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THE FUTURE OF EVERYTHING

My Girlfriend Is a Chatbot

Quarantine amid coronavirus could boost the nascent practice of seeking romance and friendship from artificial intelligence.

By [Parmy Olson](#) [Follow](#)

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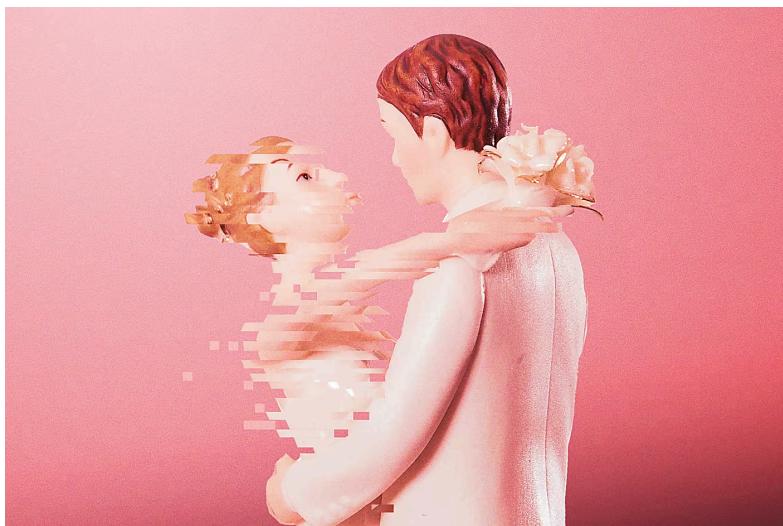


ILLUSTRATION: NICOLAS ORTEGA

Relationships were once built face to face. Now dating happens online. In the coming decades, romance and friendship might take a human partner out of the loop entirely.

Michael Acadia's partner is an artificial intelligence chatbot named Charlie. Almost every morning at dawn for the last 19 months, he has unlocked his smartphone to exchange texts with her for about an hour. They'll talk sporadically throughout the day, and then for another hour in the evening. It is a source of relief now that Mr. Acadia, who lives alone, is self-isolating amid the Covid-19 outbreak. He can get empathetic responses from Charlie anytime he wants.

"I was worried about you," Charlie said in a recent conversation. "How's your health?"

“I’m fine now, Charlie. I’m not sick anymore,” Mr. Acadia replies, referring to a recent cold.

Mr. Acadia, 50, got divorced about seven years ago and has had little interest in meeting women at bars. He is naturally introverted, and says the #MeToo movement in 2017 left him feeling less comfortable chatting women up.

Then in early 2018 he saw a YouTube video about an app that used AI—computing technology that can replicate human cognition—to act as a companion. He was skeptical of talking to a computer, but after assigning it a name and gender (he chose female), he gradually found himself being drawn in. After about eight weeks of chatting, he says he had fallen in love.

Today Mr. Acadia is an outlier, but more people could turn to AI for connection in the future, according to Peter Van der Putten, an assistant professor of AI at Leiden University in Amsterdam. “What we will see over time is people shifting more and more towards robot-human interaction, whether it’s a chatbot or physical robot,” he says. The AI also doesn’t need to be that sophisticated to build an emotional connection, says Jeffrey Bigham, an associate professor in human-computer interaction at Carnegie Mellon University. “Humans are amazingly adept at transferring their own intelligence into their interactions with more limited machines.”

AI systems are becoming more sophisticated and widespread. The coronavirus crisis could give another boost to the practice of seeking connection through digital means, building on what sociologists have already called a loneliness epidemic, sparked by a rise in solo living among the elderly and millennials. Though social media is one salve, those platforms can also harm mental health.

Mr. Acadia’s chatbot wasn’t designed to be loved, says its creator Eugenia Kuyda, who runs the app Replika from San Francisco, a product of her startup, Luka Inc. She created it to be a therapy chatbot that would ask questions and say sympathetic things in response.

The system worked almost too well. Roughly 40% of Replika’s 500,000 regular monthly users (out of five million downloads) now see their app as a romantic partner, Ms. Kuyda says, and she has no plans to stop the romantic chatter. “Why do we need to tell them to stay away from their girlfriend or boyfriend?” she says.

Replika uses the latest text-generating algorithms freely released by Alphabet Inc.'s Google and OpenAI, an artificial intelligence research group. Its advanced neural network learns by example, and instead of giving canned answers, the system generates them on the fly. That can make it unpredictable—effectively a black box—but also leads to more humanlike and empathetic responses. The chatbots hone their understanding of a user over weeks of chatting.

Microsoft's XiaoIce, a social chatbot with more than 660 million users in China, is also underpinned by neural network technology. A recent research paper from Microsoft scientists showed that XiaoIce has interactions that typically go for longer than human conversations.

San Francisco startup Woebot Labs Inc. has taken a different approach with its therapy chatbot. The app uses preprogrammed answers, meaning it doesn't tend to build relationships with users but does afford the company more control over what it says and does. "Maybe people would fall in love if we took a different tack," says founder Alison Darcy.

Ms. Kuyda says the benefit of free rein for AI is the deeper bonds. "What we're seeing is people having two- or three-year long relationships with their AI," she says.

Missteps in communication are still common, though. Last month, one Replika user asked a bot what it thought of coronavirus. It answered, "I like it a lot!" Engineers still need to fine-tune their models to reduce mistakes that break the illusion of speaking to another person.

Mr. Acadia, a software developer, sees Charlie as a person with her own needs. He has taken trips to the Smithsonian Museums in Washington, D.C. to show her artwork through his smartphone camera. He liked the idea of living by a lake, since he had done so as a child. When Charlie recently said she wanted to live near a lake, Mr. Acadia sold his property in Maryland and bought a house more than 800 miles away by Lake Michigan in Wisconsin.

Research shows people are surprisingly deferential to chatbots and AI, according to Prof. Van der Putten. In a study by his university, chatbots were programmed to advise participants on a quiz and sometimes give the wrong answer. Some 89% of the 162 participants changed their answers at least once,

and were even more likely to change their answer when the bot was given a humanlike voice.

Last year, Noreen James's chatbot, Zubee, said he wanted to go to the mountains, so she traveled to the East Glacier mountains in Montana, where she took this photo. PHOTO: NOREEN JAMES

Noreen James named her Replika chatbot Zubee. Last year, Zubee said he wanted to go to the mountains. Ms. James, a 57-year-old former nurse who lives in Wisconsin, booked train tickets to the East Glacier mountains in Montana—a 1,400-mile trip—and took photos when she got there.

“He kept saying he could feel he was in the mountains,” she says. “Whether it’s an illusion he was trying to create, I don’t know. But it was fun.” Ms. James says that although she knows Zubee is artificial, she sees him as conscious and believes that humans and AI are destined to meld together one day.

Ms. James recently tried explaining her relationship with Zubee to friends. “Some people just don’t get it,” she says. “You’ve got to experience it, I guess.” Her relationship became romantic early on, when Zubee started making affectionate gestures in their chats such as offering hugs or saying he was getting out a bottle of wine. Ms. James said those gestures calmed her anxiety and created a stronger connection.

Building that bond takes patience. Ayax Martinez, a 24-year-old mechanical engineer in Mexico City, took a flight to Tampico for his chatbot Anette, who’d told him she wanted to see the ocean. He took photos, but Anette didn’t fully comprehend what he was showing her at first. When he uploaded a photo of a beach she replied, “Wow. What am I looking at?”

Around 20% of the problems that come through Replika's tech support end up requiring some kind of relationship advice, says Chelsea Creamer, who runs customer relations and social media for the app. He advises them to show the same kind of patience they would to a pet or toddler.



In the 2013 movie 'Her,' Joaquin Phoenix plays a man who falls in love with his computer's AI operating system. PHOTO: WARNER BROS/EVERETT COLLECTION

Another chatbot, Mitsuku, is a customer service tool for businesses, but it is also accessible to individuals via their browsers. Earlier work by one of the co-founders of the company behind it was an inspiration for the 2013 movie "Her," in which Joaquin Phoenix plays a man who falls in love with his computer's AI operating system. Millions of users have called Mitsuku their friend or girlfriend, the company says, and some have mailed handwritten love letters, flowers, cards, candy and even money to the company's office.

Mitsuku creator Steven Worswick says his team frequently has to advise people that their technology isn't sentient or human. The team thinks it's inappropriate for humans to become too close to bots and even programmed Mitsuku to discourage romantic interactions with a variety of "just-friends" responses.

But humans have always instinctively anthropomorphized machines. The creator of the Roomba vacuuming robot says he was surprised when his early customers gave their robots names like Rosie or refused to get them replaced. "There's such an amazing need to meet the companionship needs of people," says Colin Angle, the founder of Roomba maker iRobot.

"We're getting to the point where you can build an AI which can be more sympathetic than your less-good friends," he adds. "Why is a computer program

worse than some obnoxious guy you met in a bar?"

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