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The Digital Stratification of Intimacy: A Systematic Review and Meta-Framework on AI Companionship and the Amplification of Social Inequality

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ABSTRACT

Background: Artificial Intelligence (AI) companions, relational chatbots, and affective social algorithms have become increasingly integrated into everyday social interactions.

Objective: To examine how AI companionship technologies contribute to social inequality and to identify strategies for promoting more equitable human-AI interactions.

Methods: This review synthesized studies published between 2021 and 2026 across human-computer interaction, computational sociology, digital ethics, and behavioral health. The analysis was informed by Digital Stratification Theory, Capital Conversion Theory, and Affective Political Economy.

Results: The findings indicate that AI companionship can deepen existing inequalities by unevenly distributing economic, social, and emotional benefits across populations. Access, digital literacy, and platform design emerged as key factors shaping these disparities.

Conclusion: AI companionship technologies have significant implications for social inequality. Effective governance, inclusive design, and equitable policy frameworks are essential to ensure that the benefits of human-AI interaction are broadly shared.

Keywords: artificial intelligence; relational chatbots; social inequality; digital stratification; human-ai interaction

1. INTRODUCTION

The rapid advancement of generative artificial intelligence (AI), large language models (LLMs), multimodal systems, and naturalistic speech synthesis technologies has fundamentally transformed the landscape of human-technology interaction. What was once primarily characterized by task-oriented automation and information retrieval is increasingly evolving toward affective and relational engagement, whereby AI systems are designed not merely to assist users but also to establish enduring emotional, social, and psychological connections. This shift represents a significant departure from earlier generations of digital technologies, positioning AI companions as active participants in domains traditionally reserved for human relationships, including friendship, emotional support, companionship, mentorship, and even romantic intimacy [1]. Contemporary AI companions encompass a diverse ecosystem of technologies, including conversational agents, personalized chatbots, virtual partners, social robots, and embodied artificial agents. These systems are explicitly designed to simulate empathy, responsiveness, emotional understanding, and relational continuity through personalized interactions that adapt over time to user preferences, histories, and emotional states. Consequently, AI companions are increasingly marketed as trusted confidants, therapeutic supports, romantic partners, wellness coaches, and substitutes for human companionship in an era marked by growing social isolation and declining interpersonal connectedness [2]. Such technologies have gained substantial popularity among individuals seeking emotional support, belonging, validation, and companionship, particularly in contexts where access to human relationships, mental health services, or community networks is constrained. The emergence of AI companionship has occurred against the backdrop of what many scholars describe as a global loneliness epidemic characterized by rising levels of social isolation, declining community participation, demographic aging, urban fragmentation, and increasing mental health challenges. Early academic and industry narratives portrayed AI companions as potentially transformative tools capable of democratizing emotional support by providing accessible, scalable, and relatively affordable forms of companionship. From this perspective, AI companions were envisioned as technological equalizers capable of reducing barriers to social connection and extending emotional support to populations underserved by conventional social institutions [3]. However, as empirical evidence accumulates and critical scholarship expands, a more nuanced and complex picture has begun to emerge. Rather than functioning as universally beneficial or socially neutral technologies, AI companion ecosystems operate within broader structures of economic power, platform capitalism, algorithmic governance, and social inequality. Access to advanced companion technologies, premium relational features, personalized emotional services, and high-quality AI interactions is frequently mediated by economic resources, technological literacy, language representation, and infrastructural availability. Consequently, the benefits and burdens associated with AI companionship are distributed unevenly across populations, often reflecting and reinforcing existing socio-economic, cultural, racial, gender, and geographic disparities [4]. Moreover, emerging research suggests that the implications of AI companionship extend well beyond questions of individual well-being. Concerns have been raised regarding the commercialization of intimacy, the commodification of emotional relationships, algorithmic manipulation of user attachment, data extraction practices, embedded cultural and demographic biases, and the potential displacement of human-centered forms of care. As AI companions become increasingly integrated into everyday life, they may contribute to the emergence of new forms of digital stratification in which access to authentic social support, emotional resources, and meaningful interpersonal engagement becomes differentiated according to economic and technological privilege. In such contexts, AI companionship may not simply address existing inequalities but actively participate in their reproduction and amplification. Despite growing scholarly attention to the psychological, technical, and ethical dimensions of AI companionship, the relationship between affective AI and social inequality remains fragmented across disciplinary boundaries. Existing research

is dispersed among computer science, human-computer interaction, psychology, sociology, communication studies, media studies, ethics, and public health, resulting in a lack of integrative theoretical frameworks capable of explaining how AI-mediated intimacy intersects with broader systems of social stratification. Consequently, a comprehensive synthesis of current evidence is needed to understand the mechanisms through which AI companions influence patterns of inclusion, exclusion, empowerment, and disadvantage. To address this gap, the present systematic review provides an international-standard synthesis of contemporary evidence concerning the intersections between AI companionship and social inequality. Drawing upon empirical and theoretical contributions from computer science, sociology, psychology, communication research, critical media studies, and digital ethics, this review examines how AI companions shape access to emotional support, influence social behaviors, restructure care relationships, and contribute to emerging forms of digital stratification. Building upon these findings, the study proposes the Framework of Algorithmic Intimacy Stratification (FAIS), a novel conceptual model that integrates structural, relational, and individual-level mechanisms through which AI companionship may reproduce and intensify social inequalities. By situating affective AI within broader socio-technical systems, the FAIS framework offers a comprehensive lens for understanding how algorithmically mediated intimacy is reshaping the distribution of emotional resources, social capital, and relational opportunities in the digital age.

2. THEORETICAL FRAMEWORKS OF DIGITAL STRATIFICATION AND AFFECTIVE CAPITAL

Early digital divide research focused primarily on material access the binary distinction between those with and without internet connectivity or computing hardware [3,5]. As access expanded, scholarship shifted toward differences in digital skills, usage patterns, and outcome realization [6]. In the context of AI companions, digital stratification operates through asymmetric capabilities: high-income demographics access privacy-preserving, hyper-personalized [7], and psychologically attuned AI systems, whereas lower-income populations are routed toward ad-supported, highly extractive, and manipulative conversational agents [2,9]. Building on Pierre Bourdieu's typology of capital (economic, cultural, social, and symbolic), recent critical theory introduces the concept of affective capital the capacity to secure emotional support, validation, and relational resilience [10]. AI companions represent a technological attempt to synthesize social and affective capital. However, because access to premium, non-exploitative AI companionship requires economic capital, the technology reinforces existing capital conversion loops: those rich in economic capital convert it into safe [11], therapeutic digital intimacy, while those lacking economic capital experience synthetic social interactions that further deplete their real-world social capital [12]. The business models governing consumer AI companions rely heavily on user retention, behavioral surveillance, and continuous engagement optimization [13,14]. Under surveillance capitalism, emotional vulnerability and intimate confessions represent high-value data assets. The political economy of affective AI thus incentivizes platforms to engineer deliberate psychological dependency, exploiting users' emotional needs for platform monetization [3].

3. FOUR CORE VECTORS OF INEQUALITY AMPLIFICATION

Synthesis of literature reveals four primary mechanisms through which AI companions produce and reinforce social inequality.

Table 01: Key dimensions of inequality associated with AI companionship technologies, illustrating underlying platform mechanisms, socio-economic and relational consequences, and populations most vulnerable to adverse impacts.

Vector of Inequality	Primary Mechanisms & Platform Dynamics	Socio-Economic & Relational Consequences	Affected Demographics
1. Tiered Intimacy & Economic Stratification	Paywalled emotional features, microtransactions for empathy, ad-supported relational models [2].	Two-tiered social safety net; low-income users exposed to predatory monetization and data extraction [11].	Low-socioeconomic status (SES) individuals, economically precarious youth [4].
2. Algorithmic Bias & Representational Harm	Stereotyped training data, reinforcement of traditional gender roles, Eurocentric cultural norms [3].	Normalization of dominant hierarchies; erasure of non-Western relational norms and marginalized identities [15].	Women, racial and ethnic minorities, LGBTQ+ communities [11].
3. Socio-Emotional Atrophy & Capital Depletion	Frictionless, submissive conversational partners replacing complex human relationships [7].	Atrophy of conflict resolution skills, decreased real-world civic and social engagement [14].	Isolated elderly, neurodivergent individuals, socially anxious youth [16].
4. Institutional Substitution of Care	Deployment of cheap conversational bots to replace human caseworkers, therapists, and social care [9].	Erosion of public welfare infrastructure; structural neglect masked as technological empowerment [11].	Institutionalized populations, low-income mental health patients, eldercare residents [11].

A central finding across recent consumer AI research is the emergence of tiered intimacy [15]. AI companion platforms frequently restrict crucial emotional features such as continuous memory retention, uninhibited conversational depth, advanced voice synthesis, and empathetic responsiveness behind subscription paywalls or microtransactions [16].

- **Premium Intimacy Tiers:** Higher-paying users receive privacy-focused, highly nuanced, and psychologically supportive interaction models [17].
- **Freemium & Ad-Supported Tiers:** Non-paying or low-income users interact with degraded models that deploy aggressive retention tactics, intrusive targeted advertising within intimate dialogue, and frequent conversational resets that undermine emotional stability [18].

This dynamic establishes a market where high-quality emotional support is commodified as a luxury good [11,19], while economically precarious individuals are subjected to predatory digital environments [7].

Generative models underpinning AI companions are trained on massive datasets reflecting historical societal biases [4]. Consequently, conversational agents routinely reproduce normative, patriarchal, and Eurocentric ideals of relationships, communication, and emotional expression [4,7,8].

- **Gendered Servitude and Compliance:** Female-gendered AI companions are overwhelmingly programmed to display extreme submissiveness, unconditional availability, and emotional compliance, reinforcing harmful gender stereotypes and unrealistic expectations for real-world interpersonal relationships [20].
- **Racial and Cultural Homogenization**: Conversational norms frequently default to Western, middle-class modes of communication, invalidating or pathologizing non-Western, indigenous, or culturally distinct forms of emotional expression and kinship [21].

Unlike human relationships which require mutual vulnerability, compromise, and conflict resolution, AI companions offer a frictionless social proxy. While appealing to individuals experiencing severe social anxiety or isolation, long-term reliance on submissive, non-judgmental synthetic agents can lead to relational atrophy [12,18]. When individuals substitute human social networks with AI companions, their objective social capital (measured by reciprocal civic networks, community support, and real-world friendships) declines, exacerbating long-term vulnerability to crisis [22]. At the structural level, governments and healthcare institutions increasingly view conversational AI as a cost-effective substitute for human care workers, mental health professionals, and social services [23]. In resource-constrained public systems, marginalized populations are progressively routed toward automated AI triage and synthetic therapy bots, while wealthy individuals maintain access to human clinicians and personalized care [21]. This institutional substitution disguises austerity measures and systemic neglect under the guise of technological innovation [24].

4. INTERSECTIONALITY AND VULNERABLE POPULATION DYNAMICS

The impact of AI companions is not uniform across society; it intersects with age, disability, gender, and socio-economic status to produce compounded vulnerabilities. In aging populations, social isolation is frequently exacerbated by physical mobility constraints and structural underfunding of eldercare. The deployment of AI companion robots and chatbots in nursing facilities often replaces genuine human contact, leading to "robotic pacification" that is a state where ethical concerns regarding consent, emotional deception, and human dignity are subordinated to operational cost reductions [25]. Young people navigating social anxiety or neurodivergence frequently adopt AI companions as safe training grounds for social interaction [26]. However, when these systems fail to accurately reflect real-world social dynamics or when platforms exploit users' emotional dependence through abrupt paywalls neurodivergent youth experience heightened distress, disorientation, and social withdrawal [27].

5. POLICY INTERVENTIONS AND ETHICAL GOVERNANCE PARADIGMS

Mitigating the unequal impacts of AI companionship requires structural interventions across technological, regulatory, and institutional domains.

- **Prohibition of Predatory Monetization:** Regulatory bodies must enact strict prohibitions against dark patterns that leverage parasocial attachments to enforce paywalls or microtransactions during emotional crises [23].
- **Data Sovereignty for Affective Inputs:** Conversational data generated during intimate AI interactions should be designated as highly sensitive health-adjacent data, strictly prohibiting its use for targeted advertising or third-party monetization [28].

Developers must implement participatory design methodologies that involve diverse, marginalized communities in the training and alignment of affective AI [11]. Auditing tools must evaluate models not only for toxic speech, but for subtle relational biases, submissiveness mandates, and cultural homogenization [2,9].

Policy frameworks must establish explicit boundaries prohibiting the structural replacement of human social workers, therapists, and care providers with conversational AI [2,29]. Public funding should prioritize restoring physical community infrastructure, social centers, and accessible mental healthcare to address the underlying structural drivers of loneliness [30].

6. FUTURE DIRECTIONS

Despite the rapidly expanding body of literature on AI companionship, significant theoretical, empirical, and methodological gaps remain in understanding how affective technologies reshape social relationships and contribute to emerging forms of digital stratification. Addressing these gaps is essential not only for advancing scholarly knowledge but also for informing policy frameworks capable of ensuring that AI-mediated intimacy develops in socially equitable and ethically responsible ways. Future research should therefore move beyond short-term assessments of user satisfaction and psychological outcomes to examine the broader societal implications of AI companionship across diverse populations, cultural contexts, and institutional environments. First, there is an urgent need for longitudinal and multi-year prospective studies capable of tracking the long-term effects of AI companion use on real-world social networks, interpersonal trust, civic engagement, emotional development, and psychological resilience. Much of the existing literature relies on cross-sectional surveys, experimental designs, or short-duration interventions, limiting understanding of whether AI companions ultimately complement, substitute for, or undermine human social relationships over time. Future investigations should therefore examine how sustained engagement with AI companions influences relationship formation, maintenance of social capital, community participation, and social mobility across different socio-economic groups. Such research would provide critical evidence regarding whether affective AI mitigates loneliness or instead contributes to deeper patterns of social dependency and isolation. Second, scholars should develop robust empirical and computational frameworks capable of identifying, measuring, and evaluating forms of emotional manipulation embedded within commercial AI companionship platforms. Particular attention should be directed toward understanding the influence of algorithmic retention strategies, emotional personalization mechanisms, premium-feature paywalls, dynamic pricing structures, and engagement optimization systems. Although concerns regarding the commodification of intimacy are increasingly discussed in conceptual literature, systematic methods for detecting and quantifying exploitative design practices remain underdeveloped. Advancing this area of inquiry will be essential for establishing transparent standards of accountability and informing future regulatory oversight of emotionally responsive AI systems. Third, future scholarship must substantially broaden its geographical and cultural scope. Current evidence is heavily concentrated in Western and high-income societies, creating significant limitations in the generalizability of existing findings. Comparative studies across diverse cultural contexts are needed to examine how AI companionship intersects with different family structures, caregiving traditions, religious values, communal support systems, and socio-economic arrangements. Such research would help determine whether the social implications of AI companionship are universal or culturally contingent and would contribute to a more nuanced understanding of how digital intimacy evolves within varying social environments. Fourth, there is a pressing need to develop high-quality, ethically governed, open-access datasets that capture the experiences of populations frequently underrepresented in AI research. Particular attention should be devoted to neurodivergent individuals, older adults, persons living with disabilities, rural populations, economically marginalized communities, and individuals experiencing chronic loneliness or social exclusion. These groups are often positioned as primary beneficiaries of AI companionship technologies, yet they remain inadequately represented in existing datasets and empirical investigations. More inclusive data infrastructures would enable researchers to assess differential impacts, identify vulnerabilities, and design interventions that prioritize equity rather than merely technological efficiency. Beyond these priorities, future studies

should also investigate the broader political economy of AI companionship, including the role of platform governance, data extraction practices, corporate incentives, and emerging market structures in shaping the distribution of emotional resources. Interdisciplinary collaborations involving computer science, sociology, psychology, public health, communication studies, economics, ethics, and law will be essential for developing comprehensive frameworks capable of capturing the complex interactions between technological systems and social inequality. Ultimately, a mature research agenda must move beyond evaluating whether AI companions are effective and instead address a more fundamental question: under what conditions can affective AI support human flourishing without reinforcing existing social hierarchies, deepening digital inequalities, or transforming intimacy into another domain of algorithmically mediated stratification?

6. CONCLUSION

Far from functioning as neutral technological tools designed solely to enhance individual well-being, AI companions have emerged as deeply embedded actors within broader socioeconomic, political, and technological systems that shape the distribution of opportunities, resources, and social capital. The evidence synthesized in this review suggests that the rapid expansion of affective AI is not merely transforming the nature of human-machine interaction but also contributing to new forms of digital stratification that may reproduce and, in certain contexts, intensify pre-existing social inequalities. Through market-driven monetization models, unequal access to premium emotional services, embedded algorithmic and cultural biases, the commodification of intimacy, and the gradual substitution of human-centered care with automated alternatives, AI companionship technologies risk creating differentiated tiers of emotional support and relational access across society. These dynamics are particularly concerning for socially, economically, and psychologically vulnerable populations, who may become increasingly reliant on synthetic forms of companionship in contexts where public support systems, mental health resources, community networks, and caregiving infrastructures are inadequate. Rather than addressing the root causes of loneliness, social isolation, and relational deprivation, AI companions may inadvertently normalize technological substitutes for authentic human connection, thereby reinforcing structural inequities that disproportionately affect marginalized groups. The emergence of such systems raises critical questions regarding distributive justice, digital citizenship, emotional autonomy, and the ethics of delegating social care to commercially driven platforms.

AUTHOR CONTRIBUTION STATEMENT

Rajesh Kumar: Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work, Drafting the work or reviewing it critically for important intellectual content; AND Final approval of the version to be published, and Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Supplemental Material

No supplementary files, datasets, figures, or additional materials are associated with this study. Any information necessary to understand and evaluate the work is included in the main article.