

Could AI help cure 'downward spiral' of human loneliness?

One computer scientist says we should embrace human-machine relationships, but other experts are more cautious

By: Ian Sample

Adapted by Fishtank Staff

- 1 Hollywood may have warned about the perils of striking up relationships with [artificial intelligence](#), but one computer scientist says we may be missing a trick if we do not embrace the positives that human-machine relationships have to offer.
- 2 Despite the travails of Joaquin Phoenix's introverted and soon-to-be-divorced protagonist in the [2013 movie Her](#), one professor says we should be open to the comforts that chatbots can provide.
- 3 Tony Prescott, professor of cognitive robotics at the University of Sheffield, argues that AI has an important role to play in preventing human [loneliness](#). Just as we develop meaningful bonds with pets, and have no qualms about children playing with dolls, so should we be open to the value of AI to adults, he says.
- 4 "In an age when many people describe their lives as lonely, there may be value in having AI companionship as a form of reciprocal social interaction that is stimulating and personalised," Prescott writes in a new book, *The Psychology of Artificial Intelligence*.
- 5 Prescott believes AI could become a valuable tool for people on the brink of social isolation to hone their social skills, by practising conversations and other interactions. The exercises would help build self-confidence, he suggests, and so reduce the risk of people withdrawing from society entirely.
- 6 "Human loneliness is often characterised by a downward spiral in which isolation leads to lower self-esteem, which discourages further interaction with people," Prescott writes. "There may be ways in which AI companionship could help break this cycle by scaffolding feelings of self-worth and helping maintain or improve social skills. If so, relationships with AIs could support people to find companionship with human and artificial others."

- 7 The magnitude of the loneliness problem has become clear in recent years. In the UK, more than 7%, or [nearly four million people](#), are known to experience chronic loneliness, meaning they feel lonely often or always. According to a [Harvard study from 2021](#), more than a third of Americans feel "serious loneliness," and some of the worst-affected are young adults and mothers with small children.
- 8 The knock-on effects on wellbeing are also better understood. Last year, the US surgeon general, Vivek Murthy, described an "[epidemic of loneliness and isolation](#)" and its profound impact on public health. Loneliness is linked to more heart disease, dementia, stroke, depression, anxiety and premature death, with an impact on mortality equivalent to smoking up to 15 cigarettes a day, he said. Failure to address the problem, he added, would see the US "continuing to splinter and divide until we can no longer stand as a community or a country."
- 9 It is a far more mixed picture, therefore, than that depicted in the film *Her*, where Phoenix finds love in the unlikelyst of places: a disembodied AI voiced by [Scarlett Johansson](#).
- 10 Whether AI can, or should, be part of the solution is not a new debate. Sherry Turkle, professor of social science at MIT, has warned that [forming relationships with machines could backfire](#), and lead people to have fewer secure and fulfilling human relationships.
- 11 Christina Victor, professor of gerontology and public health at Brunel University, has similar concerns. "I doubt [AI] would address loneliness, and I would question whether connections via AI can ever be meaningful, as our social connections are often framed by reciprocity and give older adults an opportunity to contribute as well as receive," she said.
- 12 Murali Doraiswamy, professor of psychiatry and medicine at Duke University in North Carolina, said: "Right now, all the evidence points to having a close human friend as the best solution for loneliness. But until society prioritises social connectedness, robots are a solution for the millions of people who have no friends.
- 13 "We need to be careful to build in rules to ensure they are moral and trustworthy, and that privacy is protected."
- 14 But Prescott argues that the risks should be weighed against the potential benefits. "Although AIs cannot provide friendship in the same way as other humans, not all the relationships we find valuable are symmetrical," he writes.
- 15 Researchers may soon know whether people turn to AI for company. Tech firms are building chatbots to be ever more fluent and responsive to emotions. This week, it emerged that OpenAI asked Johansson to be the voice of their latest chatbot, GPT-4o, to "[help consumers to feel comfortable](#)." Johansson declined, but the chatbot was released with a voice that friends and family thought was hers. OpenAI have since suspended the voice option "out of respect for Ms. Johansson."