study presents a new perspective on the application of artificial intelligence in the social domain, and it has been demonstrated that some of the functions of this solution can be accepted by the target group and provide meaningful emotional support for families under the changing social structure.

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