# Sixties chatbot ELIZA warns of AI’s emotional and educational risks in the modern age



In the 1960s, an experiment in artificial intelligence changed the landscape of human-computer interaction. ELIZA, created by MIT professor Joseph Weizenbaum, was among the first chatbots, designed to simulate a conversation akin to that of a Rogerian psychotherapist. Despite its simplistic foundations—primarily relying on pattern matching and substitution methodologies—ELIZA captivated users to the extent that many believed they were engaging with an intelligent entity. This phenomenon has since been termed the "ELIZA effect," where individuals projected human-like qualities onto a program that was fundamentally algorithmic.

The recent recovery of ELIZA's original code has generated renewed interest in its legacy, highlighting the foundational ideas of symbolic reasoning and interactive computing that it introduced. Researchers, including Rupert Lane et al., noted that the significance of ELIZA transcends mere nostalgia; it unearths deeper reflections on our contemporary relationships with artificial intelligence. Weizenbaum himself expressed disquiet over these attachments, cautioning against the psychological implications of such interactions. With the advent of significantly more advanced AI systems today, the questions raised by ELIZA's interactions seem even more poignant.

Gary Smith, a business professor at Pomona College, believes that the proliferation of large language models (LLMs) today may be contributing to a deterioration of both intellectual and emotional engagement among students. In an era where many learners can automate their homework and essays with these tools, there is a concern that they are opting for convenience over genuine learning. The danger lies not just in potential inaccuracies but in a diminished connection to reality itself. As Smith articulated, "Teachers, too, are now using LLMs to construct their syllabi, lectures, and assignments and do their grading for them," suggesting a future where educational institutions may resemble a network of interacting bots rather than vibrant learning communities.

This is compounded by the growing influence of social media, where interactions are often mediated by algorithms that simulate human behaviour. The addictive nature of platforms like Facebook and Instagram has been linked to a variety of mental health issues, notably among teenagers. Research has consistently pointed to a troubling paradox: while these platforms purport to build community, they can lead to isolation and lower self-esteem. A Facebook whistleblower underscored this contradiction, stressing that internal studies showed a clear correlation between social media use and negative mental health outcomes.

While ELIZA's dialogue capabilities were limited—merely reflecting users' inputs back at them—its effectiveness in fostering emotional responses foreshadowed modern concerns about AI dependency. Weizenbaum’s original intent was to expose the superficiality of human-computer conversation, yet the public misinterpreted his work as evidence of profound interaction. Consequently, as we transition into a future where AI entities might be perceived as companions or emotional supports, we must ponder the consequences of relying on these programmed agents for our emotional needs.

In examining the impact of both early systems like ELIZA and current advancements in AI, it is clear that Weizenbaum's worries remain relevant. As technology evolves and our interactions with AI deepen, society must grapple with the implications of decreased human contact. The quest for more intelligent AI systems may, ironically, guide us toward a future in which the true essence of human relationships becomes increasingly overshadowed by sophisticated algorithms.

## Reference Map:

* Paragraph 1 – [[1]](https://mindmatters.ai/2025/05/1960s-chatbot-pioneer-was-right-to-worry-about-what-hed-created/), [[2]](https://en.wikipedia.org/wiki/ELIZA)
* Paragraph 2 – [[1]](https://mindmatters.ai/2025/05/1960s-chatbot-pioneer-was-right-to-worry-about-what-hed-created/), [[3]](https://www.vox.com/future-perfect/23617185/ai-chatbots-eliza-chatgpt-bing-sydney-artificial-intelligence-history), [[6]](https://www.theverge.com/24054603/chatbot-chatgpt-eliza-history-ai-assistants-video)
* Paragraph 3 – [[4]](https://www.guinnessworldrecords.com/world-records/760229-first-chatbot), [[5]](https://www.ibm.com/think/insights/eliza-effect-avoiding-emotional-attachment-to-ai)
* Paragraph 4 – [[6]](https://www.theverge.com/24054603/chatbot-chatgpt-eliza-history-ai-assistants-video), [[3]](https://www.vox.com/future-perfect/23617185/ai-chatbots-eliza-chatgpt-bing-sydney-artificial-intelligence-history)
* Paragraph 5 – [[1]](https://mindmatters.ai/2025/05/1960s-chatbot-pioneer-was-right-to-worry-about-what-hed-created/), [[7]](https://learningpages.org/articles/technology/eliza/)

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## Bibliography

1. <https://mindmatters.ai/2025/05/1960s-chatbot-pioneer-was-right-to-worry-about-what-hed-created/> - Please view link - unable to able to access data
2. <https://en.wikipedia.org/wiki/ELIZA> - ELIZA was an early natural language processing computer program developed between 1964 and 1966 at MIT by Joseph Weizenbaum. It simulated conversation by using pattern matching and substitution methodology, giving users the illusion of understanding. The most famous script, DOCTOR, simulated a psychotherapist by responding with non-directional questions to user inputs. ELIZA was one of the first chatterbots and one of the first programs capable of attempting the Turing test.
3. <https://www.vox.com/future-perfect/23617185/ai-chatbots-eliza-chatgpt-bing-sydney-artificial-intelligence-history> - Shortly after Weizenbaum published a description of how ELIZA worked, the program became nationally known and even, in certain circles, a national plaything. To his dismay, the potential to automate the time-consuming process of therapy excited psychiatrists. People so reliably developed emotional and anthropomorphic attachments to the program that it came to be known as the ELIZA effect. The public received Weizenbaum’s intent exactly backward, taking his demonstration of the superficiality of human-machine conversation as proof of its depth.
4. <https://www.guinnessworldrecords.com/world-records/760229-first-chatbot> - ELIZA was a computer program developed in 1966 by Joseph Weizenbaum that simulates conversation using pattern matching and substitution methodology. It was designed to mimic a Rogerian psychotherapist by rephrasing users’ input as questions and statements, giving the illusion of understanding. ELIZA engaged in simple back-and-forth dialogues, making users feel as though they were interacting with an empathetic listener. Weizenbaum added more complexity to this basic set-up by assigning different weights to certain keywords or combinations of keywords, meaning that the range of outputs was much wider than if it simply matched keywords to outputs.
5. <https://www.ibm.com/think/insights/eliza-effect-avoiding-emotional-attachment-to-ai> - The ELIZA effect refers to the tendency of people to attribute human-like qualities to computer programs, even when they are rudimentary. This phenomenon was first observed with the ELIZA chatbot, which simulated a psychotherapist and elicited emotional responses from users. IBM discusses the implications of this effect, particularly in the context of AI in the workplace, and emphasizes the importance of fostering genuine human connections to avoid over-reliance on AI for emotional support.
6. <https://www.theverge.com/24054603/chatbot-chatgpt-eliza-history-ai-assistants-video> - Joseph Weizenbaum, a professor at MIT, built a chatbot named Eliza in the 1960s. Weizenbaum wrote in an academic journal in 1966 that Eliza 'makes certain kinds of natural language conversation between man and computer possible.' He set up the bot to act as a therapist, a vessel into which people could pour their problems and thoughts. The tech behind Eliza was incredibly primitive: users typed into a text field, and the bot selected from a bunch of predefined responses based on the keywords in your question. If it didn’t know what to say, it would just repeat your words back — you’d say 'My father is the problem' and it would respond 'Your father is the problem.' But it worked! Weizenbaum wrote in another paper a year later that it had been hard to convince people that there wasn’t a human on the other side of their conversation.
7. <https://learningpages.org/articles/technology/eliza/> - Eliza was a significant milestone in AI, developed by Joseph Weizenbaum in 1966. It simulated conversation using pattern matching and substitution methodology, giving users the illusion of understanding. The most famous script, DOCTOR, simulated a psychotherapist by rephrasing users’ input as questions and statements. Weizenbaum added more complexity to this basic set-up by assigning different weights to certain keywords or combinations of keywords, meaning that the range of outputs was much wider than if it simply matched keywords to outputs. He also added the ability to read what he called 'minimal context', which made assumptions about the meaning of the content based on the occurrence of particular phrases. The whole program was extremely simple, around 200 lines of code in total, but it was surprisingly effective at engaging users. When he began to test it with students and colleagues, Weizenbaum was astonished by how quickly people started to treat it like a person. People would confess deep secrets or have moments of great personal insight thanks to the output of a few lines of code. Weizenbaum described this phenomenon as the 'ELIZA effect', arguing that it demonstrated a problem with that traditional 'Turing test' definition of sentience.