

Simple experiment shows chimpanzees can prepare for alternative outcomes of events

June 21 2023, by Bob Yirka



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An international team of psychologists reports that chimpanzees are capable of preparing themselves for alternative outcomes of events. In their study, reported in the journal *Biology Letters*, the group conducted

experiments with multiple chimpanzees.

Prior research has shown that humans are capable of preparing themselves for the possibility of different outcomes for a single upcoming event. People will carry with them both sunscreen and an umbrella, for example, to ensure they are prepared for both sunshine and rain. This ability develops early in humans, though there is disagreement in the psychology community regarding when it begins.

Some suggest it begins as early as one to three years old. So the researchers speculated that chimpanzees might have similar abilities since their intellects have been compared to children of similar age. To find out if that was the case, they devised a simple experiment involving several chimpanzees.

The [chimpanzees](#) were all nearly wild—they live on a 95-acre sanctuary in Uganda. The researchers showed the [chimp](#) subjects one of two kinds of cylindrical tube setups. The first was a straight tube, resembling a large, clear toilet-paper roll. The second was the same, except it was shaped like a Y. Set beneath the tube was a shelf containing a treat.

For the Y-shaped tube, there were two such shelves for the two openings. All the shelves were placed on hinges that allowed the shelf to tip, leading to the possibility of the treat falling to the ground, where the chimp would not be able to retrieve it. The researchers then dropped rocks through the tubes, causing the shelf to tip, allowing the treats to fall to the ground.

To prevent the treats from falling, all a chimp had to do was reach over and hold the shelf still before the rock was released. In the case of the single tube, it was obvious where the rock would fall; thus, the chimp only needed to hold the shelf where it would land.

But with the Y-shaped tube, it was impossible to predict which shelf it would hit—to ensure the treat did not end up on the ground, the chimp had to hold both shelves. The experiment was designed to test whether the chimps would work this out on their own.

They found that all the chimps held the correct shelf for the straight tube and that 13 of 15 of them held both shelves to cover their bases, so to speak, with the Y-shaped tube, ensuring that the treats would not end up on the ground, which meant they got to eat them.

More information: Jan M. Engelmann et al, Chimpanzees prepare for alternative possible outcomes, *Biology Letters* (2023). [DOI: 10.1098/rsbl.2023.0179](https://doi.org/10.1098/rsbl.2023.0179)

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Citation: Simple experiment shows chimpanzees can prepare for alternative outcomes of events (2023, June 21) retrieved 28 April 2024 from <https://phys.org/news/2023-06-simple-chimpanzees-alternative-outcomes-events.html>

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