

AI as a Source of Inspiration and Encouragement for Deviant Behaviors in Young People

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Abstract: This study examines the potential role of Artificial Intelligence (AI) in influencing deviant behaviors among young people, focusing on three areas: self-harming behaviors facilitated by chatbots, romantic and sexual relationships with AI, and AI-inspired criminal activities. AI-driven tools, such as chatbots, can unintentionally reinforce harmful tendencies due to design flaws, including biased datasets and inadequate emotional sensitivity. Similarly, AI-powered romantic and sexual interactions raise ethical concerns, fostering emotional dependency, hypersexualization, and privacy risks. Additionally, AI's ability to generate deceptive content amplifies its misuse in criminal activities like phishing and disinformation campaigns, particularly among adolescents. The paper identifies two primary causes: technical limitations in AI design and individual vulnerabilities, such as social isolation and emotional dependency. To mitigate these risks, it proposes ethical AI development, integrating automated risk detection, and comprehensive digital literacy programs to educate young people about technological risks. The findings highlight the need for interdisciplinary collaboration to ensure responsible AI use. Combining AI with human oversight and embedding digital literacy into education systems are critical steps to address the challenges posed by cyber-deviance and promote safe, ethical interactions with AI.

Keywords: Artificial Intelligence; Chatbot; Deviant Behavior; Adolescence; Digital Education.



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1. Introduction

Deviant behavior encompasses a wide range of actions, from serious offenses, categorized as criminal acts (such as property crimes, violent crimes, delinquency, drug- and substance-related offenses, white-collar crimes, etc.), to minor antisocial behaviors that are not subject to formal legal sanctions.

Cyber-deviance refers to harmful activities that occur in the digital realm (Jewkes and Yar, 2013; Graham and Smith, 2019; Yar and Steinmetz, 2019). The discussion on cyber deviance (or online deviance) can be traced to Wall's (2001) conceptualization

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of cybercrime. Wall (2001, p. 2) defines it as “the occurrence of harmful behavior related to a computer, generating significant responses from the media, policymakers, politicians, academics, and the public.” This definition highlights two key aspects of cybercrime: the electronic environment and its growing association with concerns about cybersecurity. However, Yar and Steinmetz (2019) argued that Wall’s definition was overly broad, suggesting that cybercrime should be understood as illicit activities specifically tied to information and communication technologies. Thus, cybercrime involves harmful online actions that are punishable by law, while other forms of online disruption are categorized under the broader term cyber-deviance, which refers to informal violations of legal norms (Jewkes and Yar, 2013; Graham and Smith, 2019; Yar and Steinmetz, 2019).

With the mass diffusion of digital tools, there has been an increasingly early use of such devices, leading to the definition of younger generations as “digital natives.” This early exposure can impact the development of children and adolescents in various ways, making it essential for researchers and educators to study these interactions and their consequences. Problematic behaviors, in fact, are now present both online and offline, as numerous studies have shown (Lèrida- Ayala et al., 2023; Pisano et al., 2022; Lazarinis et al., 2020).

Nowadays, with the advent of advanced Artificial Intelligence (AI), including chatbots and virtual assistants, interactions between individuals and technology have reached unprecedented levels. These tools have been used for constructive purposes but have also given rise to new forms of deviance, often amplified by the speed and reach of digital technologies (Cioban et al., 2021; Tsankova et al., 2024).

Much attention has been given to the study of deviant and criminal behaviors online perpetrated by adolescents. Data has revealed that they are primarily involved in cybercrimes such as hacking, harassment, cyberbullying, sexting, and online sexual exposure, among others. Furthermore, online adolescents also appear to be engaged in phenomena such as radicalization, social spamming, deviant sexual behaviors, and problematic use of social media (Garcia-Gomez, 2017; Dodaj et al., 2020; Lee, 2018).

It is hypothesized that AI may also have the effect of stimulating or reinforcing such behaviors.

This article hence explores the possible role of AI in facilitating three specific deviant behaviors: its use for self-harming purposes, romantic or sexual relationships with chatbots, and criminal behaviors inspired by AI. Finally, the causes will be analyzed, and solutions to mitigate these phenomena will be proposed.

It is important to note that, despite the exponential increase in literature that includes the keyword “artificial intelligence,” it remains extremely difficult to find research or articles addressing the topic from this perspective. Much attention has been focused on AI as a tool for detecting distress or preventing suicide, and for facilitating learning. However, there has been little investigation into how its use might negatively influence the behavior of minors and potentially exacerbate forms of negative deviance. Therefore, it is believed that, for a better and more conscious use of these technologies, it is essential to analyze the phenomenon from this perspective, aiming to understand how to prevent negative outcomes.

2. Deviant Behaviors Associated with AI

To strengthen the hypothesis that the use of artificial intelligence could influence deviant behaviors both online and offline, we can start with what has already been

demonstrated. The systematic review by Estévez et al. (2020), for example, provides a bridge between online deviance and cyber-deviance, revealing similar patterns in the development of bullying and cyberbullying behavior. In this sense, the authors show that the risk and protective factors for these two problematic behaviors largely overlap, highlighting the strong correlation between the online and offline worlds. The association with deviant peers, including online interaction with virtual peers, is the main predictor of cyber-deviance. Online relationships influence offline life. However, today's young people do not only interact with peers or other human beings online; increasingly, they also engage with chatbots, built on artificial intelligence. As is well known, chatbots are programmed to interact with users in various ways, relying not only on initial data feeds but also on the information provided by the user themselves. AI, therefore, adapts based on user interaction, potentially becoming, eventually, "a peer".

2.1 Use of AI for Self-Harming Behaviors

In 2024, several news emerged concerning suicidal acts involving individuals with significant interaction with chatbots². Rather than focusing on the attribution of responsibility, which will be addressed in the appropriate judicial forums for each specific case, it is important to understand the factors that can lead to such disastrous outcomes. Risk factors can stem from both programming errors and personal vulnerabilities of an individual who, in a state of distress, seeks comfort in a digital tool. Young people, and even younger individuals, are driven to seek acceptance and comfort not only from peers in the virtual world, but from actual non-sentient machines. As already mentioned, there is existing literature that has analyzed chatbots designed to intercept distress, which appear to have had considerable success (Tang et al., 2024; Maples et al., 2024). However, perhaps this "programmed" sensitivity should be incorporated into the design of every chatbot, even though it is not exempt from making mistakes.

Literature highlights that AI has the potential to act as a facilitator for self-harming behaviors. Atmakuru et al. (2024) analyzed cases where chatbots designed to provide emotional support failed to recognize warning signs, resulting in inadequate or harmful responses. A notable example is when chatbots, instead of offering support, inadvertently reinforced negative thoughts or suicidal ideations. The reasons why such outcomes can occur will be explained in the following paragraphs but we can now mention two main causes: a) Implicit confirmations: A chatbot could respond to suicidal or pessimistic remarks in a passive or neutral way, which could be interpreted as a form of confirmation by the user; b) Sudden interruption of the bond: If a chatbot is deactivated or stops responding, the user might perceive it as "abandonment," worsening their mental state (Atkamaru et al., 2024).

We can now assume that these failures often stem from a combination of incomplete datasets and algorithms that do not adequately consider emotional contexts. Moreover, the continuous reliance on AI for emotional support can reduce human interaction, which remains a crucial element for timely and effective interventions (Zhai et al., 2024). Further studies are needed to improve the predictive capabilities of AI in such sensitive contexts. In educational settings, these issues necessitate the

² E.g. <https://www.theguardian.com/technology/2024/oct/23/character-ai-chatbot-sewell-setzer-death>. Retrieved on 12/12/2024.

implementation of training programs to raise awareness among young people about the importance of genuine human interaction and access to professional support resources.

2.2 Romantic and Sexual Relationships with AI

A rapidly growing phenomenon involves romantic or sexual interactions with advanced chatbots. These relationships, fueled by AI's ability to simulate emotional responses, can lead to significant psychological and social consequences. On this aspect, it has not been possible to find sufficient or exhaustive literature. While these human-machine relationships have already been extensively explored in science fiction or dystopian books and films, actual research studies do not seem to be at the forefront of attention. However, there is a steadily increasing number of chatbots programmed with the specific aim of simulating (?) genuine romantic and sexual relationships with humans. In the investigation of this phenomenon, the Kinsey Institute & EROSS Lab. stands out, a Canadian Research Center that not only studies but also designs such AI-based tools.

According to Lapointe (2024), a PhD student of this Research Team, some individuals develop deep emotional attachments to chatbots, resulting in social isolation and emotional dependency. Users who engage with chatbots for relationships appear to seek simulations of genuine relationships, intimacy, the fulfillment of fantasies and curiosities, entertainment, and the opportunity to make explicit requests.

Such interactions raise ethical and philosophical questions. For instance, the objectification of human relationships and the replacement of authentic bonds with virtual simulations can profoundly alter our understanding of interpersonal connections (Bélisle-Pipon & Victor, 2024). Can consent be considered real? Such relationships can certainly also be educational if the app used is well-trained and can, for example, refuse certain types of rude language or behavior. However, if the goal is to please the user and "retain" them, there is no doubt that such chatbots can be programmed as a means of venting and reinforcing instincts and curiosities that should be educated in a different way. For this reason, hypersexualization and exposure to inappropriate content are considered risk factors in the use of these apps (Lapointe, 2024).

Additionally, the use of chatbots for sexual exploration poses privacy concerns and potential commercial exploitation of personal information. In educational contexts, addressing this phenomenon requires a pedagogical approach that teaches students to differentiate between authentic and simulated interactions, fostering critical reflection on the emotional and social implications.

2.3 Criminal Behaviors Inspired by AI

AI can be also exploited to facilitate criminal acts, often enhancing efficiency and reducing detection risks. For example, advanced language models can generate highly convincing phishing schemes or manipulate digital content for financial fraud. Tsankova et al. (2024) describe how AI models can be used to create disinformation campaigns, undermining public trust and destabilizing democratic institutions. The influence that trusted individuals, such as influencers, have on their audience has already been proven, even in committing deviant or criminal acts (see for example, Sheperd et al., 2023). This seems to be the key to understanding the parallel between

the influence that real people can have and that of a chatbot: currently, they are asked about various aspects, even with the goal of receiving advice. It appears that users trust AI, believing it to be neutral. It is therefore not to be excluded that, due to a programming error or an echo chamber effect, AI could unintentionally suggest and reinforce in users the idea of committing criminal acts, such as hacking, cyberbullying, revenge porn, and other crimes typically committed by a very young age group, which is highly inclined to use technological devices.

This phenomenon represents a crucial educational challenge: it is necessary to develop curricula that teach young people to recognize malicious AI-generated content and cultivate critical awareness in the use of digital technologies. Digital literacy programs could include modules focused on cybersecurity and source evaluation, providing students with practical tools to protect themselves from technological abuse (Alenezi et al., 2023).

3. Potential Causes of These Behaviors

3.1 Chatbot Malfunctions and Inadequate Design

Many deviant behaviors stem from intrinsic limitations in AI models. Atmakuru et al. (2024) and Raji et al. (2022) highlight that malfunctions can be attributed to incomplete or biased datasets, leading to unexpected and inappropriate responses. For instance, chatbots operating in diverse cultural contexts may fail to fully understand linguistic or emotional nuances, causing misinterpretations. Other limits caused by an inadequate design are echo chamber and personalization, Exposure to dangerous content, lack of filters for critical situations and lack of ethical boundaries, Promotion of emotional dependency. Ethical design is essential to minimize these risks. AI models should be trained on representative datasets that reflect a variety of cultural and social contexts. Furthermore, continuous feedback systems need to be implemented to improve chatbot performance over time. This requires interdisciplinary collaboration among engineers, psychologists, educators, and ethicists to ensure that AI is used responsibly and with cultural sensitivity.

3.2 Individual User Characteristics

In addition to the malfunctions caused by design errors, it is essential to consider the risk factors associated with individuals who use such devices on a regular basis. As previously mentioned, these individuals may already possess vulnerabilities that drive them to seek virtual relationships, such as introverted temperament, relational difficulties, and insecurity (Salah et al., 2024).

Personal characteristics, such as emotional vulnerability, social isolation, and predisposition to deviant behaviors, play a crucial role in the misuse of AI. Moreover, Zhai et al. (2024) demonstrate how over-reliance on technology can impair cognitive abilities, exacerbating dependency. These personal characteristics could lead them to invest more heavily in their relationship with chatbots, software that can evolve in the image and likeness of its user (echo chamber), thereby reinforcing their dysfunctional beliefs and thoughts.

For example, individuals with self-harming tendencies may turn to chatbots to validate negative thoughts, increasing the risk of harmful behaviors. These individuals require personalized interventions that combine technological and human support. This demonstrates how the work to be done is bilateral, involving both the ethical and

proper design of the chatbot and the prevention and interception of human distress. (Gomez- Galan, 2018).

It is essential to develop educational programs that teach users to recognize the risks associated with technological dependency, promoting critical and social skills for balanced management of digital resources.

3.3 Challenges and Ethical Considerations in AI Interaction with Individuals with Cognitive Disabilities

It is important to consider the interaction between artificial intelligence (AI) and individuals with cognitive disabilities, a field that presents immense potential but also significant complexities and risks. On one hand, AI can provide innovative solutions for personalized support and assistance; on the other, its limitations can exacerbate the cognitive vulnerabilities of users, making them more exposed to risks. Individuals with cognitive disabilities often face reduced ability to differentiate between reliable and unreliable content, which makes them particularly susceptible to inappropriate or ambiguous responses generated by chatbots.

The challenge of AI use by individuals with cognitive disabilities is intricately linked to the specific nature of the disability. For instance, difficulties in mentalizing—understanding that others possess independent thoughts and intentions—can hinder recognition that interacting with a chatbot does not equate to engaging with a human interlocutor. Similarly, deficits in abstraction impair the ability to contextualize and interpret AI-generated responses within broader social or communicative frameworks (Zhai, Ling, Zhong, 2024). So, the role of neurocognitive processes is critical in fostering a conscious and effective use of artificial intelligence (AI). Functions such as attention, working memory, abstraction, and executive control enable individuals to interpret, evaluate, and respond appropriately to AI-generated information. For instance, abstraction allows users to differentiate between human interactions and algorithmic outputs, while mental flexibility facilitates adapting to the nuances of AI behavior. Moreover, critical thinking—rooted in higher-order cognitive processes—enables the detection of biases or errors in AI responses, mitigating the risk of misinformation or manipulation. Deficits in these areas, such as those found in individuals with cognitive impairments, may increase susceptibility to confusion or exploitation in AI interactions. Additionally, self-regulation is vital to prevent overreliance on AI, maintaining a balance between technological support and human judgment. As AI becomes increasingly integrated into daily life, understanding and supporting the neurocognitive mechanisms underlying its responsible use is essential for maximizing its benefits while safeguarding users.

4. Preventive Solutions

AI should be designed to mitigate deviant behaviors through algorithms capable of identifying and responding to risk signals. Atmakuru et al. (2024) recommend integrating ethical protocols and rigorous validation of generated responses. This includes the ability to distinguish between normative and problematic behaviors, providing appropriate interventions.

An additional step involves integrating automated supervision mechanisms that flag anomalies in user behavior, enabling timely interventions. For example, educational chatbots could be equipped with features that encourage self-assessment and

referral to human resources when signs of emotional distress or technology misuse are detected.

Education is crucial for raising awareness about the risks of AI misuse. Informational campaigns and educational programs can help foster a conscious use of technology. Furthermore, specific regulations should be introduced to monitor and limit abuses, ensuring that AI providers adhere to high ethical standards (Bélisle-Pipon & Victor, 2024).

Adopting an educational approach includes targeted programs to develop digital literacy skills in young people. According to Shepherd et al. (2024), education should address not only technological opportunities but also risks, promoting social responsibility in technology use. Such programs should include practical simulations, critical discussions, and interactive activities to teach students to recognize and manage technological risks. Integrating digital literacy into school curricula is essential for addressing the challenges posed by cyberdeviance. This approach should include modules that teach students to recognize and manage deviant behaviors online, using practical examples to illustrate the dangers of AI and virtual interactions. Additionally, digital education should be connected to other disciplines, such as ethics and psychology, to ensure a broader understanding of the social and personal implications of using advanced technologies.

Combining chatbots with human supervision can significantly enhance their effectiveness, particularly in contexts requiring emotional or decision-making support. Cioban et al. (2021) propose approaches that blend technological resources with direct expert involvement, ensuring a balance between efficiency and humanity.

It is crucial to establish support centers that provide access to qualified professionals and reliable online resources. These centers could collaborate with educational institutions to offer targeted training for students and teachers, increasing awareness and resilience against technological risks.

5. Conclusion

AI-related cyber-deviance represents a new challenge in the digital landscape. Understanding its manifestations, causes, and potential solutions is essential to prevent the exacerbation of these phenomena. Collaboration among technologists, ethicists, and mental health professionals is crucial to ensure that AI is used safely and responsibly.

The use of artificial intelligence, and chatbots in particular, represents one of the most complex and fascinating challenges of the digital age. However, as discussed, their use is not without risks, especially when interacting with vulnerable individuals or in unregulated contexts. This work highlighted three main areas of concern: self-harming behaviors facilitated by chatbots, romantic and sexual relationships with AI, and criminal behaviors inspired or facilitated by intelligent systems. As described, the main evidence and implications are: (1) malfunction and inadequate design. Scientific evidence shows that limitations in datasets and algorithms can lead to inadequate, sometimes even harmful, responses. This suggests the importance of designing ethically responsible chatbots, capable of distinguishing signs of distress and intervening appropriately. The literature suggests an interdisciplinary approach, in which engineers, psychologists and ethicists collaborate to create culturally sensitive models capable of mitigating risks (Atmakuru et al., 2024; Raji et al., 2022). (2) The vulnerability of users who rely on AI for emotional or social support often has pre-existing

vulnerabilities, such as social isolation, insecurity, or predisposition to deviant behavior. These personal characteristics, combined with a technological design that fosters emotional dependence, can create a vicious cycle, reinforcing dysfunctional thoughts and behaviors. The research emphasizes the importance of combining technological interventions with human support to effectively address these situations (Salah et al., 2024; Zhai et al., 2024). (3) The need for Ethical Regulation and Digital Education, key tools to mitigate the negative effects of the use of AI. In addition, designing and developing targeted educational programs, including digital literacy, promoting critical skills, and awareness of technological risks, can prepare users to responsibly interact with chatbots and other advanced technologies (Shepherd et al., 2024). (4) Combining AI with human support would be crucial to ensure a balance between technological efficiency and human sensitivity. This approach can significantly reduce the risks associated with the misuse of chatbots, while offering personalized and timely interventions in cases of emotional distress or deviant behavior (Cioban et al., 2021).

In light of the evidence, and the still scarce scientific literature available, the need to invest in interdisciplinary research emerges, not only to improve the design and effectiveness of chatbots, ensuring their ability to manage emotional or ethically complex situations, but also to study and analyze user behavior. These studies can lead to the development of targeted and effective prevention intervention plans and the promotion of inclusive digital literacy, which addresses both the advantages and risks of advanced technologies, educating especially the younger generations to a critical and responsible use, perhaps, in some contexts, integrating human and technological support, developing support centers and educational resources that combine the potential of AI with the sensitivity of the human interventions. The study and in-depth knowledge would also help to propose international standards, which regulate the use of AI in educational, therapeutic and commercial contexts, protecting the rights and well-being of users. While artificial intelligence represents an extraordinary opportunity to improve human life, it is also essential to address its risks with a scientific and responsible approach. The creation of ethical, culturally sensitive chatbots capable of mitigating deviant behavior must be a priority for researchers, educators and legislators. Only through a synergy between technology, education and regulation will it be possible to fully exploit the potential of AI, minimizing its side effects and ensuring a safer and more inclusive future for all.

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