

1. **Mark your confusion.**
2. **Show evidence of a close reading.**
3. **Write a 1+ page reflection.**

## Talking to Our Devices

*As voice technology matures, we don't need touch screens and keyboards to send commands.*

Source: TheWeek.com, February 10, 2017

### How does voice technology work?

Computer dictation programs have been around for decades, but in recent years, voice-activated technology has advanced by leaps and bounds, thanks to dramatic strides in artificial intelligence that have made computers much better at understanding the nuances of human speech. AI-powered personal assistants like Apple's Siri and Amazon's Alexa can now answer trivia questions, list appointments on your calendar, or order pizza when asked, thanks to "deep learning" techniques, in which software is trained to suss out meaning and context from millions of recorded examples of commands, jokes, and conversations—most of them found on the internet. Deep learning is also being used to teach AI assistants to speak back to users in ways that sound more natural, and less robotic, than earlier talking machines. As voice activation becomes even more advanced, many technologists believe, it could be as revolutionary as the search engine or the computer mouse, and become the dominant way in which we interact with our devices. Instead of typing on a keyboard or tapping on a screen, we will simply talk to them.

### Who's working on voice control?

Amazon, Apple, Google, and Microsoft are all pouring resources into voice technology, in particular AI assistants. Apple's Siri was released for the iPhone in 2011, but voice tech arguably took off with the introduction of Amazon's Alexa, built into the e-commerce giant's Echo home device, in 2014. Alexa was already in roughly 4 percent of U.S. households in the run-up to the most recent holiday season, when Amazon sold another 10 million Echo speakers. Analysts say that beyond the increasing popularity of home assistants, voice-activation technology on smartphones is growing rapidly. Tech research firm Gartner predicts that 20 percent of smartphone interactions will occur through AI assistants by 2019, and by 2020, the majority of all tech devices will be designed to work with "minimal or zero touch"—just voice.

### What else will voice control be used for?

Smart gadgets for the home that you can speak to as if they were virtual servants. This year's Consumer Electronics Show in Las Vegas saw a proliferation of smart gadgets designed to sync up with voice-activated assistants, including laundry machines, lightbulbs, showerheads, door locks, and air purifiers. LG's smart refrigerator, for example, comes with Amazon's Alexa built in, which means consumers can order groceries via Amazon Fresh just by talking to the fridge. Gadget makers envision a fully connected future smart home that will respond to your every command. Automobiles are another natural fit for hands-free, voice-activated technology. Using Google Assistant, Hyundai is integrating voice-control features into some vehicles that will allow drivers to lock the doors on their car or start the engine.

### What are the limitations?

Though AI assistants can appear to be eerily intelligent, they can't yet engage in meaningful, extended conversations, or think creatively. So to humanize their AI creations, tech companies are trying to infuse them with their own personalities. Google has hired writers from Pixar and

*The Onion* to craft jokes and witty responses for its Assistant technology. Microsoft employs scriptwriters, including children's novelists. But truly creative artificial intelligence is probably decades away. Until then, machines can only respond with what they've been programmed to say. "A lot of work on the team goes into how to make Alexa the likable person people want to have in their homes," says Daren Gill, Alexa's director of product management.

### **Are there downsides to voice control?**

Privacy is a big one. Personal assistants are always "listening" for their "wake word," often their name, and many users have had the irritating experience of accidentally triggering their artificially intelligent companions. When activated, the assistants record users' voices and send the requests to servers for instant analysis. Amazon, for example, keeps a record of its users' queries, though that personal database can be deleted by users online. Naturally, there are concerns that having a listening device in your home is an opportunity for tech companies to gain even more insight into your buying and personal habits. "There are millions of these in households, and they're not collecting dust," says Nikko Ström, a speech-recognition expert who worked on Alexa. "We get an insane amount of data coming in that we can work on."

### **Is artificial intelligence sexist?**

Judging by their voices, Alexa and Siri are women. So is Viv, another AI assistant recently acquired by Samsung. Google Assistant doesn't have a human name, but also uses a female voice. Cortana, by Microsoft, is named after a busty hologram in the video game series Halo, and before it was released, Facebook's text-based assistant "M" was allegedly referred to within the company as Money Penny, after the MI6 secretary who enjoyed a flirtatious rapport with James Bond. Some technologists argue that women's voices are used because they are statistically proven to be more pleasing than men's, helping put users at ease with talking to a computer. But other critics see damaging gender stereotypes making the jump to computer code. "When you think of an assistant, you tend to think of their voice as female," says Michelle Habell-Pallán, an associate professor in gender studies at the University of Washington. "So that's no accident."

### **Possible Response Questions:**

- What are your thoughts about the advancements in artificial intelligence?
- Are you concerned about a loss of privacy? Explain.
- Pick a passage from the article and respond to it.