



Wednesday to the American Psychological Association, coinciding with the association's annual meeting in San Francisco.

"There are powerful psychology principles and technology that are being used against kids in ways that are not in their best interests," said Josh Golin, executive director of the Campaign for a Commercial-Free Childhood.

That technology uses computers to help figure out what motivates people and influence their online behavior. It's built on age-old tenets of behavioral psychology that marketers and advertisers have long used to get people to buy their products. The difference is smartphones are ubiquitous and unlike human marketers, they don't get tired, said B.J. Fogg, a behavioral scientist at Stanford University who has been called the technology's pioneer.

Fogg said he has aimed to use persuasive tech to enhance people's lives. But he also said he has long warned that it has a "dark side," including potential loss of privacy and the potential for encouraging behavior that isn't in users' best interests.

The letter to the psychology association cites a recent study that found that teen girls who spend a lot of time on digital devices, including on social media, are at risk for depression and suicidal behaviors. That study couldn't show whether depressed girls might be more prone to using social media than other teens.

The letter also notes evidence that some teen boys overuse video games "at the expense of obtaining real-world competencies," including college educations and jobs.

"Families don't understand why their kids are so strongly attracted and pulled to these devices," said Richard Freed, a Walnut Creek, California, psychologist who signed the letter. He said the World Health Organization's decision in June to declare excessive video gaming an addiction shows that the problem is real.

Under Fogg's model, technology can change a person's behavior by tapping into hard-wired motivations, simplifying the activity and getting people to perform it with a "well-timed" trigger. That could mean an app prompting a person to go running or it could be an alert persuading someone to spend more time on social media based on their innate desire to win acceptance and avoid social rejection.

It's not just the big tech firms. BuzzFeed reported Tuesday, based on a confidential company memo, that founders of a startup recently acquired by Facebook boasted of using a "psychological trick" — custom social media profiles and mysterious calls to action — to get high schoolers to download a polling app. Facebook later shut down the app.

In job postings, big tech companies have sought psychologists and people with psychology training for research into user experiences. Microsoft's Xbox user research division is led by psychologists. Amazon looks for hires who "geek out over user research, psychology, ethnography." Google's preferred qualification for some positions includes a doctorate in experimental psychology.

"We strive to learn and understand our users' needs, behaviors, and emotions to yield insights that inform product strategy and

guide the design of the experiences we create," says one Google job posting online this week.

Facebook and Google didn't return requests for comment Tuesday on whether they use psychological persuasion techniques to build digital products for children. Apple said Wednesday that it doesn't. Microsoft and Amazon declined to comment.