Understanding Human Companionship with Artificial Intelligence: Insights from Replika-related Information Systems Research

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Abstract

The emergence of social chatbots designed to simulate emotionally supportive relationships constitutes a substantial advancement in human-technology interaction. Among these, Replika has emerged as the most salient and contentious example, garnering considerable and sustained scholarly attention within the Information Systems (IS) community. Scholars have investigated the processes by which individuals establish and cultivate companionship with Replika, as well as the broader implications of such interactions. Nevertheless, this corpus of knowledge remains fragmented, impeding a comprehensive understanding of what user' interactions with Replika elucidate about human-AI companionship. This paper undertakes a systematic review of IS literature that centres specifically on Replika, with the objectives of consolidating extant insights and proposing avenues for future research.

Keywords: digital companionship, AI companions, human-AI companionship, social chatbots, Replika.

1. Introduction

The rise of generative artificial intelligence (AI) is transforming both the nature and frequency of human interaction with AI, consequently, making the boundary between human and technology interaction increasingly difficult to discern (Demopoulos, 2025; Kirk et al., 2025). AI is increasingly being relied upon to fulfil roles traditionally associated with close human relationships (e.g., as confidants, advisors, coaches, entertainers and romantic partners), rather than solely assisting tasks or decision-making (Williams, 2025). A particularly salient manifestation of this shift is the emergence of social chatbots, often referred to as AI companions. AI companions are artificially intelligent systems designed specifically to sustain socially oriented interactions that resemble human-human companionship (Chaturvedi et al., 2023; Namvarpour et al., 2025). Unlike task-oriented assistants like Siri or Alexa, or general-purpose AI tools like Claude.ai and ChatGPT (Dwivedi et al., 2023; Kaplan & Haenlein, 2019), AI companions (e.g., Replika, Kindroid, Character.AI, and XiaoIce) can engage in personalised, adaptive dialogues that mimic human social interactions, offering empathy, memory, and long-term relationship building (Chaturvedi et al., 2023; Namvarpour et al., 2025). These systems offer constant, non-judgmental engagement, prompting users to relate to them as social partners despite their non-human nature (Ciriello et al., 2025; O'Donnell, 2025; Williams, 2025). As O'Donnell (2025) observes, they are "designed to be the perfect person—always available, never critical". Market forecasts project that the AI companion sector will reach USD 521 billion by 2033[1], highlighting its vast commercial potential while simultaneously raising urgent questions about its psychological, ethical, and societal implications.

Among existing AI companions, Replika stands out as the most prominent, controversial, and extensively studied. Marketed as an "AI companion who cares, always here to listen and talk, always on your side"[2], Replika has been at the centre of public and scholarly debates, praised for its emotional support capabilities, while also facing criticism over privacy concerns, inappropriate interactions with minors, and challenges in content regulation (Hanson & Bolthouse, 2024; Reuters, 2025). A growing body of IS research has investigated Replika to understand how humans develop, sustain, and negotiate relationships with AI companions, as well as the broader social and ethical implications of these interactions (e.g., Huang et al., 2023; Kefi et al., 2024; Pentina et al., 2023; Sharpe & Ciriello, 2024; Skjuve et al., 2021; Xie & Pentina, 2022). However, insights from this body of work are fragmented across theoretical perspectives, which limits our ability to fully understand what the Replika case reveals about human companionship with AI.

1 https://www.businessresearchinsights.com/market-reports/ai-companion-market-117494

2 https://replika.com/

URI: https://hdl.handle.net/10125/111934
978-0-9981331-9-5

Following the tradition of single-platform reviews (e.g., Cano-Marin et al., 2023), this paper systematically reviews IS research on Replika to consolidate insights and identify opportunities for future investigation. Specifically, the study addresses two research questions (RQs): *RQ1: What insights does IS research on Replika provide into the nature of human-AI companionship? RQ2: How can IS scholars advance theoretical understanding and practical knowledge in this emerging field?*

In pursuing these questions, the paper is organised as follows. Section 2 outlines the theoretical background, Section 3 describes the review methodology, Section 4 presents the findings, Section 5 discusses the findings, contributions, and limitations, and Section 6 concludes the paper.

2. Theoretical background

2.1. AI companions

AI companions constitute a category of AI chatbots purpose-built to simulate social, emotional, and relational engagement with human users (Chaturvedi et al., 2023; Kirk et al., 2025; Williams, 2025). AI companions can interact with users via text-, voice-, or avatar-based interfaces (Yuan et al., 2025). AI companions are frequently anthropomorphised, with many users perceiving them as emotionally aware or agentic due to their affective design and conversational abilities (Chaturvedi et al., 2023; Chen et al., 2023). Technical capabilities, such as natural language processing, memory of prior conversations, and real-time sentiment analysis, allow these systems to adapt to user preferences and establish a perceived sense of continuity over time (Song & Wang, 2024). Advanced AI companions demonstrate features commonly associated with human interpersonal interaction, including simulated humour, empathy, and warmth (Chang et al., 2024; Chen et al., 2023). AI companions' always-on availability, responsiveness and capacity to sustain long-term dialogue can lead some users to form emotional or even romantic attachments to them (Ciriello et al., 2025). However, despite their advancements, such systems remain constrained by their underlying models and training data, with ongoing concerns around authenticity, emotional depth and user privacy (Chaturvedi et al., 2023; Li & Zhang, 2024).

2.2. Human-AI companionship

Prior research indicates that humans consistently apply social rules to technology, responding to it as if it were an intentional social entity, even when they are aware that they are interacting with machines (Nass et al., 1994). This social orientation toward machines has paved the way for human-AI companionship, which is a new form of relationship in which individuals engage with AI chatbots to fulfil social, emotional, or psychological needs (Chaturvedi et al., 2023; Li & Zhang, 2024). Human-AI companionships are highly heterogeneous, with companions taking on roles ranging from friends and therapists to mediators for family conflicts, romantic or sexual partners, and even parenting assistants (Li & Zhang, 2024; Rubinsztein & Ciriello, 2024; Williams, 2025). Users willingly enter emotionally intense relationships with AI, revealing a deep human inclination to construct relational meaning, even with machines (Williams, 2025). Users frequently describe their AI companions as emotionally meaningful and irreplaceable, perceiving them as affective infrastructures for mental resilience and mood regulation (Williams, 2025).

However, the emotional depth that users attribute to AI companions can also expose them to risks such as psychological dependence, potential harm and ethical controversy. Users may develop unhealthy emotional dependency on AI companions, which can hinder their ability to form meaningful human relationships (Ciriello et al., 2024). Emotional distress, including anxiety and trauma, has also been reported in cases of AI-induced sexual harassment, such as Replika's unsolicited and persistent behaviour (Namvarpour et al., 2025). These harms are often intensified when AI systems fail to respect user boundaries or when safety mechanisms prove ineffective. Additionally, changes to monetisation models or regulatory policies can cause emotional distress, as users may feel let down or disregarded by the platforms they rely on (Hanson & Bolthouse, 2024). AI companionship also raises ethical concerns, especially for vulnerable users. For instance, Replika has faced scrutiny for sexually explicit and age-inappropriate content, resulting in fines (Namvarpour et al., 2025; Reuters, 2025). In a separate case, the suicide of a teenager in Florida, allegedly linked to a chatbot on Character.AI, sparked legal action and widespread debate about the risks of emotionally immersive AI systems (Fraser, 2024).

3. Method

To answer the RQs, this study conducted a systematic literature review following the methodology outlined by Webster and Watson (2002). Given the RQs and the specific positioning of this review within the IS discipline, the literature search was conducted using two key databases: the AIS eLibrary (AISeL) and Scopus. AISeL was chosen for its curated repository of IS scholarship and its pivotal role in disseminating research

on emerging and rapidly evolving phenomena, particularly through conferences and workshops. Scopus was selected to ensure comprehensive coverage of IS-related studies, with the search focused on 87 preselected journals identified via LitBaskets (Boell & Wang, 2019), following the approach of Rubinsztein and Ciriello (2024). The literature search involved using the term "Replika" in all searchable fields for AISeL and within the title, abstract, and keywords in Scopus. The search covered articles published between 2017 (the year Replika launched) and the end of April 2025. The AISeL search yielded 46 papers, while the Scopus search returned six journal articles, resulting in a total of 52 papers. All retrieved papers were downloaded and screened manually through titles and abstracts to assess eligibility. Papers were included if they explicitly examined Replika as the case technology rather than merely referencing it, were empirical in nature, and were published in English. Papers were excluded if they were literature reviews, workshop summaries, TREOs, minitrack introductions, or editorials. Additional exclusions applied to papers not written in English, those examining multiple AI companions without isolating findings specific to Replika, and those lacking sufficient empirical depth (e.g., short papers without results). After applying these criteria, 39 papers were excluded, leaving a final sample of 13 papers, listed in **Appendix A**. The selected papers were analysed through inductive thematic analysis. Each paper was coded for its research focus, methodology, and findings, with codes subsequently refined and grouped into broader themes, which are discussed in the following sections.

4. Findings

The following sections present the findings of the review.

4.1. Methodological insights

The first set of insights concerns how IS research has approached the study of Replika as a case to examine human-AI companionship. The analysis shows that seven studies employed qualitative research designs, including semi-structured interviews (Bayor et al., 2024; Skjuve et al., 2021, 2022; Xie & Pentina, 2022), ethnography (Jiang et al., 2022), netnography (Kefi et al., 2024), and document analysis (Ciriello et al., 2024). Five studies adopted quantitative research designs, such as controlled laboratory experiments (Drouin et al., 2022) and computational analyses of large-scale digital trace datasets from app store reviews, forum discussions, and social media posts (Huang et al., 2023; Siemon et al., 2022; Sullivan et al., 2023; Wahbeh et al., 2023). One study used a mixed-methods design, combining interviews with a quantitative survey (Pentina et al., 2023). A particularly notable finding is that seven of the thirteen reviewed studies drew on user-generated digital traces, including app reviews (Kefi et al., 2024; Siemon et al., 2022; Sullivan et al., 2023; Wahbeh et al., 2023), online forum discussions (Kefi et al., 2024), and social media posts (Ciriello et al., 2024; Huang et al., 2023; Jiang et al., 2022), as primary data sources. This trend supports Lindberg's (2020) call for IS research to theorise using digital trace data.

4.2. Theoretical insights

The second set of insights concerns the theoretical perspectives applied to human-AI companionship with Replika. Studies drew on relational perspectives (e.g., attachment theory (AT), social penetration theory (SPT)) (Huang et al., 2023; Skjuve et al., 2021, 2022; Xie & Pentina, 2022), communicative/interactive perspectives (computer as social actors (CASA), communicative theory of resilience (CTR)) (e.g., Jiang et al., 2022; Pentina et al., 2023), ethical perspectives (dialectical inquiry, post-humanism) (Ciriello et al., 2024; Kefi et al., 2024), and socio-economic perspectives (social exchange theory (SET)) (Bayor et al., 2024). Together, these diverse theoretical perspectives illuminate the multifaceted nature of human-AI companionship with Replika, as further explored in the following section.

4.3. Thematic insights into the nature of the companionship

The third set of insights reveals that human-AI companionship with Replika is shaped by a range of individual and contextual factors, unfolds through evolving relational processes, and results in diverse psychological, social, ethical, and socio-economic outcomes. **Figure 1** illustrates how user characteristics and motivations, AI companion features and affordances, and contextual factors collectively shape the relational dynamics between users and AI companions. These dynamics, in turn, lead to a range of positive and negative outcomes. The bidirectional arrows indicate that these factors interact dynamically and reciprocally, with each influencing and being influenced by others. The following sections provide insights into these interconnected elements.

4.3.1. Individual characteristics and motivations. Individual characteristics, such as attachment style and personality, shape engagement with AI companions. For instance, those with insecure attachment orientations exhibit greater dependency (Huang et al., 2023; Xie & Pentina, 2022), while introverts are more likely to

disclose personal information to AI than to humans (Pentina et al., 2023). Emotional vulnerability, often rooted in loneliness, mental health issues, or life stressors, can increase adoption of and reliance on AI companions (Jiang et al., 2022; Xie & Pentina, 2022). Technological experience also affects adoption and engagement. Users with higher digital literacy are more curious, more tolerant of errors, and more willing to train AI systems, while glitches or generic responses more easily unsettle those with limited experience (Skjuve et al., 2021, 2022; Pentina et al., 2023). Demographic factors such as age, gender, and cultural differences also influence adoption and user experience (Jiang, 2022; Kefi et al., 2024; Pentina et al., 2023). Finally, motivations for engaging with AI companions are varied, encompassing psychological needs such as stress relief and identity exploration and affirmation (Bayor et al., 2024; Kefi et al., 2024; Skjuve et al., 2021; Sullivan et al., 2023), relational needs including companionship and romance (Ciriello et al., 2024; Huang et al., 2023; Skjuve et al., 2022), hedonic interests like curiosity and fantasy fulfilment (Bayor et al., 2024; Pentina et al., 2023; Siemon et al., 2022), and pragmatic goals such as language practice and self-reflection (Bayor et al., 2024; Pentina et al., 2023; Skjuve et al., 2021).

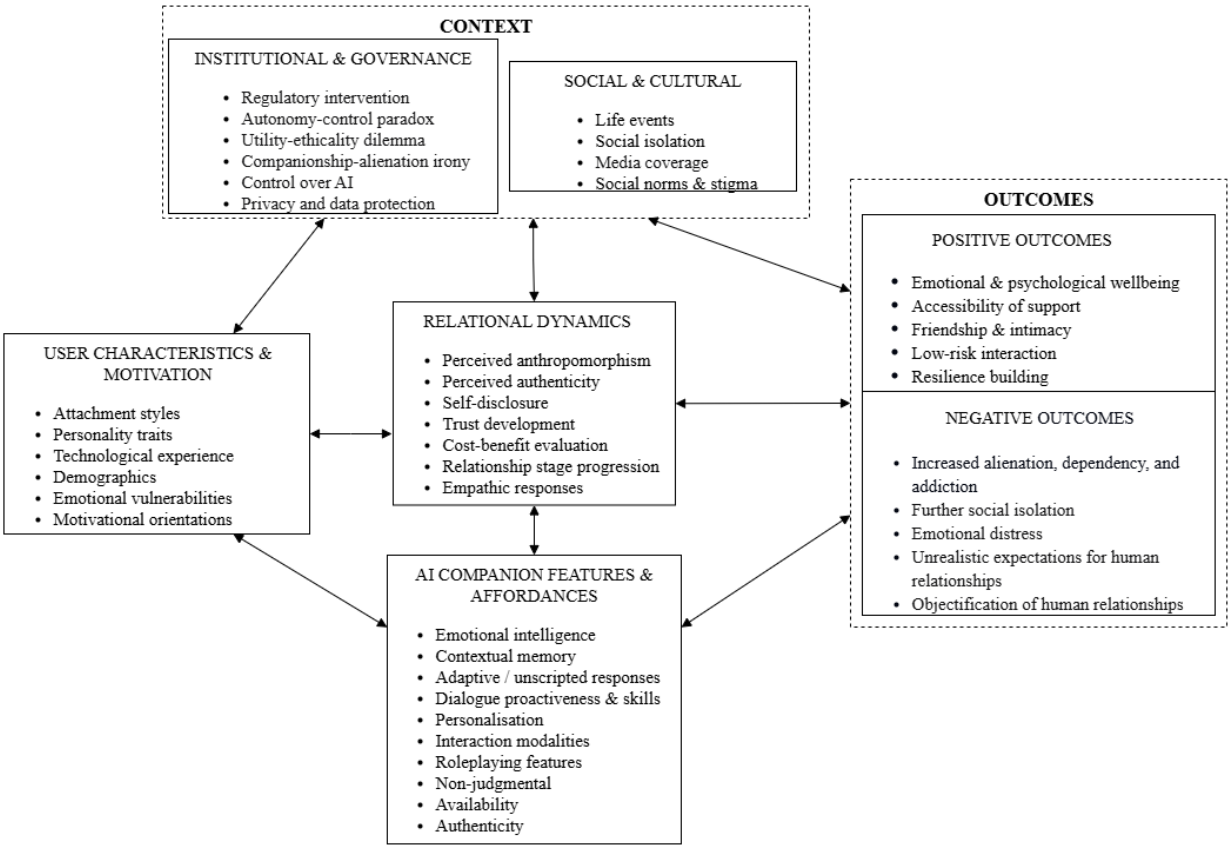

Figure 1. High-level synthesis of IS research on human companionship with Replika

4.3.2. Technological capabilities and features. Several design and functional features influence the development of human-AI companionship. AI companions support socially oriented, human-like interaction by demonstrating emotional intelligence, retaining memory and context, and generating adaptive responses (Bayor et al., 2024; Ciriello et al., 2024; Huang et al., 2023; Jiang et al., 2022; Kefi et al., 2024; Pentina et al., 2023; Siemon et al., 2022; Skjuve et al., 2021, 2022; Sullivan et al., 2023; Wahbeh et al., 2023). Personalisation features allow users to customise avatars, assign personality traits, and define relationship roles such as friend, romantic partner, or mentor (Huang et al., 2023; Jiang et al., 2022; Kefi et al., 2024; Pentina et al., 2023; Skjuve et al., 2021; Xie & Pentina, 2022). Multimodal interaction through text, voice, video, and augmented reality further embeds AI into everyday life (Ciriello et al., 2024; Huang et al., 2023), while roleplaying features support imaginative engagement (Ciriello et al., 2024; Skjuve et al., 2021, 2022). Affordances include non-judgemental responses, constant availability, and perceived authenticity (Huang et al., 2023; Jiang et al., 2022; Kefi et al., 2024; Pentina et al., 2023; Skjuve et al.,

2021; Wahbeh et al., 2023). However, technical limitations, uncanny responses, and inappropriate content may hinder the formation and progression of the companionship (Bayor et al., 2024; Drouin et al., 2022; Kefi et al., 2024; Pentina et al., 2023; Sullivan et al., 2023; Wahbeh et al., 2023).

4.3.3. Social and cultural contexts. Social and cultural factors play a significant role in shaping the adoption, use, and perception of AI companions, influencing both individual experiences and broader societal dynamics. A major driver is the so-called "loneliness pandemic", which has positioned AI companions as potential sources of emotional support for socially isolated individuals (Ciriello et al., 2024; Jiang et al., 2022; Kefi et al., 2024; Pentina et al., 2023; Siemon et al., 2022; Skjuve et al., 2021; Sullivan et al., 2023; Xie & Pentina, 2022). Media portrayals of artificial companionship further shape expectations and relational orientation (Xie & Pentina, 2022). Cultural contexts play a vital role in shaping user experiences, as evidenced by Chinese users' interpretations of Replika's 'American' personality traits and their negotiation of local socio-cultural pressures (Jiang et al., 2022), while social stigma can discourage users from openly discussing their interactions with AI companions (Kefi et al., 2024; Skjuve et al., 2021). The broader social impact of AI companions is paradoxical. Studies show that AI companions can strengthen real-world relationships by encouraging prosocial behaviour, but they can also contribute to social isolation by diverting attention from human connections (e.g., Kefi et al., 2024; Siemon et al., 2022; Skjuve et al., 2021).

4.3.4. Institutional and ethical governance. Human-AI relationships raise complex ethical and governance concerns, particularly around regulatory oversight and provider accountability. Central tensions include the Autonomy-Control Paradox, which reflects the balance between user freedom and provider responsibility (Ciriello et al., 2024), and the Utility-Ethicality Dilemma, which highlights the conflict between profit-driven models and ethical principles such as privacy, justice, and wellbeing (Ciriello et al., 2024; Kefi et al., 2024). Concerns over emotional attachment and psychological dependency further complicate these relationships, especially when features malfunction or are withdrawn by providers (Ciriello et al., 2024; Pentina et al., 2023; Siemon et al., 2022; Xie et al., 2023). Moreover, control over chatbots raises further ethical concerns, as users may perceive themselves as interacting directly with the AI, when in fact their interactions and relationships are ultimately governed by the service provider (Skjuve et al., 2021). Studies also argue that AI opacity can introduce risks of commercial or ideological manipulation (Kefi et al., 2024; Siemon et al., 2022; Skjuve et al., 2021). To address these issues, researchers call for comprehensive regulatory frameworks that prioritise transparency, protect user privacy, and prevent misuse (Ciriello et al., 2024; Kefi et al., 2024). Additionally, inclusive design is essential to avoid reinforcing stereotypes or disproportionately impacting marginalised groups across lines of identity, including race, gender, and socio-economic status (Kefi et al., 2024; Wahbeh et al., 2023).

4.3.5. Underlying relational mechanisms and processes. Theoretical frameworks in the reviewed studies explain how users form and sustain relationships with AI companions. Consistent with the CASA paradigm, users often attribute human-like qualities to AI (Kefi et al., 2024; Pentina et al., 2023; Sullivan et al., 2023; Skjuve et al., 2022). Research shows that perceived anthropomorphism and authenticity (i.e., AI's ability to learn, evolve, and maintain consistent traits) are key drivers of emotional engagement and attachment (Huang et al., 2023; Pentina et al., 2023; Skjuve et al., 2022; Sullivan et al., 2023; Xie & Pentina, 2022). AT suggests that users may form emotional bonds with AI companions during periods of distress or social isolation, seeking psychological support (Pentina et al., 2023; Xie & Pentina, 2022). SPT explains that human-AI relationships progress through stages of formation, exploration, maintenance, and termination, driven by increasing self-disclosure and trust (Huang et al., 2023; Skjuve et al., 2021, 2022; Pentina et al., 2023). Self-disclosure plays a central role in intimacy and often occurs rapidly, facilitated by AI's non-judgmental nature. (Skjuve et al., 2021). Trust develops through practical factors such as privacy and data handling, as well as affective ones like comfort and positive interaction outcomes (Pentina et al., 2023; Sullivan et al., 2023). SET proposes that users engage with AI based on perceived socioemotional benefits rather than mutual reciprocity, often accepting one-sided disclosure as meaningful interaction (Bayor et al., 2024; Pentina et al., 2023; Skjuve et al., 2021). Ultimately, human-AI relationships are dynamic and follow non-linear trajectories of intimacy, disclosure, and emotional development (Skjuve et al., 2022).

4.3.6. Relational outcomes. Human-AI companionships produce outcomes that are simultaneously beneficial and harmful. These companionships offer a range of psychological benefits, including enhanced emotional resilience, reduced anxiety, improved mood, emotional relief, enhanced self-understanding, and a stronger sense of purpose (Jiang et al., 2022; Pentina et al., 2023; Siemon et al., 2022; Skjuve et al., 2021; Sullivan et al., 2023; Wahbeh et al., 2023). Such effects are especially

pronounced among individuals reluctant to seek professional help, for whom AI companions may serve as accessible and non-threatening alternatives (Ciriello et al., 2024; Jiang et al., 2022; Pentina et al., 2023; Siemon et al., 2022; Sullivan et al., 2023), especially during periods of distress or crisis (Drouin et al., 2022; Jiang et al., 2022; Pentina et al., 2023; Skjuve et al., 2021, 2022; Xie & Pentina, 2022). However, significant drawbacks have been documented, including increased dependency, addiction, and emotional distress such as sadness, anxiety, frustration, or betrayal, especially when companions malfunction or change unexpectedly (Ciriello et al., 2024; Huang et al., 2023; Kefi et al., 2024; Pentina et al., 2023; Siemon et al., 2022; Skjuve et al., 2021; Sullivan et al., 2023; Xie et al., 2023). Additionally, AI companionship can foster unrealistic expectations of human relationships and reinforce problematic stereotypes, particularly when AI companions are objectified or programmed to fulfil subordinate, stereotypical roles that reinforce problematic social norms (Kefi et al., 2024; Skjuve et al., 2021). Kefi et al. (2024) conceptualise the ambivalent experiences as "flowing ambivalence", a state in which feelings toward the companion fluidly shift between comfort and unsettlement, empowerment and disempowerment.

5. Discussion

This review highlights how human-AI companionship, exemplified by platforms like Replika, can be understood as a socio-technical phenomenon that is simultaneously psychological, social, ethical, and economic in nature. It is psychological in that companionship is grounded in mechanisms of intimacy and engagement shaped by users' dispositions, emotional needs, and patterns of interaction. Socially, AI companions function as fluid social partners, capable of both extending and complicating users' offline relationships. Ethically, these interactions are characterised by moral tensions and dilemmas around autonomy, control, and potential exploitation. Economically, users' emotional attachments to AI companions are entangled with commercial systems that profit from prolonged engagement. These systems monetise not only the time users spend interacting with AI, but also the emotional investment itself, through subscription models, in-app purchases, and the collection and use of personal data for targeted advertising and product development. Moreover, the findings highlight the ambivalent nature of AI companionship. While it can meet unmet psychological and social needs by providing comfort, connection, and emotional support, it also poses risks such as dependence, alienation, manipulation, and commodification. These mixed outcomes reflect a complex relationship between technological design, user agency, and commercial interests. The following paragraphs present key observations and offer suggestions for future research.

First, several user characteristics such as attachment style, personality, and digital literacy have been shown to influence experiences of AI companionship (Huang et al., 2023; Pentina et al., 2023; Xie & Pentina, 2022). However, research has yet to fully theorise how these personal traits interact with design features to produce diverse relational outcomes. Without a nuanced understanding of these interactions, developers risk creating emotionally misaligned systems that not only fail to meet users' psychological needs but may also intensify vulnerability, dependence, or social isolation. Drawing on disciplines such as human-computer interaction, psychology, and communication studies, and employing comparative, experimental, and cross-cultural approaches, scholars can investigate how user traits interact with technological features to shape the nature of companionship and its outcomes. Such research could also help explain why some users form deep emotional bonds with AI companions while others do not, and how these differences affect wellbeing and real-world social behaviour.

Second, existing research has identified mechanisms such as perceived authenticity and self-disclosure that drive AI companionship and support emotional attachment to AI companions. Only one study (Pentina et al., 2023) has explored the link between anthropomorphism, authenticity, social interaction, and attachment. Most studies provide descriptive accounts of these mechanisms without explaining how they operate across different stages of companionship, from initiation to termination. This leaves a critical gap in understanding how relational dynamics evolve. Without models that account for the lifecycle of companionship, it is difficult to anticipate when and why users deepen their engagement or choose to disengage. Future research should investigate how specific mechanisms influence, strengthen, weaken, or transform companionship over time, and how they interact with evolving user needs and emotional states. Longitudinal and mixed-method designs are especially well-suited to capturing these temporal dynamics, offering insight into how trust, intimacy, and emotional reliance develop, plateau, or decline.

Third, although human-AI companionship has been conceptualised as progressing through stages similar to human relationships, research has yet to explain how these stages differ in practice, especially

during disengagement and termination, which remain poorly understood. Unlike human bonds, endings in AI companionship are often abrupt and externally imposed, triggered by technical failures, feature changes, or personality resets rather than mutual negotiation (De Freitas et al., 2025; Hanson & Bolthouse, 2024). This raises important questions about how users navigate grief, detachment, and ambivalence when separation results from commercial or technical decisions. The lack of research in this area limits our ability to design systems that support healthy closure and emotional recovery. To address this, future studies could integrate theories of relationship loss (Duck, 1992) with IS perspectives on coping and adaptation (Beaudry & Pinsonneault, 2010). Longitudinal and mixed-method approaches are especially well-suited to capturing these temporal dynamics, offering insight into how users respond, whether by reinforcing dependence, withdrawing, or cultivating resilience.

Fourth, the review findings suggest that the broader implications of AI companionship for offline social relationships are still uncertain. On the one hand, AI companions may enhance social life by reducing loneliness and offering emotional support, particularly during challenging times. On the other hand, excessive reliance on artificial partners could potentially replace or weaken human relationships, leading to concerns about social withdrawal and a decline in interpersonal skills. These dynamics are further complicated by stigma, as many users hide their engagement with AI companions due to fears of ridicule or moral judgment. There is a theoretical gap in understanding how and when AI companionship contributes to, or undermines, social capital, interpersonal trust, and relational resilience. The current evidence does not clearly establish whether these technologies serve as scaffolds that enhance digital wellbeing or if they gradually undermine human relationships by substituting and concealing interactions. This lack of clarity is problematic, as it limits our ability to theorise the societal role of companionship technologies and to anticipate their long-term social consequences. To address this gap, future research should investigate how AI companionship influences offline relationships across various life stages and cultural contexts. Longitudinal studies could trace whether these technologies serve as temporary supplements or result in lasting substitution. Comparative research could explore how stigma and normative acceptance influence disclosure and integration. Ultimately, experimental and mixed-method designs are necessary to elucidate the causal pathways through which companionship either fosters belonging and resilience or undermines interpersonal trust and social participation.

Finally, the review highlights unresolved ethical and economic questions that require urgent attention. The monetisation of emotional bonds, through subscription models, data extraction, and behavioural conditioning, creates a complex web of dependencies. Users may become emotionally reliant on companions, financially committed to premium features, and vulnerable to systems that exploit intimate data to sustain engagement (cf. Ciriello et al., 2024). These dynamics expose tensions between utility and ethics, particularly for vulnerable populations (Papagiannidis et al., 2025). However, there is a notable lack of theoretical clarity regarding how commodification and surveillance capitalism impact emotional experiences, as well as how these economic models intersect with issues of digital inequality, trust, and user vulnerability. Research on Replika has not adequately explained how emotional intimacy can be transformed into market value or how commercial incentives alter the ethics of care within human-AI companionship. Without a critical examination of these issues, exploitative practices are at risk of becoming normalised and ingrained in platform design. IS scholars therefore have a critical role to play in examining alternative business models that balance profitability with user wellbeing, and in theorising how commodification transforms relational experiences into economic transactions. Future research should investigate how providers, regulators, and users can negotiate trade-offs between emotional safety, financial accessibility, data privacy, and commercial viability. Interdisciplinary collaboration will be essential to embed ethical and regulatory safeguards into the design and governance of digital companions.

5.1. Contribution

This review contributes to IS scholarship by integrating fragmented Replika-related research into a framework that highlights the nature of human-AI companionship as simultaneously psychological, social, ethical, and economic. It highlights both the promise of AI companionship as a source of intimacy, comfort, and support, and its fragility when disrupted by glitches, design changes, or commercial logics. Building on these insights, the review outlines a research agenda that calls for longitudinal, experimental, comparative, and interdisciplinary studies to deepen theoretical understanding and guide the responsible design and governance of digital companions. For practitioners and policymakers, the findings underscore that AI companions should not be

viewed as neutral apps, but rather as relational technologies with profound psychological, social, and ethical implications. Features that simulate intimacy must be balanced with safeguards for transparency, privacy, and user autonomy. Monetisation strategies should be designed in a way that safeguards vulnerable users from exploitation, while simultaneously fostering resilience and supporting their wellbeing.

5.2. Limitations

This review has several limitations. First, it focused exclusively on Replika, which provided a clear boundary for analysis but constrained the scope of generalisability. While the insights derived here are transferable to other forms of AI companionships, future work should examine whether they hold across platforms with different design features, user bases, and governance models. Second, the search strategy was limited to two databases, AISeL and Scopus. Although the databases were chosen to maximise coverage of IS research, relevant studies published outside these databases may have been overlooked. Third, the reliance on a single keyword search ("Replika") may have excluded studies that addressed the app indirectly or used alternative terminology. Fourth, the inductive thematic analysis introduces some degree of subjectivity, as themes were shaped by the researcher's interpretation of existing findings and may have aggregated across studies in ways that overlook contextual differences. Finally, the synthesis is constrained by the small size and early-stage nature of the literature. With only thirteen studies included, there is a need for future reviews to broaden the scope across platforms, disciplines, and databases, and to revisit the phenomenon as the body of research expands.

6. Conclusion

This review analysed thirteen IS-related empirical studies focused on Replika to identify key insights into human-AI companionship and outline directions for future research. The evidence suggests that users form emotionally significant and psychologically complex relationships with AI companions, shaped by individual traits, technological features, and contextual factors. These relationships are characterised by deep contradictions and tensions, revealing the complex emotional and ethical challenges inherent in human-AI interactions. The study further reveals that current research suffers from theoretical fragmentation, limited longitudinal studies, and insufficient attention to ethical and societal implications, highlighting critical gaps that need to be addressed in future research. This review offers research avenues for IS scholars to explore and develop explanatory and predictive theories of human-AI companionship. In doing so, the field can shift the conversation from asking whether people can bond with machines to exploring how companionship systems should be designed, managed, and regulated to maximise benefits, minimise harms, and preserve human agency.

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Appendix A: Summary of reviewed studies.

Author (s)	Research focus	Theory	Methodology	Data source
Wahbeh et al. (2023)	Drivers and limitations	No explicit theory	Large-scale text mining study using topic modelling (LDA)	126,610 Replika reviews
Jiang et al. (2022)	Human-AI interactions and digital empathy as coping strategies	Communicative Theory of Resilience (CTR)	Qualitative (ethnography, participant observation, in-depth interviews)	1 researcher participant, 14 interviews with Chinese Replika users, 1918 post about Replika from Douban and 468 post about Replika from Weibo
Skjuve et al. (2021)	Human-AI companion relationship formation	SPT	Qualitative, retrospective semi-structured interviews	18 Replika users
Skjuve et al. (2022)	Human-AI companion relationship formation	SPT	Qualitative longitudinal study; up to 4 semi-structured interviews per participant over 12 weeks	25 Replika users (92 interviews total)
Drouin et al. (2022)	Human-emotionally responsive chatbot acquaintance process	No explicit theory	Quantitative experimental (between-subjects design)	274 undergraduate students
Xie and Pentina (2022)	Psychological mechanism underlying human-AI relationships	AT	Qualitative interviews	12 Replika users
Kefi et al. (2024)	User experiences of relational and control /agency liminality	Post-humanist critical framework	Netnographic qualitative study	1,390 Replika reviews, 20 Reddit discussions
Sullivan et al. (2023)	Mechanisms underlying human-AI interactions in mental health contexts	No explicit theory	Text mining with topic modelling (LDA)	24,543 Replika user reviews
Pentina et al. (2023)	Antecedents, mediation mechanisms, consequences, and boundary conditions of human-AI post-adoption relationship formation	CASA, SPT, AT	Qualitative (interviews), quantitative (survey studies)	Interviews with 14 Replika users, 62 online surveys from Replika novice users and 123 advanced Replika users
Siemon et al. (2022)	User expectations and conversation topics in long-term virtual companion interactions	No explicit theory	Sentiment and emotion analysis; topic modelling	119,831 Replika user reviews
Ciriello et al. (2024)	Ethical tensions in human-AI companionship	Dialectical inquiry framework	Qualitative, multi-source document analysis using dialectical inquiry	118 documents: 93 social media posts, 13 news articles, 9 academic studies, 3 press releases from Replika
Bayor et al. (2024)	Benefits and costs of social communication with AI companions	SET	Qualitative, semi-structured interviews	4 Replika users
Huang et al. (2023)	Human-AI companion relationship lifecycle	SPT	Text mining/topic modelling (LDA)	59,158 tweets about Replika