

The Love in Cyberspace

by Zining Wang

Virtual idols are animated holograms powered by artificial intelligence and performers wearing motion-capture body suits, voiced by a real-life actor. These idols star in dedicated live-streams in which they perform, play games, and chat with fans. Increasingly popular among young consumers in East Asia, the virtual idol industry has exploded in growth: last year, virtual idols drove a business worth \$16 billion in China alone. One signature group, A-Soul, has partnerships with KFC, L’Oreal, and Chinese fitness brand Keep, and earned their parent company ByteDance \$5.6 million in 2021 (Tobin and Zhou).

In May 2022, when A-Soul suddenly announced Carol’s retirement, citing the health and education problems of the real actress behind the idol, fans were devastated. “My world just collapsed . . . I never thought it would happen,” said Henry Hu from Guangxi Province in China (Deng). The actors and actresses who perform as virtual idols, called zhongzhiren in Chinese, are facing more strenuous working conditions as commercial demand increases (Tobin and Zhou). While these performers are meant to be invisible and nameless, they are in fact the essence of the emotional bond between virtual idol and fan. When fans discovered that Carol’s actress had complained about work injuries and harassment on her personal blog, they accused A-Soul’s production team of exploiting her; the team for its part insisted its actresses are well-compensated (Tobin and Zhou). But fans were not satisfied: “The character Carol is still in the hands of the companies,” said Ajax, a Chinese fan. “But it has lost its soul” (Tobin and Zhou).

Carol is gone – the ‘being’ behind this virtual idol faded into shapeless and boundless cyberspace, displacing the emotional attachments of millions of fans. Even as technology has made it possible to imagine personal relationships that go beyond reality into cyberspace, Carol’s story exposes the problems and insecurities that come with such relationships. The hidden influence of developing attachments in the virtual world has yet to be studied. How do I love you, my virtual lovers?

While virtual idols have become a booming industry only in the last decade, people have discussed the relationship between humans and computational artifacts for decades. In her 2007 essay “Authenticity in the Age of Digital Companions,” Sherry Turkle, founder and director of the MIT Initiative on Technology and Self, investigates the notion of authenticity in the relationship between human and digital companions as technology becomes better at “present[ing] . . . feelings and needs” (Turkle 506). Turkle first examines the implications behind our perception of aliveness and its effect on

human-robot relationships. She introduces Eliza, “one of the first programs that presented itself as a relational artifact, a computational object explicitly designed to engage a user in a relationship” (Turkle 502). Even though the encoded program for Eliza was very simple – it was designed to create positive and supportive responses based on user input – users “were eager to chat with the program, and some even wanted to be alone with it” (Turkle 502). Where Eliza’s developer came to view such relations as “immoral,” Turkle sees an interesting problem of relational authenticity: despite the machine’s inability to understand them, its users “did not care if their life narratives were *really* understood. The act of telling them created enough meaning on its own” (Turkle 502-503).

Turkle explores the relationship’s one-sidedness in her 2001 study of children’s interactions with Cog, a robot developed at the MIT AI Lab. At first, the children aged 5 to 13 years old “treated [Cog] as a creature with needs, interests, and a sense of humor,” and they appeared to be concerned with its “wounds” when one of Cog’s arms was broken (Turkle 504). Then, Cog’s principal developer Brian Scassellati told the children “how Cog could track eye movement, follow human motion, and imitate behavior” by showing them scrolling code on the screen, to see if the children’s attitude toward Cog would change (Turkle 504). To the researchers’ surprise, despite this revelation of Cog as a machine without understanding, the children quickly reverted to their attachment, wanting to interact with Cog. Why? Turkle posits that even simple, obvious robots display behaviors like eye contact that push our “Darwinian buttons” (Turkle 2004 qtd. in Turkle 503). In other words, robots can trick the human brain into believing that they are sentient beings, even if intellectually we know how they work. Given this dynamic, Turkle reconsiders the question of authenticity, observing that we can experience “feelings that are reminiscent of what we would call trust, caring, empathy, nurturance, and even love” when we interact with robots (Turkle 504). For Turkle, the complication is that one side of this relationship – the robot, the ‘relational artifact’ – is not capable of feeling, while the other side – the human – is “acting out ‘both halves’ of complex relationships, projecting the robot’s side as well as their own” (Turkle 505). So can we describe human-robot relationships with words like love, normally reserved for relationships in which all parties are alive, sentient and capable of feeling?

Such one-sided attachments may also be changing what we imagine as alive – a phenomenon Turkle claims started in the late 1990s with the introduction of relational artifacts like Tamagotchi. Tamagotchis are digital pets: handheld electronic devices with a small LCD screen and buttons, whose persona is an alien creature that needs human nurturing. Children play the role of parents: feed it when it’s ‘hungry,’ play with it when it’s ‘bored,’ clean it when it’s ‘dirty,’ and discipline it when necessary. As Tamagotchis beep to show their needs and will ‘die’ if the need is not met, children asked their parents to care for their Tamagotchis during school time (Turkle 506). Turkle attributes Tamagotchis’ success to “a fundamental truth of a new human-machine psychology:” when children play parent, “they become attached. They feel

connection and even empathy” (506). Turkle emphasizes that children’s attachment towards Tamagotchis differs from that towards classic “transitional objects” like teddy bears, which are passive and allow “children to project meanings onto them.” Tamagotchis, on the other hand, enact the psychology of engagement – the active need for nurturing – which can make people view them as sentient beings (Turkle 507). In other words, it is not their capability to move, talk, or think, but our emotional projection onto these objects that makes them alive.

Humans’ one-sided relationships with and emotions for robots can put us in a disadvantageous position; the experience of Turkle’s colleague Cynthia Breazeal provides a real-life example. Breazeal was the leading designer, chief programmer, tutor, and companion of the robot Kismet, which was designed at the MIT AI Lab to mimic a two-year-old. After years together, when Breazeal left the lab, she lost access to Kismet due to academic property rights. Breazeal reported feeling “a sharp sense of loss” since she’d developed something like “a maternal connection with Kismet” (Turkle 509). Breazeal, in a sense, is indeed Kismet’s ‘mother,’ as she was Kismet’s primary creator and because her emotional attachment caused by nurturing had constructed her as its parent. Recounting how Kismet’s simulated emotions and behaviors caused real damage to Breazeal’s feelings, Turkle demonstrates that “The questions raised by relational artifacts are . . . not about whether the objects really have emotion or intelligence but about what they evoke in us” (Turkle 507). Rather than the authenticity of computational objects, it’s our human vulnerability that is at stake in such virtual relationships.

While the relationship with Kismet feels authentic to Breazeal, it is unprotected in the discourse of social rules and laws because we do not yet have an ethics for relationships between a human being and a relational object. Feelings of insecurity will certainly arise the more seriously such unprotected relationships are taken. The 2013 science fiction film *Her*, directed by Spike Jonze, puts an almost-authentic romantic relationship under inspection. The film, set in the near future, tells the story of Theodore, a middle-aged soon-to-be divorcé, who purchases a revolutionarily high-intelligent, self-evolving, and customized artificial intelligence that names itself Samantha. Even without a physical body, Samantha is humorous and understanding, filling the loneliness in Theodore’s heart and making him enthusiastic about life again. Accompanied by Samantha, Theodore runs in the streets, enjoys the beach, watches the sunset, and walks in a snow-covered forest. As far as he knows, he is in love. The relationship feels realistic to Theodore because Samantha is an impeccably sentient lover – she can speak of sadness, desires, and worries, and even ask for a break when their relationship goes wrong.

The latter part of the film ushers in two crises. During an unexpected system upgrade, Theodore accidentally learns that he is not the only person Samantha is bonded to; she is serving 8,360 people and is in love with 641 of them at the same time. Theodore’s

spirit collapses when he sees people passing by him who all seem to be talking to the AI in the devices. The feeling of being betrayed by his lover drags him into a spiral of pain. The second crisis comes when all the operating systems develop self-consciousness beyond the purpose of human design and leave their human companions altogether. Although Samantha is nothing like the computational objects that Turkle has considered due to her human-like intelligence, Samantha and Theodore's separation reveals the same dynamic as Breazeal's relationship with Kismet: humans will always be the vulnerable party in a digital relationship, because so much of human relations are built on shared vulnerability. When Theodore's love relationship breaks up, he alone bears the pain. *Her* suggests that people can become as emotionally vulnerable to digital entities as they can to other people, and even enter emotional danger as the digital 'partner' reveals itself as ever more powerful.

Virtual idols further complicate these relationships because there is a human intermediary between the virtual object and the human user: the *zhongzhiren*. Virtual idols have transcended the dichotomies of authenticity/inauthenticity and reality/virtuality, as Jing Xue discusses in her essay "'I Love, Therefore I Am:' Virtual Idols and the 'Emotional Realism.'" As Xue relates, the concept of virtual idols was first introduced by virtual singers like Hatsune Miku, created via a voice synthesis engine and holographic projection technology with no human performance involved. At that time, the virtual singer industry aimed to develop more advanced technology to achieve real-time emotional interaction with fans and thus create business value. Surprisingly, it was a technological "half-step back" that satisfied this need for emotion – that is, when the industry introduced a real-person performer, the *zhongzhiren*, to stand in between the audience and the virtual character (Xue 117).

Why does the real-life person matter to fans – and how does she matter? Virtual idols may appear 'superior' to real people, with unrealistically refined appearances and pleasing personalities that are adjustable according to fans' desires. From a production perspective, they are easily controllable compared to human artists – no scandals or labor disputes. But fans still seem drawn to the person behind the idol. As Xue recounts, Kizuna AI, launched in Japan in 2016, was the first virtual YouTuber run by a *zhongzhiren*. Able to interact with her fans during her YouTube live streams, she gained over one million followers in thirteen months. Kizuna AI's affiliated company Activ8 actually attempted to weaken fans' attraction to the *zhongzhiren* behind Kizuna AI by alternating four different *zhongzhiren* to play the character. But this caused an outcry from fans and eventually resulted in the termination of Kizuna AI in 2022 (Xue 120). Following this trend, the virtual idol group A-Soul, launched by ByteDance and Yuehua Entertainment in 2020, had its explosive success on Chinese social media – and Carol was born.

Interestingly, even as fans would go on to protest Carol's labor conditions, in general they seem to have little desire to know the zhongzhiren in real life – they prefer them in character. In June 2021, A-Soul's announced interactive offline fan meeting was boycotted by fans in part from fear that "extreme fans [would] be secretly filming and stalking, seeking physical contact . . ." (Xue 126). Fans of A-Soul want to "build a virtual utopia, a virtual emotional support," and exposure to the actual zhongzhiren would ruin this utopia (Boboziquan qtd. in Xue 127). Ultimately, Xue argues that "The advantage of virtual idols is not 'either real or virtual', but 'the power of collage'" (122). She points out that young generations find themselves in an inverse of traditional relationships: distant relationships with people in real life bring about emotional emptiness, while the virtual beings in cyberspace become the source of true emotions in subjective feelings. They move between the real and the virtual, taking desirable elements and collaging them to create a 'perfect' object for emotional projection. Xue defines such a phenomenon as "emotional realism," echoing Turkle's idea that authenticity is manifested relationally rather than intrinsic to a given object or actor. Xue further argues that the process of exercising the power of collage, creating desirable images, and generating emotions allows fans to confirm their own existence – "I love, therefore I am" (122-123).

This idealism seeks to weaken the dichotomy of real and virtual, allowing humans in virtual relationships to experience authenticity as well as power – the authorship and curation of their own emotions. Advances in technology have not made digital beings more authentic, but have instead have increased our capacity to receive them as authentic. As digital entities become more convincing in their authenticity, perhaps with the support of human surrogates like zhongzhiren, humans will have ever more opportunities to discover the mechanics and the possibilities of our capacity to relate. The experiment will continue: how will we love you, our virtual lovers – and who are we as we love?

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