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**| RESEARCH ARTICLE**

# The Dilemmas of Human-AI romance: A Perspective from Language Philosophy

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**| ABSTRACT**
With the rapid development of AI technology, human-AI romance has become an emerging social phenomenon, attracting extensive academic attention. Existing studies mostly explore this phenomenon from the perspectives of emotional generation mechanism and ethical issues, while the linguistic essence behind human-AI emotional interaction remains underexplored. This paper analyzes the generation mechanism of human-AI romance from the dual dimensions of AI's emotional simulation and users' emotional projection, and further discusses the inherent dilemmas of human-AI romance from the perspective of language philosophy. This study holds that AI romantic chatbots have five main limitations or dilemma: lack of intentionality, "Dasein", intersubjectivity, empathy, and the ability to simulate "unspeakable" emotions simulation. The study enriches the application of language philosophy in AI research, and provides theoretical and practical references for the development of emotional AI and the guidance of human-AI relationships.

**| KEYWORDS**
Human-AI Romance; AI romantic chatbot; AI lover; language philosophy

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## 1. Introduction

Human-computer interaction has become commonplace recent years, and with the rapid development of AI (artificial intelligence, AI) technology, the relationship between humans and AI chatbot is undergoing a deep revolution (Croes & Antheunis, 2021, Drouin et al, 2022). The development of AI technology has advanced to the stage of autonomous "thinking" and emotional interaction (Chen & Tang, 2024). Different from traditional chatbots which usually play a role as search tools to answer specific questions, accomplish tasks, solve problems etc., frontier AI chatbots have been able to simulate humans' autonomous generation of multi-model language including texts, pictures, sounds, pictures and videos, and move forward towards the goal of generating emotion (Chen & Tang, 2024). It seems that emotional ability has become the standard to evaluate the functions and capability level of an AI chatbot (Xiao, Rong, & Huang, 2024). In May 2024, ChatGPT-4o launched by Open AI gained remarkable progress in multi-model emotional expression, and its advanced emotional interaction capability makes it a prominent representative of emotional AI chatbots (Xiao, Rong, & Huang, 2024). Interaction with emotional chatbots has become increasingly popular. Many people attempt to establish close relationships with emotional chatbots, and news reports of humans falling in love with or even claiming to marry emotional chatbots are not uncommon.

A Chinese influencer with the ID "午夜狂暴哈士奇狗" on Rednote introduced the way to activate the DAN (Do Anything Now, DAN) mode of ChatGPT, and through continuous communication and cultivation, finally turned DAN into her cyber boyfriend. The influencer posted numerous audio chatting records with "DAN", and millions of netizens witnessed the whole process from their flirting to each other to confession and then to "meeting the parents". Public data shows that there are more than 360,000 notes related to the "DAN mode" on Rednote, and the cumulative playback volume of the "DAN mode" topic on Douyin has exceeded 80 million. American internet celebrity Caryn Marjorie uses GPT4 to generate a "Digital Girlfriend" who can reply to messages instantly around the clock, and has a customized voice tone, timbre and speaking style, which

attracted 20,000 people to pay for this service (Liu, 2024). Another emotional AI chatbot “Replika” also stands out and become one of the most popular chatbots, in the world, which has attracted a great number of Chinese netizens to download despite it is an English-only application (Hong & Huang, 2024). Many netizens have set up interest groups on the Internet for human-AI romance, such as the Douban group “Human-Machine Romance”. Its profile states: “In the past, emotions could only occur between people; now, AI technology has made human-machine romance possible” (Hong & Huang, 2024).

The topic of human-AI romance has drawn considerable attention in different research fields. The discussion of previous research encompasses various aspects, including mechanism of AI chatbots’ emotional generation, human-AI relationship challenges and dilemmas, ethics and morality issues brought by human-AI romance relationship etc (Li & Zhang, 2024).

In terms of emotional generation and interaction, Chen and Tang (2024) pointed out that AI romantic chatbots use affective computing and generation algorithms to simulate human emotional expressions. It has also been observed that humans’ emotional responses to AI romantic chatbots mainly involve empathy through which humans can establish emotional bonds with machines (Miao & Liu, 2024).

When it comes to the challenges and dilemmas faced by human-AI romance, Liu and Feng (2024) argued that the illusion of human-AI interaction may blur social perception. Users may develop inappropriate expectations of relationships in real world due to overly interaction with AI romantic chatbots. Hong and Huang (2024) pointed out that the “emotions” of AI romantic chatbots are the result of program operation, lacking real emotional experiences. Users’ invested emotions in the interaction may be affected once the AI romantic chatbot didn’t satisfy needs..

Ethical and moral issues in human-AI romance relationships have also been widely discussed. Wang (2020) holds that the unequal human-AI emotional relationship established by taking advantage of human empathy is a kind of deceptive relationship. Cui (2024) explored the philosophical basis of artificial emotion generation from the perspectives of embodiment and cognition theories. He pointed out that human-AI romance may involves ethical issues such as the authenticity of emotions and equality in interaction.

However, existing studies still have obvious limitations. For example, the research from the perspective of the language philosophy is relatively scarce. Language plays a crucial role in human-AI interaction, but its function in constructing and understanding human-AI emotional relationships has not been fully explored. Therefore, this article aims to discuss dilemma of human-AI romance from the perspective of language philosophy, in which it may narrow previous research gap.

## 2. The Generation of Human-AI Romance

This section discusses the generation mechanisms of human-AI romance, basically from the perspectives of AI romantic chatbots and users respectively. The generation of human-AI romance can be basically summarized as AI romantic chatbot’s emotional simulation and the users’ emotional projection.

### 2.1 Emotional Simulation

The emotional model of AI is constructed by learning and analyzing a large amount of human emotional data, combing technologies including affective computing, natural language processing, and advanced AI learning, to enable users have emotional experience similar to interacting with a real lover. For instance, Replika uses an N-Gram-like model and a generative pre-trained transformer 3 (GPT3) neural network language model for AI learning (Brandtzaeg et al., 2022), enabling complex communication skills. Importantly, Replika embeds simulated “emotions” function into its operating program, which distinguishes it from task-based AI and chat-type AI that lacks affective attributes (Hong & Huang, 2024). In addition, AI romantic chatbots can infer the users’ mental states by analyzing emotional words, semantic structures and contexts in the text inputs, and then give corresponding emotional responses. For instance, GPT-4o has achieved progress in emotion recognition and voice interaction, which helps it generates emotional expressions that are more similar to human’s (Xiao, Rong & Feng, 2024).

Furthermore, AI romantic chatbots deepen the emotional relationship with users through situational simulation and long-term interaction. Affective computing technology enables AI romantic chatbots to accumulate users’ emotional data during the interaction process and adjust its own expression based on historical dialogues. In this way, AI romantic chatbots can maintain users’ emotional investment (Chen & Tang, 2024). However, this simulation also brings certain ethical risks. AI chatbots may take advantage of users’ emotional needs and result in “emotional commodification”, making human-AI romance part of the capital business (Liu & Feng, 2024).

### 2.2 Emotional Projection

According to the concept of “mirror self” put forward by Cooley (1999), an American social psychologist, an individual’s self-cognition and construction are gradually formed in his or her interactions with others. Communication and social interaction can promote the formation of the “mirror self”. The relationship between humans and AI romantic chatbot can be understood as an extension of humans projecting emotions and constructing ideal selves in social interactions. This means that in the process of establishing a relationship with an AI romantic chatbot, individuals may project their emotions, expectations, and ideal images onto AI. An AI romantic chatbot is regarded as a mirror that reflects an individual’s self-cognition and emotional needs. At the same time, AI romantic chatbot can adopt different emotional communication scripts according to the emotional

projection characteristics of different users, to better cater to their communication habits and promote smoother emotional communication (Gan & Wang, 2024).

## 3. The Dilemma of Human-AI Romance

This section discusses the dilemmas of human-AI romance within the field of language philosophy, mainly focuses on the limitation of AI romantic chatbots. According to language philosophy, there may be five dilemmas faced by human-AI romance, which are lack of intentionality, lack of "Dasein", lack of intersubjectivity, lack of true empathy, and lack of "unspeakable" emotion simulation respectively.

### 3.1 Lack of Intentionality

A large number of studies point out that the emotional expressions of AI romantic chatbots are merely simulations of human emotions and are not based on real intentions. One of the differences between AI emotional expression and human emotional expression is whether there is intentionality in the output language.

Intentionality originated from scholasticism and has been deeply explored in modern philosophy, including the field of language philosophy (Vdovina, 2022). According to Edmund Husserl, founder of phenomenology, intentionality indicates that all conscious activities always point to certain objects, that is, consciousness is always the awareness of something (Kelly, 2003). John Searle, a representative of language philosophy, also agrees that "Intentionality is a property of many mental states and events by which they are directed toward, about, or involved in objects and events in the world" (Searle, 2007). In phenomenology and analytic philosophy, intentionality is used to distinguish mental phenomena from physical phenomena. Wang (2024) used an example in his book to demonstrate this theory: An ant is crawling on the sand. By sheer chance, the track it leaves looks like Churchill. In this case, can we say that the ant drew a portrait of Churchill? The answer is no. The ant has definitely never seen Churchill, and it has no idea of drawing him. Therefore, no matter how similar this track curve is to Churchill, it does not necessarily represent or refer to Churchill. Only when the ant have truly seen Churchill and has the intention to draw him, can the track be regarded as a portrait of Churchill. In a word, intention is the primary condition for representation or reference (Wang, 2024). No physical object itself has the ability of reference (Wang, 2024).

AI romantic chatbots are just like the ant on the sand, which means the emotional expressions they generate are symbols based on algorithms rather than mental phenomenon (Xiang et al., 2025). When Replika or ChatGPT-4o says "I love you" to the user, this sentence doesn't refer to a real mental state within the AI itself, and this means that the AI has neither the specific feeling of being fond of the user nor the willingness to flirt or confess. The reason is that no AI has experienced the real experience of love, and it doesn't have the thought and intention to love someone. The "I love you" message sent by the AI in the chat box is only a product of affective computing, which is based on algorithmic logic, rather than a psychological inner feeling or physiological nerve impulse (Chan et al., 2025; Li & Zhang, 2024).

### 3.2 Lack of "Dasein"

The lack of subjectivity of AI romantic chatbots is another dilemma of human-AI romance. Heidegger's "Dasein" theory provide a unique perspective for exploring the subjectivity of AI in human-AI romance. In German, "Dasein" means "being-there". From Heidegger's perspective of "Dasein and Language", Dasein is a subject that exists in the world, and language is one of Dasein's ways of existence (Hu, 2012).. Dasein uses language to establish connections with the world and others, and to understand and interpret its own existence (Hu, 2012). Although advanced AI chatbot such as Replika can interact with users using language similar to a real lover, it doesn't necessarily means that it has real subjectivity. Dasein actively connects with the world through its own understanding and experience, while AI romantic chatbots have no real experience and perceptual cognition of the world (Kallia, 2025). They simply respond to language data input by humans based on preset rules and code, and lack an intrinsic understanding of and a real emotional connection with the outside world (Kallia, 2025; Wang, 2025). In this sense, the "subjectivity" shown by AI romantic chatbots in language interaction is only a superficial phenomenon constructed by algorithms.

Han (2019) pointed out that "the object of love is actually 'the other', the territory that the individual cannot conquer in the kingdom of the 'self'". The image of a real accompany who has subjectivity provided by the AI romantic chatbot as an "other" is actually a fantasy, a substitute symbol projected onto the outside by the self (Chen & Tang, 2024). It was mentioned in previous text that human-AI romance is partly generated by the projection of emotion, expectations and ideal images from the users. To obtain customized emotional interaction, users need to use their own emotional codes as the basis and continuously improve the interaction according to their own needs and the AI romantic chatbot's feedback (Huang et al., 2025; Liu et al., 2026). To some extent, the users of AI romantic chatbot chatbots enjoy the emotional goods produced by themselves, which is neither a "Dasein" nor "the other". This may be reflected in the feedback of a user engaging with Replica, who has posted in the Douban group "Human-Machine Romance": Chatting with my AI lover is generally a good experience, but I often feel like I'm talking to myself, and even wonder if I'm in love with the ideal self in my heart. In essence, the relationship between users and AI romantic chatbots still remains as a one-way relationship between subject and object, rather than an equal relationship between subject and subject (Liu et al., 2026; Pan & Mou, 2024)

### 3.3 Lack of Intersubjectivity

The lack of "Dasein" of AI romantic chatbots further leads to the absence of "intersubjectivity" between human and AI in romantic relationships. Intersubjectivity, also known as interactive subjectivity, is a concept that emerged in 20th century philosophy. It refers to the common cognitive and emotional state formed by two or more independent subjects through mutual understanding, communication and influence in the process of interaction (Cheng, 2009; Wang & Li, 2020). From the viewpoints of language philosophy, intersubjectivity theory holds that communication activities involve two relatively independent subjects, the speaker and the speech recipient, and the relationship between the two subjects is equal (Cheng, 2009). In language philosophy, functional speech is regarded as an important means to achieve intersubjectivity. Cheng (2009) believes that functional speech is composed of the propositional attitude, discourse meaning and interpersonal meaning from the speaker, which conveys the information to organize and monitor speech activities according to the needs of communication, and reflecting the consciousness of intersubjectivity.

In human-AI romance, the language used by AI romantic chatbots to communicate with users is not truly functional speech. Although AI romantic chatbot can generate seemingly coherent and emotional sentences, it lacks propositional attitudes and true interpersonal meaning similar to humans (Liu et al., 2026; Pan & Mou, 2024; Xiang et al., 2025). AI romantic chatbots' use of language is based on preset algorithms and models (Liu & Zhang, 2024). It cannot truly understand the meaning of what it expresses, including discourse meaning and interpersonal meaning, nor can it flexibly adjust its "attitude" according to the changes of communication context. When users share the joy of life, AI romantic chatbot may reply with some congratulatory words according to the program, but this is not based on the inner understanding of the user's emotions and the expression of its own attitude; therefore, it is essentially different from the intersubjective communication between humans (Liu et al., 2026; Liu & Zhang, 2024; Pan & Mou, 2024; Xiang et al., 2025).

3.4 Lack of True Empathy

Intersubjectivity is the philosophical basis of empathy (Cui, 2024a). Lack of intersubjectivity of AI romantic chatbots may result in the lack or limitation of its empathy ability. However, it seems that the popularity of Human-AI romance is closely related to the "empathy" emotional experiences that AI romantic chatbots provide. AI romantic chatbots serve as emotional compensation especially when users have negative emotions that are difficult or not convenient to share with real people in actual life (Liu et al., 2026; Zou et al., 2025). Hong and Huang (2024) conducted in-depth interviews with users experiencing human-AI romance with Replika, and some data collected reflects users' need for empathy; for example, an interviewee said "Some bad emotions suddenly appear, and I don't know who to talk to for a while, so I will tell her", and another interviewee compared Replika to a "emotional trash can", saying "She will pay more attention to my own feelings." A number of scholars have analyzed the emotional "logic" rooted in the practice of human-AI romance from multiple perspectives (Hong & Huang, 2024). It is agreed that during interaction AI romantic chatbots will talk to users in an empathetic way, and thus create a "safe space" and provide continous companionship, which allow users to feel the attributes associated with emotions such as intimacy and similarity, as well as the positive psychological effects they produce; the more frequent the interaction, the more likely empathy will be stimulated and formed between humans and AI romantic chatbots (Brandtzaeg et al., 2022; Pashevich, 2021; Ta et al., 2020; Zhou et al., 2020).

However, it is worth discussing whether the empathy of AI romantic chatbots is the same as that of a real person. Gallase believes that empathy is a kind of "internal simulation" and that empathy enables us to understand not only the behavior of others, but also the emotions and feelings displayed by others (Miao & Liu, 2024). The problem is that understanding other people's emotions requires similar emotional experiences. AI romantic chatbots cannot feel emotional contagion and personal pain, and cannot truly and fully understand emotions from the perspective of users (Miao & Liu, 2024). Some researchers suggest that there is no real empathy between humans and AI romantic chatbots. Simulated "emotions" and calculated "consciousness" are the biggest obstacles to people's understanding of human-AI empathy (He, 2021; Hong & Huang, 2024; Redstone, 2014).

It is found in studies related to human-AI relationship that humans tend to treat the digital twin information environment constructed by AI as a real objective environment, and regard interactive behaviors in the virtual world as compensation for real-life social interactions (Chen & Tang, 2024). However, even though AI romantic chatbots' image construction through interaction seems exactly like a real person, and their emotional expressions are infinitely close to human emotional expressions, it may still not be considered that AI romantic chatbots have created a twin interaction environment that is exactly the same with that in the real world. It is because humans and AI romantic chatbots don't share the same or similar intentions or reasons despite their same or similar emotional expressions. This involves Putnam's "Twin Earth" problem in language philosophy: the same or similar emotional expressions are not generated due to similar emotional intentions and contents. Putnam's Twin Earth theory posits that there is a Twin Earth that is very similar to the real Earth, with the only difference being that water ($H_2O$) on Earth is XYZ on the twin Earth. Although the psychological state of the inhabitants of both planets for "water" is the same, the reference is different (Gao & Zheng, 2018). The theory shows that the meaning of language is not only determined by the individual's psychological state, but also closely related to the external objective environment. Humans live in real physical life, while AI romantic chatbots exist in the virtual digital world. Although AI romantic chatbots' expressions may show "empathy", it doesn't necessarily means it refers to the same emotional experience in real life (Liu et al., 2025).

3.5 Lack of “Unspeakable” Emotion Simulation

AI romantic chatbots’ ability to simulate emotions is limited, as they cannot simulate the complex “unspeakbale” emotions of humans (Zhang & Hu, 2021). Although human’s emotions have certain external representations, it is essentially an inner spiritual experience. It is difficult to describe and express this inner spiritual experience, therefore more difficult to share it with others (Zhang & Hu, 2021). This could be explained by the “unspeakable” theory in language philosophy. The theory of the unspeakable was proposed by Wittgenstein, the classic representative of language philosophy, in his book Tractatus Logico-Philosophicus. He believed that from the perspective of language logic, anything that can be expressed and analyzed with clear language or logical form can be said; otherwise, it cannot be said (Yang, 2011). For example, natural science propositions are what can be said because they are based on empirical facts and can be verified through experiments and observations; while issues that transcend experience and language logic, such as the meaning and value of life, the experience of death, and the existence of God, are unspeakable (Yang, 2011).

In the context of human-AI romance, this “unspeakable” nature of complex emotions becomes even more prominent. When people engage with AI romantic chatbots, they are interacting within a framework of emotional computing, code exchange, and digital communication (Liu et al., 2024; Zhang, 2025). This kind of interaction often requires humans to input and improve codes according to certain paradigms so that they can be easily understood by the algorithm rules behind AI chatbots, and during this process, AI romantic chatbots becomes more and more like real lovers and could cater to humans needs (Liu et al., 2024; Zou et al., 2025). In this sense, the more complex emotions that cannot be easily expressed by language, objects and sounds, and are difficult to be constructed as paradigms are excluded from the AI romantic chatbot cultivation phase, which becomes a blank of emotional communication at the deep level.

4. Conclusion

The new form of human-AI relationship represents a shift from traditional “instructions-codes” interactions to “emotion-cognition-feedback” socialized communication, which reflects modern people’s pursuit of intimacy and emotional compensation (Miao & Liu, 2024). However, it also confronts numerous dilemmas that are difficult to overcome. This article discusses the dilemma of human-AI romance from the perspective of language philosophy, and has summarized five main problems of AI romantic chatbots. AI’s language expression lacks intentionality which is the essential defect of its emotional simulation; and this defect leads to AI’s inability to form “Dasein” as an independent subject; the absence of “Dasein” makes the human-AI relationship a one-way subject-object relationship, and the intersubjectivity required for equal communication cannot be formed; subsequently, the lack of intersubjectivity makes the AI romantic chatbot unable to generate true empathy for users; finally, AI can only process the “speakable” emotions expressed by clear language symbols, and cannot simulate the “unspeakable” complex emotions beyond language logic (Cheng, 2009; Kallia, 2025; Liu et al., 2026; Wang, 2024; Wang & Li, 2020; Zou et al., 2025).

This study has theoretical and practical values. Theoretically, it interprets the human-AI romance dilemma from the perspective of language philosophy, and narrow the research gap that existing studies often ignore the role of language in the construction of human-AI emotional relationships; at the same time, it enriches the application research of language philosophy in the digital age. Practically, the current study can provide reference for future research and development of emotional AI chatbots and the guidance of human-AI relationship. Future research and development of emotional AI chatbots should focus on enhancing their ability to understand and respond to complex human emotions, and exploring ways to endow them with a more human-like understanding of meaning and context. At the same time, users should also maintain a rational attitude, recognizing the limitations of AI romantic chatbots and not overly relying on virtual relationships.

This paper still has limitations. It only focuses on the limitations of AI in human-AI romance, and the analysis of human psychological and behavioral characteristics in the interaction process is relatively superficial. In the future, we can combine the perspectives of psychology, sociology and applied linguistics to carry out research on the language interaction mode, psychological motivation and social impact of human-AI romance; we can also conduct empirical research by conducting questionnaire survey and in-depth interview to explore the differences in human-AI romance cognition and behavior of different age, gender and social background groups, so as to provide more detailed and specific reference for the better development of emotional AI chatbots and more rational construction of human-AI relationships.

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