

Science sheds light on shaking your holiday presents

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As holidays near, people are sneaking shakes of their presents to try to figure out what they're getting. But present shakers might be a little less sly than they think. New research shows it's incredibly easy for people watching others shake boxes to tell what they're up to.

"There are few things more delightful than seeing a child's eyes light up as they pick up a present and wonder what might be inside," said author Chaz Firestone, a Johns Hopkins University assistant professor of psychological and [brain sciences](#) who investigates how vision and thought interact. "What our work shows is that your mind is able to track the information they are seeking. Just as they might be able to tell what's inside the box by shaking it around, you can tell what they are trying to figure out when they shake it."

In a series of experiments, the researchers asked hundreds of people to watch others shake boxes. It took just [seconds](#) for most of them to know whether the box shaker was trying to learn either how many things were in the box or the shape of things in the box. Although the boxes weren't presents, and the contents weren't [smart watches](#), Legos or Red Ryder BB guns, if they were, the results would have been exactly the same, the researchers say.

"The way you would shake a present to find out if it's one thing or many things, or if it's a small thing versus a big thing, can be subtly different," said lead author Sholei Croom, a Johns Hopkins graduate student. "But people are amazing at picking up on such subtleties."

The deceptively simple work by Johns Hopkins University perception researchers is the first to demonstrate that people can tell what others are trying to learn just by watching their actions. [The work](#), newly published just in time for the [holidays](#) in the journal *Proceedings of the National Academy of Sciences*, reveals a key, yet neglected, aspect of human cognition.

"When we present this work we always talk about Christmas presents," Firestone said. "It's the perfect real-life example of our experiment."

More information: Sholei Croom et al, Seeing and understanding epistemic actions, *Proceedings of the National Academy of Sciences* (2023). [DOI: 10.1073/pnas.2303162120](https://doi.org/10.1073/pnas.2303162120)

Provided by Johns Hopkins University

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