Tech products can turn uncool when they become too popular

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In the tech world, coolness takes more than just good looks. Technology users must consider a product attractive, original and edgy before they label those products as cool, according to researchers.

That coolness can turn tepid if the product appears to be losing its edginess, they also found.

"Everyone says they know what 'cool' is, but we wanted to get at the core of what 'cool' actually is, because there's a different connotation to what cool actually means in the tech world," said S. Shyam Sundar, Distinguished Professor of Communications, Penn State, and co-director of the Media Effects Research Laboratory.

The researchers found that a cool technology trend may move like a wave. First, people in groups—subcultures—outside the mainstream begin to use a device. The people in the subculture are typically identified as those who stand out from most of the people in the mainstream and have an ability to stay a step ahead of the crowd, according to the researchers.

Once a device gains coolness in the subculture, the product becomes adopted by the mainstream.

However, any change to the product's subculture appeal, attractiveness or originality will affect the product's overall coolness, according to the researchers, who report their findings in the current issue of the

International Journal of Human-Computer Studies. If a product becomes more widely adopted by the mainstream, for example, it becomes less cool.

"It appears to be a process," Sundar said. "Once the product loses its subculture appeal, for example, it becomes less cool, and therein lies the challenge."

The challenge is that most companies want their products to become cool and increase sales, Sundar said. However, after sells increase, the products become less cool and sales suffer. To succeed, companies must change with the times to stay cool.

"It underscores the need to develop an innovation culture in a company," Sundar said. "For a company to make products that remain cool, they must continually innovate."

However, products that have fallen out of favor can have coolness restored if the subculture adopts the technology again. For example, record players, which were replaced in coolness by digital files, are beginning to increase in popularity with the subculture, despite their limited usefulness. As a result, participants in a survey considered the record players as cool.

The researchers asked 315 college students to give their opinions on 14 different products based on the elements of coolness taken from current literature. Previously, researchers believed that coolness was largely related to a device's design and originality.

"Historically, there's a tendency to think that cool is some new technology that is thought of as attractive and novel," said Sundar. "The idea is you create something innovative and there is hype—just as when Apple is releasing a new iPhone or iPad—and the consumers that are

standing in line to buy the product say they are buying it because it's cool."

A follow-up study with 835 participants from the U.S and South Korea narrowed the list to four elements of coolness—subculture appeal, attractiveness, usefulness and originality—that arose from the first study. In a third study of 317 participants, the researchers found that usefulness was integrated with the other factors and did not stand on its own as a distinguishing trait of coolness.

"The utility of a product, or its usefulness, was not as much of a part of coolness as we initially thought," said Sundar.

Such products as USB drives and GPS units, for example, were not considered cool even though they were rated high on utility. On the other hand, game consoles like Wii and X-box Kinect were rated high on coolness, but low on utility. However, many products ranking high on coolness—Macbook, Air, Prezi Software, Instagram and Pandora—were also seen as quite useful, but utility was not a determining factor.

"The bottom line is that a tech product will be considered cool if it is novel, attractive and capable of building a subculture around it," said Sundar.

Sundar worked with Daniel J. Tamul, assistant professor of communications, Indiana University-Purdue University, Fort Wayne, and Mu Wu, graduate student, Penn State.

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