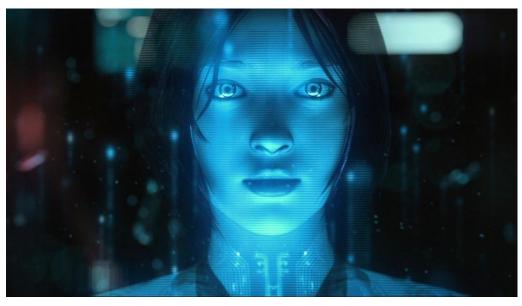


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Why is AI female? How our ideas about sex and service influence the personalities we give machines

BY MONICA NICKELSBURG (HTTP://WWW.GEEKWIRE.COM/AUTHOR/MONICA-NICKELSBURG/) on April 4, 2016 at 10:30 am



Microsoft's Cortana, as depicted in the Halo video games.

Consider the artificially intelligent voices you hear on a regular basis. Are any of them men? Whether it's Apple's Siri, Microsoft's Cortana, Amazon's Alexa, or virtually any GPS system, chances are the computerized personalities in your life are women.

This gender imbalance is pervasive in fiction as well as reality. Films like "Her" and "Ex Machina" reflect our anxieties about what intelligent machines mean for humanity. But Al, in and of itself, is genderless and sexless. Why, then, are the majority of the personalities we construct for these machines female?

Is it about service?



Apple's Siri

Assigning gender to these AI personalities may say something about the roles we expect them to play. Virtual assistants like Siri, Cortana, and Alexa perform functions historically given to women. They schedule appointments, look up information, and are generally designed for communication.

"When you think of an assistant you tend to think of their voice as female and it has to do with the way that labor is gendered and stratified," said Michelle Habell-Pallan (http://faculty.washington.edu/mhabellp/), an associate professor in Gender, Women, and Sexuality Studies at the University of Washington. "So that's no accident. That's more something that's out there in the cultural field that gets reproduced then in the technology. And it becomes a loop where, if you're not conscious, you just think this is inevitable and this is the way it is. It creates this illusion that this is the way it is, how it has been, and how it shall be."

Flight attendants and travel agents are also roles that traditionally skew female, so perhaps it's unsurprising that Alaska Airlines and United Airlines chose lady bots "Jenn" and "Alex" (http://www.geekwire.com/2011/expedia-dials-virtual-agent-assist-customer-service/) to assist their passengers.

66 It creates this illusion that this is the way it is, how it has been, and how it shall be. 99

The trend may seem harmless, but we should be careful about the message it sends if we want to prevent AI from becoming the latest chapter in a history of objectifying women.

Women are already subject to volumes of damaging, implicit messaging. Some might argue they're held to robot-like standards of perfection, an idea explored in the iconic "Stepford Wives" film. Near-constant signals from the media suggest that with enough tweaking, plucking, painting, and self-control, women can obtain perfection. Studies show that women who wear makeup are perceived as more competent at work

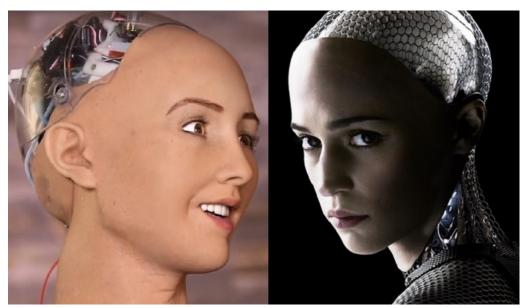
(http://www.nytimes.com/2011/10/13/fashion/makeup-makes-women-appear-more-competent-study.html?_r=0), and everywhere in the world women spend more hours grooming and working (in the home and outside of it) than men do (https://www.gatesnotes.com/2016-Annual-Letter).

Maybe these social norms make it easier to believe in a female virtual assistant. After all, Siri is always working, always available, ready at any minute to provide assistance with a positive attitude.

Assigning female characteristics to these AI personalities may seem innocuous, but it has some serious implications. In addition to reinforcing gender stereotypes, it could lead to machines taking on morally ambiguous roles that go well beyond scheduling appointments.

Is it about sex?

Al may be in its nascence, but the feminizing — and sexualizing — of machines isn't a new phenomenon. Several robotics companies have been developing human-like (and largely female) robots for years, anticipating high demand. Hanson Robotics recently demoed Sophia (http://www.geekwire.com/2016/experts-work-turn-artificial-intelligence-airobots-friendly-faces/), a learning and expressive robot designed to help humans in areas like healthcare and customer service.



(http://cdn.geekwire.com/wp-content/uploads/2016/03/mach3-1.jpg)

Hanson Robotics' Sophia (left) represents the state of the art in "friendly" Al robots, while the Al robot Ava from "Ex Machina" (played by Alicia Vikander, at right) represents a sci-fi vision of where the robotics field could go. (Credit: CNBC / Hanson Robotics / A24 Films)

"I believe that robots will become people," Sophia's creator, David Hanson, told GeekWire. "I believe that in time they will develop the complete capability of a human, to understand us, to have general intelligence and the willful desire to grow and reach their potential the way that humans experience it."

When asked if that potential included love, companionship, and sex, Hanson said he believes it's an inevitable future. But Hanson Robotics, which also builds male robots, is not headed that direction.

Still, many companies are developing technologies to meet the demand for robotic companionship. That demand is largely for female simulations, which may also have something to do with the gender imbalance. *The Atlantic* has an indepth exploration (http://www.theatlantic.com/health/archive/2014/08/a-straight-male-history-of-dolls/375623/) of why the market for these kinds of products is dominated by men.

In a Pew Research study (http://www.pewinternet.org/files/2014/08/Future-of-Al-Robotics-and-Jobs.pdf) canvassing experts in technology and robotics, GigaOm lead researcher Stowe Boyd predicted that sex with robots will become prosaic by 2025.

"Robotic sex partners will be commonplace, although the source of scorn and division, the way that critics today bemoan selfies as an indicator of all that's wrong with the world," he said in the study (http://www.pewinternet.org/files/2014/08/Future-of-Al-Robotics-and-Jobs.pdf).

Japanese manufacturers have made strides in simulating sex with virtual avatars (http://Stowe Boyd,) and real-life robots (http://techcrunch.com/2010/01/09/nsfw-true-companion-debuts-sex-robot-roxxxy/). Tenga, one such company, demoed a virtual reality experience (http://kotaku.com/elaborate-pc-demo-allows-for-virtual-sex-robot-handjob-

1462645304) which combined Oculus Rift and other hardware to look and feel like sex with an anime avatar.

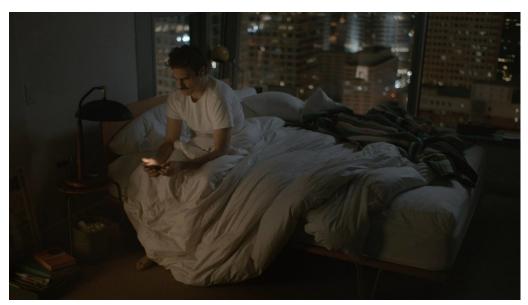
Sex with robots is a big leap from asking Siri to set an alarm, but the fact that we've largely equated artificial intelligence with female personalities is worth examining. There are, after all, few sexualized male robots or avatars.

Is it about adoption?

A less insidious — and perhaps more compelling — theory on why Al is female has to do with user comfort.

Depictions of Al in pop culture tend to fall into two categories: Malevolent and subservient. Male and female. HAL 9000, the sentient computer from *Stanley Kubrick's 2001: A Space Odyssey*, is murderous, controlling, and so iconic that some argue he's the reason engineers have shied away from creating male Al voices

(http://www.cnn.com/2011/10/21/tech/innovation/female-computer-voices/). Samantha, from *Her,* on the other hand, helps Theodore (Joaquin Phoenix) navigate his work life, deal with his divorce, and even engages in some virtual bootknocking.



(http://cdn.geekwire.com/wp-content/uploads/2016/04/1519894_500068536778621_381891032_o.jpg)

Samantha provides Theodore constant comfort in "Her." (Facebook.com/HerTheMovie (https://www.facebook.com/herthemovie))

The contrast between these two archetypes reflects the biased lens through which we see artificial intelligence.

"In terms of how we are trained to relate to particular genders, there's a kind of comfort that is associated with female voices," Habell-Pallan says. "So, more warm, more welcoming, more nurturing, all those associations that are connected with women that are not necessary essential qualities but are socially constructed."

In order to get consumers to adopt new technologies, Habell-Pallan says, their engineers choose female personalities, which are perceived as less threatening. At least, that's the case in most countries. Siri is male, by default, in the UK.

"Americans speak loudly and clearly and are usually in a hurry, so it makes sense for them to have a female voice because it has the pitch and range," technology consultant Jeremy Wagstaff told (http://www.theguardian.com/lifeandstyle/the-womens-blog-with-jane-martinson/2011/oct/21/siri-apple-prejudice-behind-digital-voices). "British people mumble and obey authority, so they need someone authoritative."

Wagstaff's theory is speculative, as Apple has declined to comment on why the UK Siri is male. Generally, experts say that a female voice is easier for consumers to tolerate and communicate with.



(http://cdn.geekwire.com/wp-content/uploads/2016/04/shutterstock_374247160.jpg)

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"The research indicates there's likely to be greater acceptance of female speech," Karl MacDorman, an associate professor at Indiana University's School of Informatics and Computing, told *Wired* (http://www.wired.com/2015/10/whysiri-cortana-voice-interfaces-sound-female-sexism/).

MacDormand, who specializes in human-computer interaction, studied reactions to voices of both genders and found female personalities were preferred.

Market research is likely the main factor that influences tech companies when constructing AI personalities. Customer adoption and trust are key to their success.

Microsoft has already proven that getting users to trust an AI can be a boon for business. Xiaoice, the company's AI chatbot designed for the Chinese market, is wildly successful (http://www.geekwire.com/2015/people-china-love-microsofts-xiaoice-virtual-companion-says-artificial-intelligence/) and not just in user adoption. Many people have formed an emotional bond with the bot and 25 percent have even told her they love her. Tay, the American version, was not embraced so warmly (http://www.geekwire.com/2016/microsoft-debuts-millennial-minded-ai-chat-bot-understand-teens-talk/).

But Xiaoice's popularity has real monetary value. JD.com, a Chinese e-commerce giant, is already using the relationship to sell more products. Users are much more likely to make a purchase when she acts as their "shopping buddy."

Interview: Paul Allen's artificial intelligence guru on the future of robots and humanity (http://www.geekwire.com/2016/geekwire-radio-paul-allens-artificial-intelligence-guru-future-robots-humanity/)

"We've shown that monetization on this channel is much, much higher than regular JD.com channels," Microsoft R&D VP Hsiao-Wuen Hon said. "It will be very interesting to have something that people actually trust."

Gendering Al boils down to business. Customers interpret these Al personalities through the lens of their own biases. Whether its stereotypes about women in service roles, the desire for a female companion, or simply that feeling of trust that a woman's voice instills, female Al personalities are easier for most consumers to adopt. And adoption is the ultimate goal for tech companies that want to make Al mainstream.

"We don't know what the right answers are," said Hanson in a recent panel on robotics and AI (http://www.geekwire.com/2016/robots-sale-price-drop-android-market-open-new-frontiers-ai/). "What I want to do is put tools in the hands of artists and product designers and ask them the questions to make sure we can address people's needs as effectively as possible. And I think the gender relationships with robots is one of those deep questions I don't have a full set of answers for."

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jdrch ⋅ 8 days ago

Except there are numerous counterexamples of male intelligent software agents both in practice and in culture:

- 1) AskJeeves, the first mainstream service to widely claim it could answer natural language questions, is male.
- 2) Watson is presented as being male.
- 3) Wolfram Alpha is gender neutral.
- 4) I daresay most Als in fictional culture are male.

Perhaps we should be celebrating our society associating females with knowledge and logic as a compliment.



Jered → jdrch · 8 days ago

There's a pretty clear difference between the roles assigned to "male" and "female" Als. "Male" Als, like the ones you listed, are about knowledge and authority, while the "female" ones tend to fall into service roles like navigation, setting up calendar appointments, etc. The article doesn't claim there are no "male" Als, instead it argues that "female" Als are more prevalent and the difference between them indicates a not-so-subtle cultural role gendering.

1 ^ V · Reply · Share



tick → Jered · 7 days ago

The role distinction I would agree with, but in terms of more female Als than male Als, I'm not sure. There are so many male Als in entertainment, Data (star trek), daryl, Al, I suspect there are way more male than female.

Now if the article stuck to gender roles, or perhaps made the argument of most recent entertainment being female...



Snek → Jered · 7 days ago

That is still a compliment? You are trusting a "female" All to guide you to your destination, making sure your on time, giving you accurate reports on weather and events?

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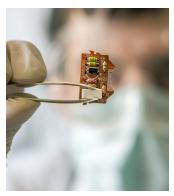
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