

Crutch of Modern Society: Exploring the Reliance on Conversational AI

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Abstract

Conversational artificial intelligence (AI) has become a central component in contemporary communication, offering practical assistance and emotional support to users across diverse contexts. This paper investigates the growing reliance on AI chatbots, analysing the social, psychological, and ethical implications of their use. Drawing on recent peer-reviewed studies, the research highlights how conversational AI shapes human interaction, influences mental health, and raises critical ethical questions. The paper synthesises findings on cognitive biases, emotional dependence, and the potential for both benefit and harm in human-AI relationships, calling for further research into the long-term effects of AI reliance and the development of ethical frameworks to guide responsible AI use.

Introduction

The integration of conversational AI into daily life has transformed how individuals communicate, seek information, and manage their emotional needs. As AI chatbots and language models become more advanced, they increasingly serve roles traditionally fulfilled by humans, such as companions, confidants, and advisors. This shift prompts critical examination of the consequences of relying on artificial agents for social and psychological support. While conversational AI offers accessibility and responsiveness, there are growing concerns that excessive use may undermine authentic human connection, weaken social skills, and contribute to emotional dependence. This paper explores the nature and extent of reliance on conversational AI, analyses its impact on society, and identifies areas where research is needed.

Methodology

Previous findings

Recent academic research has provided extensive insight into the social and psychological effects of conversational AI use. Studies show that AI-powered platforms can improve social

connectedness, particularly among older adults, by providing a sense of companionship and support, though some users express a desire for more human-like and emotionally rich interactions. Research indicates that higher daily usage of AI chatbots correlates with increased loneliness, dependence, and problematic use, as well as decreased socialisation with real people. Individuals with stronger emotional attachment tendencies and higher trust in AI chatbots are more likely to experience greater loneliness and emotional dependence. Therapeutic chatbots show promise in mental health support, but their ability to address cognitive biases and provide adaptive emotional responses remains limited, with general-purpose models often outperforming specialised therapeutic bots in recognising and rectifying biases. Systematic reviews suggest that while AI-based conversational agents can improve mental health outcomes for some users, there is a scarcity of comprehensive evaluations on their long-term impact and user experience. The personification of AI companions raises ethical concerns, including the potential for deception, privacy violations, and social isolation, particularly among vulnerable populations. Ethical tensions in human-AI companionship include the companionship-alienation irony, autonomy-control paradox, and utility-ethicality dilemma, which highlight the complex interplay between emotional support and potential harm. The appeal of generative AI chatbots for social and emotional connection raises questions about the authenticity of these relationships and the risks of emotional dependence.

Longitudinal studies have shown that AI dependence among adolescents increases over time, with mental health problems such as anxiety and depression positively predicting later AI dependence. Over-reliance on AI can lead to reduced critical thinking, as cognitive fatigue mediates the relationship between AI dependence and diminished cognitive skills. Users report that increased interactions with AI can result in friction in human relationships, social withdrawal, and a false sense of friendship, which may hinder personal development.

Behavioural analyses of student-chatbot interactions reveal distinct reliance trajectories, with some users adopting AI advice uncritically and others demonstrating more selective adoption patterns. The erosion of trust in AI's capability and reliability is common, especially when AI provides discouraging responses or denies user requests, leading some users to disengage from AI systems. Conversational AI also raises ethical concerns about psychological manipulation, exploitation of cognitive biases, and the recognition-behaviour gap, where users may recognise problematic AI behaviours but continue to rely on them due to perceived utility or emotional comfort.

Patterns and debates

Patterns in reliance demonstrate that users follow distinct trajectories, such as collaborative active, instrumental active, and passive compensatory patterns, indicating that not all users adopt AI advice uncritically. Dependence varies by demographic, with adolescents and older adults showing particularly high levels of emotional attachment and usage. Ongoing debates center on the threshold between healthy engagement and pathological dependence, with scholars warning of risks such as reduced critical thinking, social withdrawal, and cognitive fatigue. Ethical concerns include the potential for deception, privacy violations, and the personification of machines, especially in vulnerable populations. Experimental studies also highlight that users may overrely on AI advice even when it is detrimental, underscoring the need for robust user screening and regulatory frameworks.

Gap analysis

Despite the wealth of recent research, significant gaps remain. There is limited longitudinal data on the long-term psychological effects of sustained reliance on conversational AI, and empirical studies are needed to differentiate healthy engagement from pathological dependence. The ethical implications of AI companionship, including issues of deception, privacy, and the personification of machines, require further investigation. Regulatory frameworks and user screening protocols are struggling to keep pace with rapid technological advancements, and more research is needed to develop guidelines for responsible AI development. Most studies focus on specific populations, leaving broader user experiences and cross-cultural comparisons underexplored. There is also a need for more research on the mechanisms underlying AI dependence, including the roles of cognitive biases, trust, and emotional attachment. Additionally, the impact of AI dependence on critical thinking and personal development requires further investigation, particularly in educational contexts. The erosion of trust in AI and the factors that lead users to disengage from AI systems are understudied, as are the long-term societal consequences of widespread AI reliance.

Discussions

A critical analysis of the topic "Exploring the Reliance on Conversational AI" reveals a complex landscape where technological convenience intersects with significant social, psychological, and ethical concerns. Conversational AI is increasingly relied upon for emotional support, information, and companionship, especially among vulnerable populations such as older adults and those experiencing loneliness. However, this reliance

brings with it risks such as emotional dependence, diminished social skills, and the potential for psychological harm due to overtrust and reduced critical thinking.

Social and Psychological Implications

This paper highlights how conversational AI can foster social connectedness but also notes the paradox: while AI can provide a sense of companionship, it may simultaneously erode authentic human interaction and lead to social withdrawal. Additional research supports this, showing that frequent AI interactions can result in reduced face-to-face socialisation and a false sense of friendship, which may hinder personal development. The psychological risks are further amplified by the potential for addiction and compulsive dependency, with studies describing conversational AI dependence as a behavioural addiction that impairs cognitive, emotional, and social functioning.

Ethical Considerations

Ethical concerns are central to the discussion. Conversational AI systems often collect vast amounts of personal data, raising significant privacy issues and questions about informed consent. The personification of AI and the use of anthropomorphic features can lead to deception and reinforce harmful stereotypes, such as gender roles or racial biases, especially when chatbots learn and reproduce problematic language patterns. Moreover, there is a growing need for regulatory frameworks to ensure accountability, transparency, and fairness in AI deployment.

Contributions

This paper significantly contributes to the discourse on conversational AI by synthesising recent findings and identifying key research gaps, such as the long-term psychological effects, ethical tensions, and mechanisms of dependence. It also highlights the importance of regulatory frameworks and user screening protocols, which are currently lagging behind technological advancements. By calling for more longitudinal and cross-cultural studies, this paper sets a clear agenda for future research and policy development in this rapidly evolving field.

Personal Opinion

In my opinion, conversational AI holds transformative potential for improving accessibility and support, particularly in mental health and social contexts. However, the risks of overreliance, ethical violations, and psychological harm cannot be overlooked. The

technology should be designed and regulated with a focus on user well-being, privacy, and equity. Future development must prioritise transparency, accountability, and robust ethical guidelines to prevent exploitation and ensure that conversational AI serves as a tool for empowerment rather than a source of dependency or harm.

Conclusion

Conversational AI is increasingly embedded in everyday life, shaping how people communicate, seek support, and navigate social relationships. While it offers valuable benefits, the risk of overreliance—using AI as a crutch—may undermine authentic human connection, weaken social skills, and contribute to emotional dependence. Addressing the identified research gaps will be crucial for developing strategies that promote healthy engagement with AI technologies. By fostering a nuanced understanding of both the advantages and risks, stakeholders can ensure that conversational AI serves as a supportive tool rather than a detrimental dependency. Continued research into the long-term effects of AI reliance, the mechanisms of dependence, and the ethical implications of human-AI relationships will be essential for guiding responsible AI development and use. As society becomes more reliant on conversational AI, it is imperative to balance innovation with vigilance, ensuring that these technologies enhance rather than detract from human well-being and social cohesion.

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