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# Google's AI is no smarter than a 6-year-old, study says

Chinese researchers also found Google's artificial intelligence technology to be twice as smart as Apple's Siri.

BY **ZOEY CHONG** / OCTOBER 3, 2017 3:40 AM PDT



Google's AlphaGo may have unseated Ke Jie as the Go world champion this year, but the artificial intelligence behind AlphaGo is actually no smarter than a 6-year-old child.



Google's AlphaGo defeated Chinese Go player Ke Jie (left) this year to become the world champion.

VCG via Getty Images

A study published Saturday showed Google's artificial intelligence technology scored best out of 50 systems that Chinese researchers tested against an AI scale they created, CNBC reported Monday. With a IQ score of 47.28, Google's AI was almost twice as smart as Apple virtual assistant Siri, which scored 23.94.

AI systems have developed so quickly that they've been able to act as assistants, take exams and even outperform us at strategy games. But the new results may downplay the concerns of people uneasy about AI's rapid progression.

To evaluate how smart an intelligent system is (or has become), its ability to "acquire, master, create and feedback knowledge"

needs to be tested, wrote the researchers. In 2014, the IQ of 50 AI systems was rated. The systems included Google's AI, Siri and Chinese search engine Baidu. Three humans, ages 18, 12 and 6, were also rated. When the researchers tested the AI systems again in 2016, they found that Google was the smartest and improved the fastest (from an IQ of 26.5 to 47.28), but it wasn't enough to beat even a 6-year-old, who came in with a score of 55.5.



Notable "AI worriers" include physicist Stephen Hawking and Tesla Motors and SpaceX CEO Elon Musk, who both won the 2015 Luddite Award and were branded AI "alarmists." Hawking is a firm believer that AI could pose a real danger depending on who controls it and argues that it could outsmart us and end humanity. Musk agrees there's significant risk and asked for regulation in July, going as far as to suggest AI could start World War III. Alibaba founder and executive chairman, Jack Ma, predicts that companies could be helmed by AI systems in the next three decades.

Dr Lin Hsuan-Tien, chief data scientist of Taiwan-based AI startup, Appier, agrees AI systems have yet to reach the intelligence of even a six-year-old, but possess extraordinary learning capabilities.

"Scientists believed AI was capable of lots of things but were disappointed by failures created out of unrealistic goals," Dr Lin tells CNET in an email.

"Many AI researchers instead started to focus on 'weak AI,' which [tackles] specific problems, such as image recognition or playing the game of Go. Weak AI has proven that its ability to learn surpasses the capabilities of most human beings and is able to achieve super-human performance levels."

Google declined to comment.

First published, Oct. 3, 3:40 a.m. PT.

**Update, 11:41 p.m. PT:** Adds comment from Appier.

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## MOBILE

# VR promised us the future. Too bad we're stuck in the present

Oculus, the VR company that Mark Zuckerberg bought for more than \$2 billion, has a problem: It's struggling to convince people to buy its gear.

BY IAN SHERR / OCTOBER 10, 2017 12:14 PM PDT



James Martin/CNET

Are you going to buy a virtual reality headset?

Seriously. Are you?

I'm not the only one who wants to know. The VR industry is having an awkward moment. Though headset makers have spent years and billions of dollars promising world-changing technology, relatively few of us have actually lined up to buy them.

That sales problem is likely to be among the things discussed at the fourth annual conference for one of the darlings of VR, Oculus, which Facebook bought three years ago for as much as \$3 billion. More than 2,500 app and game makers are expected to attend its annual developers conference, called Oculus Connect, starting Wednesday in San Jose, California.

Facebook's Oculus VR division promises discussions on how health care, movies and video games are adapting to this still nascent technology. One panel will explore how the disability community can benefit from VR gear and presentations.

The talk underscores the potential of VR. Yes, the high-end headsets are bulky and need special setup and long thick cables tethered to big PCs. They're expensive too, with Oculus' Rift costing \$599 and requiring a \$500 PC before you can get set up. But after you put on those VR goggles -- basically strapping a screen inches from your eyes -- your brain can be tricked into believing you've been transported to whatever computer-generated world you want.

You could be in the middle of a massive space battle or dive to the bottom of a shipwreck and come face to face with a blue whale. Or you could watch cartoon bunnies hack your brain. Maybe you want to meet people from around the world and chat while hanging out on a idyllic beach.

For some people, VR is more than that. Rae O'Neil, a 34-year-old IT worker from Nova Scotia, had always been fascinated with VR. But it was her grandfather's reaction to the Rift that made its promise clear.

In his 80s and disabled after losing a leg a few years prior, he put on the headset and began using an app called Blue Marble, which lets you float in space, looking at planets while music plays in the background.

"He felt like he was actually in space," she recalled. The experience brought a tear to her grandfather's eye.

Those kind of otherworldly experiences helped convince Facebook CEO Mark Zuckerberg to buy Oculus after trying a prototype of the headset back in 2014.

"Virtual reality was once the dream of science fiction," Zuckerberg wrote on his social network after buying the startup. Back then, he said, VR had the potential to remake everything from education to medicine to communications, just like the phone and computer had done in their day. "The future is coming."

It still is.



President Barack Obama, in 2016, watches a VR film captured during his trip to Yosemite National Park.

Pete Souza/The White House

## From hype to trough

Oculus' flagship Rift headset hit store shelves in March 2016, with so much hype leading up to the launch that even then-President Barack Obama gave it a whirl as part of a virtual tour of the White House.

But a lot of people still haven't bought in.

Facebook's been tight-lipped about shipments, but several people familiar with Oculus said that fewer than a quarter million Rift headsets were sold during their first year on the market. Facebook declined to comment on Rift sales.

But the company signaled its frustration with the anemic interest when it pulled Rift demo stations from hundreds of Best Buy stores around the country in February.

Then, the social media giant cut the headset's price.

Twice. It was being sold for \$400, a third

less than its original price, for six weeks over the summer before jumping back up to \$499.

34-sony-playstation-vr-2016.jpg

The PlayStation VR is backed by one of the biggest game companies in the world.

Sarah Tew/CNET

The company's chief competitors, Sony and HTC, followed suit. The PlayStation VR dropped to \$400 from \$500, and the Vive dropped to \$599 from \$799 all in the past three months.

The price cuts were enough to juice demand for Oculus, two people familiar with the company said. Though current total tallies couldn't be learned, at least a million units are estimated to have been sold.

Sony, by comparison, says it sold more than a million units of the PlayStation VR as of June, just eight months after going on sale. HTC didn't respond to a request for sales data.

The question of demand is causing some VR game and app developers to worry about their future.

"It's not happy sunshine and rainbows," said James Iliff, co-founder and creative chief at VR game maker Survios, which made early hit shooters Zombies on the Holodeck and Raw Data, one of the first VR games to rack up \$1 million in sales. "We are very much in a trough of disillusionment."

That "trough of disillusionment" comes from the "Hype Cycle," a theory popularized by research firm Gartner and whose stages

have become mantra in Silicon Valley. The goal of the Hype Cycle is to chart the expectations and emotions around products as they're introduced, innovated upon and eventually adopted -- or not.

In the beginning, there's the "Innovation Trigger," when new tech is introduced. Then hype and excitement begin to build until the new thing eventually hits the "Peak of Inflated Expectations." That's followed by the crash into the "Trough of Disillusionment." (Gartner says VR is nearly out of that stage and headed into the "Slope of Enlightenment," just before mass adoption.)

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The future is coming.

Mark Zuckerberg

Iliff and his co-founders worked on early VR research before Oculus was founded. He felt expectations were getting too high, particularly in the media, and expected a backlash of sorts. So, he's prepared.

This month, for example, Survios made Raw Data more widely available for Oculus, Vive and PlayStation VR. Survios is also looking beyond VR for customers, redesigning Raw Data to work in arcades as well.

"The game industry is hard, it is a tough industry, and that is not going away," he said. "That's the same for VR."

## Seeking shelter

On a Friday in September, Paul Bettner was giving a speech in San Francisco at VRDC, another VR developer conference. The title of his talk was "How to Be a Successful VR Game Studio."

screenshot03.jpg

Paul Bettner, CEO of Playful, says his latest Lucky's Tale game is designed to be "VR friendly," but he's not wedded to the tech.

Playful

As CEO of Playful, one of the first high-profile VR game makers and co-founder of the company behind the hit social game Words With Friends, Bettner wanted to share his perspective.

One of the most important slides in his presentation: "Don't be a VR game studio."

"The point I was trying to make in that talk was to pursue a high-level vision," Bettner said. While VR is a medium to make great games, companies shouldn't be focused just on making great games for VR. "It's a means to an end, not the end," he said.

He's taken his own advice. When the Rift went on sale last year, it included Playful's [Super Mario 64](#)-like adventure game, [Lucky's Tale](#), bundled for free. This year, he's partnered with [Microsoft](#) to publish the sequel, [Super Lucky's Tale](#), to work with the company's Xbox video game console when it's released in November.

Bettner said he hasn't given up on VR. He's just not wedded to it.

"It's intoxicatingly amazing how magical the technology is, but we can't fall in love with that," he said. "We have to fall in love with our mission to bring the experience to our players."

## Path forward

The most exciting changes in the VR industry in the past year haven't come from the game industry but from phone makers.

giphy-apple-ar

Enlarge Image 

Augmented reality tech, that blends computer images and the real world, has many developers excited.

CNET

Over the summer, [Apple](#) and [Google](#) announced new technologies called [ARKit](#) and [ARCore](#), respectively, that are designed to help iPhones and iPads or any device powered by Google's Android software marry computer-generated images with the real world.

A \$2.99 app, [Star Guide AR](#), highlights stars and constellations in the sky once you point your phone at them. Another, [Ikea Place](#), previews furniture in your home with a tap. Walk around your living room and you can see the furniture you placed while looking through the screen on your phone. So far, both are available only for the [iPhone](#).

"The excitement is catching, and one could easily imagine 'There's an AR app for that' could become a common phrase," wrote CNET's [Sean Hollister](#) and [Scott Stein](#) back in August.

App developers I spoke with say they're excited by augmented reality and believe it may help spur people to eventually buy VR systems as well. That's because AR, which was used so effectively in [last year's Pokemon Go craze](#), may get people



comfortable with more immersive apps, which is part of the essence of VR.

"We're finally at the point where I think the technology has caught up to make good user experiences," said Scott Montgomerie, head of Scope AR, which makes training simulators. For businesses, overlaying information on the real world can help train employees on multimillion-dollar equipment like oil rigs and rock drills.

That's part of why Microsoft's focusing on both AR and VR. In an October update to its Windows 10 software for PCs, the company is partnering with device makers like Lenovo, Dell, HP, Acer and Samsung to create headsets based on its designs. They'll sell for as little as \$300 each when they begin hitting store shelves Oct. 17.

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We are very much in a  
trough of disillusionment.

James Iliff

"There's a bit of a waiting game," said Brian Blau, an analyst at Gartner who once worked for a VR company. "Without a vibrant running ecosystem, it's hard for parts of it to do their best."

That's also why developers will trek to Oculus Connect this week, hoping whatever Facebook shows off will spark excitement.

That new stuff, though, will need to clear a pretty high bar to persuade people like Sam Le to buy one. The 31-year-old wedding photographer from Austin, Texas, is a hardcore gamer. He's bought each video game console at launch, be it an Xbox, PlayStation or Nintendo device, and he owns a powerful PC to run his favorite games. He spends hours a each day playing alone and with friends.

After trying HTC's headset last year at the SXSW music and entertainment festival, Le decided to take the plunge and buy a PlayStation VR. He returned it a month later and ate the \$80 he spent on the games.

The experiences were exciting but not enough to justify the price. "It's a question of which is worthy of my investment?" he said. None of his gaming friends has bought a VR system either.

Le said he's willing to buy the headsets at some point, but they need to be worth it. "I've waited this long," he said. "I can wait another year."

That's not the answer Oculus and its developers want to hear.

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