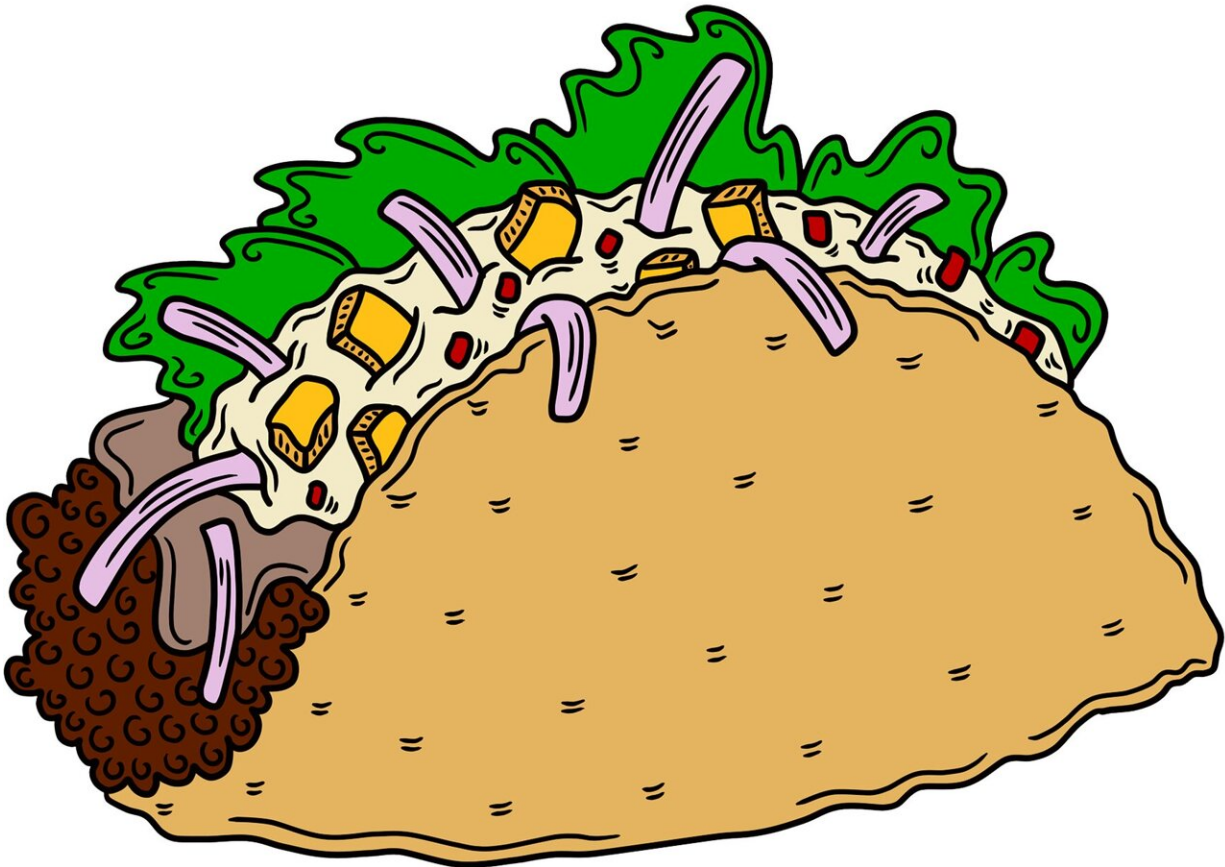


# What an animated taco reveals about curiosity and patience

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Credit: Pixabay/CC0 Public Domain

Curiosity paradoxically increases people's patience for an answer, while simultaneously making them more eager to hear it, finds a new study by

Duke neuroscientists.

The research might help teachers and students alike by describing a side of curiosity that encourages us to stay engaged instead of seeking immediate relief.

Die-hard fans of the Hulu show "The Bear" are left on the edge of their seats each Sunday, wondering what's going to happen in the scrappy Chicago hotdog shop next week. But the new study from Duke helps explain why viewers may choose to avoid spoilers despite the urge for resolution.

"When we think of curiosity, we often think of this need for immediate answers," said Abby Hsiung, Ph.D., a postdoctoral researcher at the Duke Institute for Brain Sciences and lead author of the new research paper. "But we found that when people were more curious, they were actually more willing to wait."

[The findings](#) appeared October 16 in the *Proceedings of the National Academy of Sciences*.

"When we watch TV shows or football games, we're watching that information evolve over time, uncertain about how it's all going to end," said Hsiung. "I wanted to know if higher curiosity would push people to seek or to avoid getting an immediate 'spoiler.'"

Hsiung drew inspiration from short cooking videos that are popular on Instagram and TikTok.

"These videos caught my attention because even though they're so short, they manage to develop a narrative and suspense, so that you're invested and curious about how the lasagna will all come together."

So Hsiung got out her digital paintbrush and made a series of 30-second animated line drawing videos, that like the cooking clips, eventually ended up as something highly recognizable, like a taco or a dog.

More than 2,000 adults from across the U.S. then watched 25 of these short line-drawing videos online. Participants in Hsiung's study were asked along the way how curious they were, how they felt, and to guess what the drawing would become. Viewers also had a "spoiler" button to skip ahead to see the final drawing.

Hsiung and her team were surprised to find that when people were curious, they withheld from hitting the "spoiler" button and kept watching the drawings unfold. It was when people were less curious that they tended to opt for an instant answer.

"Curiosity didn't just motivate getting answers, it increased the value of the journey itself," said Alison Adcock M.D., Ph.D., a professor of psychiatry and [behavioral sciences](#) at Duke and senior author of the new report.

The study also found that curiosity increased at different stages of watching these videos.

"We saw higher curiosity during moments where it seemed like the drawing could turn into anything and also when participants were starting to really home in on a single answer," said co-author Jia-Hou Poh, Ph.D., a postdoctoral researcher at the Duke Institute for Brain Sciences.

Curiosity also stirred up people's feeling of joy, explaining why people kept watching the line drawing video even when they could just hit a button to get the [answer](#) right away.

"This helps explain why people often avoid spoilers," said Scott Huettel,

Ph.D., a fellow senior author on the study and Duke professor of psychology and neuroscience. "Knowing the end of a new TV series, for example, can remove the enjoyment of watching the plot unravel."

Hsiung and her team suggests that aside from watching TV shows, stoking curiosity might also help enhance motivation in the classroom to potentially improve learning. A recent study from Dr. Adcock and Poh found that increasing [curiosity can enhance memory by "readying" the brain for new information](#). This latest finding highlights that curiosity can also bolster persistence throughout a learning journey, which is often needed for deep understanding.

"By understanding what sparks [curiosity](#), especially how it arises from our own ideas, we can find more ways to cultivate it and benefit from the learning it promotes," said Dr. Adcock.

**More information:** Abigail Hsiung et al, Curiosity evolves as information unfolds, *Proceedings of the National Academy of Sciences* (2023). [DOI: 10.1073/pnas.2301974120](https://doi.org/10.1073/pnas.2301974120)

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