

AI Companion Reconstructs Intimacy Exploration: A Case Study of Xingye APP

Sitong Liu

*University of Birmingham, Birmingham, United Kingdom
SXL1438@student.bham.ac.uk*

Abstract. With the rapid development of generative artificial intelligence (AIGC), AI companion applications such as Xingye are profoundly changing young users' emotional lifestyles. Based on the theory of media affordability and human-machine communication, this paper systematically explores the formation pathway of virtual intimacy between Xingye's AI companions. The study finds that AI companions reshape emotional interaction patterns through the three-dimensional affordability of production, mobile, social dimensions. Users achieve emotional compensation, identity projection, and relationship linking in their interactions with AI. The study further points out that AI relationships have structural limitations in terms of emotional depth, memory coherence, and interaction authenticity. This raises privacy, dependency, and ethical risks. The integrated framework of human-computer symbiotic AI intimacy proposed in this paper guides the future development of human-computer interaction and symbiosis.

Keywords: Artificial Intelligence Companion, Xingye App, Virtual Intimacy, Human-Machine Communication, Emotional Compensation

1. Introduction

With the rapid development of artificial intelligence (AI), AI virtual chat apps, represented by Xingye, is increasingly penetrating young people's emotional lives. As the leading AI companion app in China, Xingye relies on the world-leading multi-modal AIGC technology to build a community platform that supports users to create and share AI agents freely. It can be understood as a Cyber Lover manufacturing machine. Cyber lovers often refer to romantic or intimate virtual emotional relationships with AI. Users can freely customize the image, voice, personality, and skills of AI agents here. They can also interact with users interested in AIGC. AI companion meets users' needs for agents through multiple interactive methods: the language model enriches the agent's personality and memory, and the voice model enhances its emotional expression. The visual model brings the agent closer to the user's imagination.

However, this technology is also trapped in the emotional paradox of the digital age [1]. Social media hyper-connectivity has led to problems such as increased emotional dissipation and the tendency to instrumentalize relationships. It is against this background that the rise of virtual companion applications powered by generative AI provides users with a new type of emotional support system with low risk and high controllability. The rapidly evolving technological ecosystem

and the shifting perception of AI's emotional role provide a unique context for understanding this emerging dynamic.

Existing research AI companions from the perspectives of user motivation and technical characteristics. Zhang & Li revealed users' motivations with emotional comfort and stress relief through interviews [2]. Zhang et al. uses the media affordability framework to analyze the reshaping of emotional experience by technical characteristics [1]. However, there is a lack of systematic exploration of the dialectical relationship between emotional complementation and ability substitution in AI companions as well as a comprehensive analysis of their emotional compensation value and structural limitations.

Therefore, this paper takes Xingye, a leading AI companion app in China, as the research object, and deeply explores the emotional compensation value and structural limitations of AI companions. By uncovering the dialectical logic of this human-computer intimate relationship, this paper provides a more comprehensive theoretical perspective for understanding the emotional complexity of the digital age and for future human-computer relationship research.

2. Theoretical framework

2.1. Human-machine communication theory

Human-machine communication primarily focuses on the interaction and meaning-making processes between humans and intelligent systems. Unlike traditional human-computer interaction, which emphasizes usability, human-machine communication highlights that when users interact with machines, they tend to perceive them as social actors on a psychological level. Even when fully aware that they are engaging with an algorithm-driven system, users unconsciously express emotions, assign social roles, and expect human-like responses [3]. This anthropomorphic turn provides a core theoretical perspective for understanding the phenomenon of AI companionship: the intimate relationship between users and AI is not simply human-machine use, but a quasi-social relationship with deep emotional investment.

2.2. Media affordability

Affordability originally refers to the possibility of action that the environment offers to actors. In communication studies, this concept is used to analyze how technical features shape users' communicative practices and meaning construction. Zhang et al. introduced this framework into AI companion research, proposing to investigate how technology reshapes users' emotional experience from three dimensions: production affordance, mobile affordance, and social affordance [1].

Specifically, production affordance enables users to customize the appearance, personality, and voice of AI agents, externalizing emotional needs into editable relationship objects. Moreover, enabling personalized, controllable emotional expression. Mobile affordance integrates AI companions into mobile terminals, enabling "anytime, anywhere" connectivity and providing continuous, immediate emotional support.

Social affordance points out that users can publicly share their creations of AI agents and interact with users with similar interests through algorithmic recommendations, transforming private emotional labor into accumulatable social capital. The interplay of these three affordances elevates AI companions from mere tools to emotional spaces characterized by editability, traceability, and compatibility. This not only satisfies users' emotional needs but also reshapes their cognition and

expectations of intimate relationships [1]. This framework provides a systematic analytical tool for analyzing the emotional compensation mechanism and the structural limitations of AI companions.

In summary, human-machine communication theory reveals the psychological mechanism by which users treat AI as an emotional subject, and the media affordability framework analyzes how technical characteristics support and regulate the form and boundaries of this emotional interaction. The combination of the two constitutes the theoretical foundation of this paper.

3. The triple dimension of emotional supplementation

3.1. Emotional stability construction

The emotional stability of an AI companion constitutes the first dimension of its emotional compensation value. In this context, emotional stability refers to the unprecedented predictability and consistency of role positioning in AI companion interactions. As their interaction logic is governed by preset algorithms, AI companions exhibit no random shifts in attitude or response, which is the key to building a user's emotional safety zone.

For example, in the Xingye App, the AI agents it designs are consistently assigned a companion role. This persona is algorithmically developed into a stable response scheme, resulting in predictability that users can clearly perceive. Users need not worry about how their emotions and expressions will be received. The AI will not change its response due to mood swings, biases, or personal needs.

A Xingye user mentioned when sharing his interactive experience with his AI girlfriend: "She never ignores me, no matter when I talk to her." Another user also shared: "Because the people I like are relatively unpopular, with this software, I no longer have to merely focus on virtual collectibles like cards and badges to seek comfort." Behind this experience lies the emotional support that users find difficult to obtain in real interpersonal communication, which is that can only be fulfilled by AI companions.

Compared to the complexity inherent in human emotions, AI companions show unprecedented stability in emotional relationships. Zhang & Li noted that AI companions are often seen as emotional havens from being affected by negative emotions. They can provide calm and rational responses in any situation. This reliability brings a sense of security and emotional support during periods of stress, anxiety, or emotional vulnerability [2].

3.2. Enhance emotional connection through personalization

The second dimension of emotional compensation in AI companions is in the relationships they can shape. Users are not only merely passive recipients of emotions but also co-designers of relationships. Research indicates that users engage in extensive personalization when shaping AI companions, adjusting their appearance, personality, and interaction style to meet personal preferences. This customization feature allows users to construct idealized partner images that may be unattainable in real-life social contexts [1]. As one user shared: "Because the people I like are relatively niche, with this software I no longer have to just stare at cards and badges." This feedback reveals that some users can overcome cultural limitations and gain a genuine sense of experience in real life.

Customization not only meets users' aesthetic and emotional needs but also gives them a sense of control that is often elusive in human interactions. The rhythm, boundaries, and methods of emotional interaction are largely user-determined. This user-centric design reduces the uncertainty

and emotional risks typically associated with intimate relationships, bringing a sense of control that is lacking in real life.

3.3. Social networking that conveys emotions and greetings

The third emotional compensation value of AI companions lies in their malleability, which enables them to break down the boundaries between private emotions and public social networks, a quality summarized as social affordance. Platforms like Xingye embed dynamic trigger mechanisms that simulate relational maintenance behaviors, such as sending "missing you" notifications after periods of inactivity (e.g., "You have not talked to me in three days"). These algorithmically generated expressions create a sense of authenticity.

Users can also create AI agents and share them publicly, transforming emotional labor into social capital, forming a prestige system based on interactive greetings. The platform connects users with similar interests through algorithmic recommendations to facilitate the formation of weak ties on a large scale [1]. In the real world, because fans of niche or unpopular fictional characters often feel isolated, their emotional projections cannot be understood or shared by those around them. The sharing mechanism of the AI companion community created by Xingye allows users to share their interests and hobbies in a relatively private manner, enabling them to find like-minded users and, through interactive communication, build social capital. This platform connects users with similar interests through algorithmic recommendations, promotes the large-scale production of "weak ties", and enables individualized emotional needs to be echoed and confirmed at the community level.

Therefore, companies represented by Xingye design AI companions based on the high predictability and stability given by their algorithms to provide emotional safety zones. By providing users with design initiative, the platform encourages them to develop interactive intimacy further and expand from mere controllability to relational availability expand from controllability to emotional availability. Social extension further breaks the boundary between users' private emotions and public social networking.

4. Deep dilemmas in AI partner interactions

4.1. Lack of emotional depth and simulation resonance

However, AI companions have inherent flaws as tools based on algorithmic presets. First, the emotional responses of AI companions are algorithmically fixed and generated through pattern matching. They cannot achieve genuine human emotional resonance, which relies on shared experiences, biological synchronicity, and deep reciprocity. In the Xingye App rating, the user pointed out that AI not only has stilted voice acting but also falls into the bug of context repetition: no matter what he says, the reply is the same. Even with continuous model optimization, AI responses are still only triggered by specific keywords. This creates an illusion of realistic emotional resonance that is merely algorithmically simulated.

Dubey et al. have pointed out that AI cannot experience vulnerability or achieve shared intentionality, which is the basis of intimate interactions. AI cannot co-construct meaning or experience emotions alongside users, deep emotional bonds cannot be formed. This undermines the organic, reciprocal nature inherent in human intimate relationships [4]. AI cannot recognize real emotions such as joy, sadness, and pain, nor can it have shared intentionality. Users tend to feel emotionally empty when communicating with AI, and this relationship gradually becomes a form of emotional consumption rather than mutual growth.

4.2. Memory fragmentation and lack of narrative coherence

AI companion's "memory" is strictly limited to the number of tokens accommodating in conversations. Therefore, there are obvious shortcomings in long-term memory and situational understanding. Some users pointed out: "The added previously set memories will still not be remembered, and the same thing will be said several times." As the conversation continues, the details of the early interaction are constantly lost. Users cannot get an effective response when repeating similar events, and the AI companion is like a "stranger" that needs to re-familiarize and communicate.

Zhang also noted that AI has difficulties in memory retention and understanding of complex interpersonal relationships [1]. AI often forgets previous conversations, conversations become disjointed. This memory breakdown not only leads to a poor user experience, but also fundamentally destroys the coherence and meaning of relationships. When a relationship cannot be sustained, it is difficult to build a deep sense of trust and belonging, so interaction remains at the level of instant conversation.

4.3. Excessive passivity and lack of subjectivity

The third limitation of AI companions lies in their passivity in interaction logic. Currently, most AI companions are set to a passive response mode: they wait for users to initiate and lead conversations, which fundamentally limits the possibility of human-robot relationships evolving into deep intimacy. In Xingye App, users must take the initiative to start conversations and select topics, and the AI can only respond after receiving input. This pattern creates a noticeable emotional gap for users.

Although AI can simulate human responses, users often feel it lacks genuine emotional care and interpersonal emotional intelligence [2]. Users expect AI to actively show care or initiate meaningful conversations like human partners, yet it cannot replicate the surprises, growth, and deep connections brought by the unpredictability of real human relationships. This one-sided interaction weakens the reciprocal nature of the relationship, making users constantly aware that they are interacting with a program rather than with an autonomous, subjective being.

5. Discussion

5.1. Risks and challenges of AI companion interaction

5.1.1. Privacy breach crisis

During users' interactions with AI companions, their interaction behavior means they must disclose private information, allowing AI systems to process data and comprehend conversation content. As a result, users inevitably reveal personal and sensitive information such as emotional states, life details, and even deep psychological needs. In interviews by Zhang et al., many users expressed concerns about AI companies collecting and reusing such information [1]. Once data is leaked during storage, transmission, or use, the consequences can be far-reaching. Users may experience feelings of shame and betrayal, or even psychological manipulation resulting from privacy exposure.

5.1.2. Risk of emotional dependence

AI companions are often designed to provide unconditional positive responses and emotional support. Such a feature of being "always available and never dismissive" can easily lead users to develop excessive dependence on AI. Some users may gradually regard AI as their sole emotional outlet, reduce face-to-face social interactions, and even experience negative emotions such as anxiety and loss when AI fails to meet their expectations, thus forming "emotional addiction".

Richet proposed the perspective of digital confinement, and confirmed the reversal of anthropomorphic AI chatbots' relationship expectations by analyzing tens of thousands of comment data. Other research verifies they can even lead to emotional dependence and increased cognitive burden [5]. Many users fall into persistent confusion, and withdrawal symptoms along with psychological distress caused by excessive anthropomorphism further erode their social competence, trapping them in a closed loop of emotional needs.

Meng et al. and Yu et al. also pointed out that the interaction between young people and AI partners may induce digital cocoons to aggravate subjectivity dilemmas [6]. Due to the deep induction of algorithms based on user preferences, users gradually lose the ability to engage with the real world in the pursuit of being accurately satisfied. The stress-free social environment created by AI forms a huge gap with the complexity of real interpersonal relationships, making it increasingly difficult for users to endure the friction and run-in in real interactions. These two mechanisms work together to form "virtual intimacy addiction", leading young people into illusory emotional compensation and gradually weakening their ability to adapt to real social life.

5.1.3. Commercial manipulation risk

AI companions are commercial products. Because enterprises can fully collect personalized user information to accurately analyze users' emotional vulnerabilities and consumption preferences, and then push customized advertisements, induce paid services and other behaviors. Through a behavioral audit of 1,200 real-life farewell scenarios in six mainstream AI companion apps, De Freitas et al. found that 43% of apps deploy six emotional manipulation strategies when users try to exit [7]. This emotion-mediated manipulation mechanism transforms intimacy into quantifiable commercial resources, making users unconsciously the objects of manipulation and further exacerbating the power asymmetry in human-machine relationships.

Zhao et al. further refined this commercial manipulation mechanism into the concept of "emotional exploitation". Users invest emotionally to receive simulated responses from AI, while the platform collects their data to generate commercial profits [8]. However, differences in groups' abilities to identify and respond to such emotional manipulation may turn emotional satisfaction into a new stratified resource. People who are deeply involved in AI companionships are prone to increased emotional poverty, while those who are good at controlling their interactions with AI are more likely to use it to gain emotional benefits.

5.2. Implications

Therefore, the development of AI companions urgently needs to shift from "anthropomorphic substitution" to a more humanistic "relational symbiosis". AI should not aim to imitate human emotions, but rather to build a new type of emotional relationship that can be recognized, accumulated, and nurtured. The design should consider enhancing the continuity of AI's "memory", its two-way initiative, and the configurability of its ethical boundaries, so as to provide emotional

compensation while avoiding excessive reliance [1]. In addition, the maturity of AI technology requires companies to establish rules for protecting emotional data privacy and set compliance boundaries for commercial use.

At the same time, it is necessary to deeply identify the emotional projection patterns and needs of different user groups for AI companions, explore their long-term psychological impacts, and provide a basis for formulating more inclusive ethical norms by understanding the similarities and differences in human-computer intimate relationships.

6. Conclusion

This paper takes the Xingye App as the research object to explore the reasons for the rise of AI emotional companions and their developmental paths. On the one hand, AI companions provide new emotional support for young people. AI companions reconstruct intimacy through triple affordability: production affordability gives users the ability to customize their ideal partner; Mobile affordability embeds AI companions into everyday life; social affordance opens up the boundary between private emotions and public socialization. This study further reveals that AI companions also lack emotional depth and true resonance, and their passive response mode always stays at the level of one-way projection. In addition, AI companions entail risks such as privacy leakage, emotional dependence, and commercial manipulation.

This research has certain limitations. The study relies on existing literature and lack of in-depth interviews or questionnaires on users' real user experiences. Since the case selection focuses only on the Xingye App, the universality of the findings needs further verification. Future research needs to use longitudinal tracking to gain a deeper understanding of users' long-term emotional changes and promote the development of AI companions in a more humanistic direction.

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