



Mattel Is Building An Alexa For Kids, Called Aristotle

Technocrats have no sense of ethics or responsibility when using technology. Sure, it sounds good on the surface, but spying on and tracking your children is beyond the pale. No, no, no! □ TN Editor

Her name is Aristotle, and she has eyes, and ears, inside your child's bedroom

"What do you want to ask Google?" my wife asked our toddler after installing Google Home.

"Everything," he responded in the most casual and sincere way. *Duh*. Of course a young human with endless questions would have endless queries for an internet service with endless answers.

But over the course of dinner, as he did his best to yell to the machine, "Okay, Google, how fast do lions run?" and "Okay, Google, how far is our moon?" I realized its flaw: Google's voice assistant understood me perfectly, thanks to endless waves of machine learning from adults asking it questions everyday. And yet it couldn't understand a single question asked by the young, less articulated voice of my son. "Sorry, I can't help with that, yet," Google said.

"She doesn't help!" he lamented with a frown.

My toddler's dinnertime disappointment with Google Home is the exact scenario that Mattel believes it can fix with Aristotle, a \$300 Wi-Fi speaker-based voice assistant that functions like Google Home or Amazon Echo, but is built to live in a child's room—and answer a child's questions—rather than rule the entire home. In this most intimate of spaces, Aristotle is designed to be something far more specific than [the generic voice assistants](#) of today: a nanny, friend, and tutor, intended to both soothe a newborn and help a tween with their foreign language homework. It's an AI to help raise your child.

We tried to solve the other fundamental problem of most baby products, which is they don't grow with you," says Robb Fujioka, senior vice president, chief products officer at Mattel. "So we spent a lot of time investing in how it would age."

To new parents, Mattel is positioning Aristotle as a smart baby monitor. Unlike Google Home or Amazon Alexa, Aristotle is equipped with a camera that streams video through an encrypted cloud connection to your phone. But with partners like Qualcomm (which makes key chips inside most smartphones) and Microsoft (which provides both Bing search intelligence and Cortana AI smarts), Aristotle is a lot more capable than the baby monitors of today. Via an app, parents can program Aristotle to auto-soothe their baby when they wake crying, setting it to glow like a nightlight or play a favorite song. Parents can even program such behaviors to kick in only after a baby cries for five or ten minutes to aid in sleep training. (While I saw a live demonstration of some of these features, I was unable to play with the app myself, so exactly how parents juggle all of this in the UI is a bit unclear.)

Aside from sleeping, Aristotle will also support the logging of all sorts of things parents obsessively track, like wet diapers and feedings, via voice commands or the smartphone app. As you may have guessed, this data logging also introduces all sorts of possibilities for Aristotle automatically replenishing diapers and formula, too. "It looks like you need more diapers, would you like to order more?" Aristotle asked during a demo. "Pampers Swaddlers size two should be arriving on January 22nd." Aristotle will have various retail partners, but it's also compatible—rather than competitive—with Amazon's Alexa service. So in

what Mattel calls “parent mode,” anything a parent would ask Alexa can be asked through Aristotle. They simply begin a question with “Alexa” rather than “Aristotle,” talking to two AIs just as if they’re addressing two different people. But in “child mode,” the Alexa personality options can be deactivated. “You don’t want your child ordering a bunch of diapers or anything else they’re asking for,” says Fujioka.

Indeed, it’s the child-to-Aristotle connection that’s most intriguing about the product. Aristotle is designed to understand voice from toddler up. “It was one of the core things we tried to resolve from the get go. The challenges for many of the voice control device are accents and things like that,” says Fujioka. “But we have a greater challenge—that our core audience often says words completely differently [even from one another].”

Mattel’s solution is personal voice training—which is used by companies like Dragon more extensively than Apple or Google. The child has to recite a brief paragraph of information (presumably, a parent can help somehow with young children who’ve yet to learn to read) to personalize the voice recognition. From there, children can talk to Aristotle, a system that currently has the female voice of a perky, 25-year-old kindergarten teacher, though Mattel imagines Aristotle will eventually be fleshed out to feel less like a conventional voice assistant and more like a specific caricature: a best friend straight out of *Frozen*. Children can ask factoids like who was the 16th president of the United States (Abraham Lincoln, dear reader), or request that Aristotle play a game. In one demo, Aristotle turned her LED various colors and asked the listener to identify them.

It’s a cute bit of fun that points at Aristotle’s greater intent: It’s built for play. After all, Mattel is a toy company. “Imagine what happens with Hot Wheels and Thomas the Train when you have this connected hub,” says Fujioka. “Do you hear sound effects? Can you have greater interactions?” Indeed, Mattel imagines that even cheap, simplistic diecast cars can be loaded with low-cost NFC chips to connect to Aristotle. Meanwhile, Aristotle’s camera opens up all sorts of other possibilities. It can use object recognition to identify flashcards, or even a toy that has no special electronics inside, essentially adding

interactions through the speaker hub to make it feel smarter or more connected. A traditionally crafted American Girl doll could be given a voice—maybe even a chatbot personality—through a combination of object recognition and Mattel’s smart hub speaker.

“Our approach is not going to be one derivation of UI, but multiple approaches,” says Fujioka, alluding to how voice, vision recognition, and even tablet apps can connect kids to the Aristotle platform.

Aristotle won’t be out until June 2017, and many of its features still seem theoretical. So much of its user interface capabilities will come down to core technological competencies: Can it really understand toddler-speak? Will it really distinguish one Hot Wheels car from another? And even with this UI logic in place, all of these capabilities only put more pressure on Mattel to build out a greater digital experience behind its analog toys, which would require untold levels of new investment on Mattel’s part. In fact, Mattel has already had to focus greatly on the privacy and protection of children going online, and the company claims that the security arm of what they’re doing wouldn’t have been capable even two years ago. The hardware itself puts 256bit encryption on all transmissions to Aristotle’s servers—and the way data is handled internally is both [COPAA](#) and [HIPAA](#) compliant.

And just how private a child’s information remains could become particularly slippery. Mattel isn’t going it alone; in fact, it’s opening Aristotle to third party developers, too. Much like Apple’s App Store invites Nintendo to release games, so too will Mattel’s Aristotle allow its roughly 500 partners to build connected toys and apps. In fact, when we’d interviewed Fujioka, Mattel had just inked a deal to support thousands of children’s books on the platform, so that Aristotle might read them a story, all while a tablet projected related art onto the ceiling. More details will come on that in February.

Which is really why, whether it’s a success or not, Aristotle is such interesting entrant in the rapidly commoditized voice assistant market. Companies like Amazon, Apple, and Google are trying to rule voice with totally generic, everything for everyone personalities that ultimately provide us with [lame puns](#) and weather reports. “There is really no point

to competing with them,” says Fujioka. “They want to be the top of the funnel when it comes to search. Our focus around AI is, how do we educate and entertain children?”

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