

Humans can recognize and understand chimpanzee and bonobo gestures

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Chimpanzees use lots of different gestures to communicate, like this “reach” which they usually use to ask for food. Participants selected the right meaning for the reach gesture and were overall able to understand ape gestures. Credit: Catherine Hobaiter (CC-BY 4.0, creativecommons.org/licenses/by/4.0/)

Humans retain an understanding of gestures made by other great apes, even though we no longer use them ourselves, according to a study by Kirsty E. Graham and Catherine Hobaiter at the University of St Andrews, Scotland, publishing January 24 in the open access journal *PLOS Biology*.

The discovery of [gestures](#) used by great apes provided the first evidence of intentional communication outside [human language](#), and more than 80 such signals have now been identified. Many of these gestures are shared across non-[human](#) apes, including distantly related apes such as chimpanzees and orangutans. However, despite humans being more closely related to chimpanzees and bonobos, these ape gestures are no longer thought to be present in [human communication](#).

Researchers tested people's understanding of the 10 most common gestures used by chimpanzees (*Pan troglodytes*) and bonobos (*Pan paniscus*) using an online game. Over 5,500 participants were asked to view 20 short videos of ape gestures and select the meaning of the gesture from four possible answers.

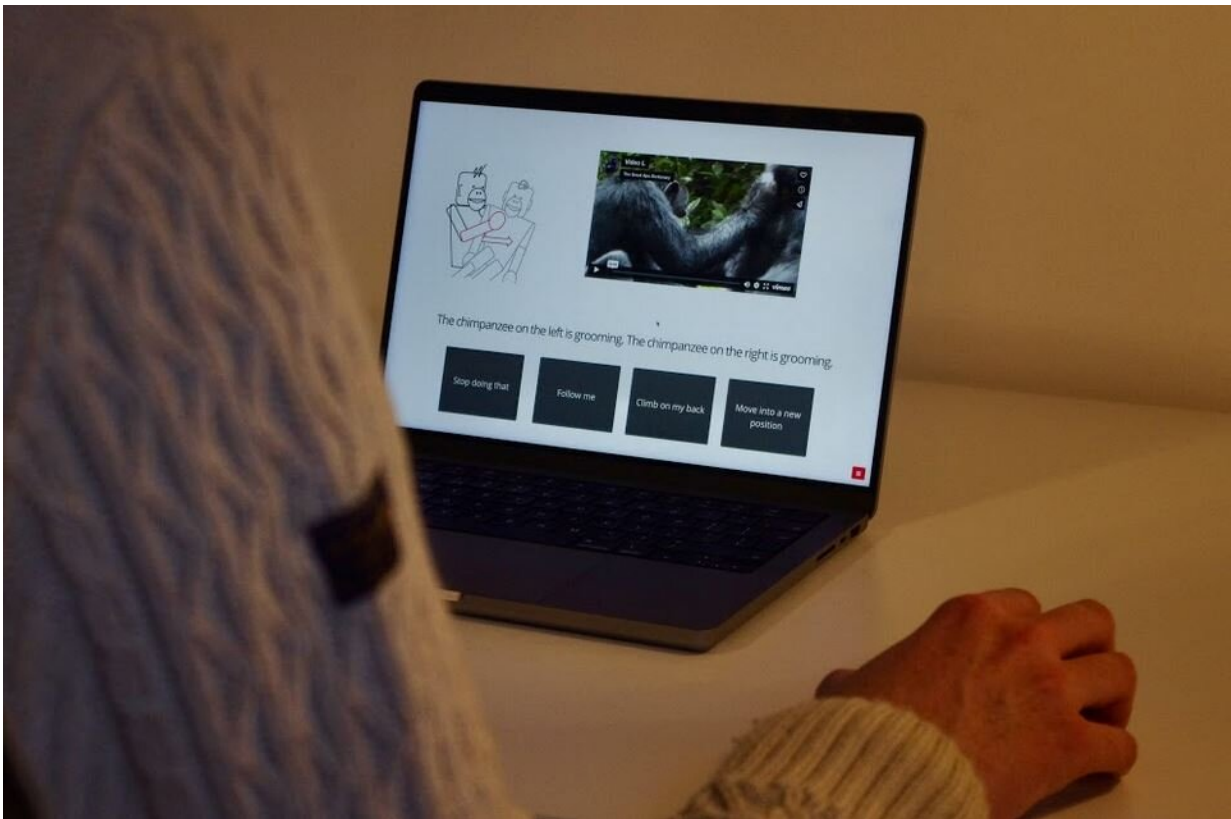
They found that participants performed significantly better than expected by chance, correctly interpreting the meaning of chimpanzee and bonobo gestures over 50% of the time. Providing participants with contextual information about what the apes in the video were doing only marginally increased their [success rate](#) in interpreting the meaning of the gesture.

Video playback experiments have traditionally been used to test language comprehension in [non-human primates](#), but this study reversed the paradigm to assess humans' abilities to understand the gestures of their closest living relatives for the first time.

The results suggest that although we no longer use these gestures, we

may have retained an understanding of this ancestral communication system. The authors say that it remains unclear whether our ability to understand specific great ape gestures is inherited, or whether humans and other great apes share an ability to interpret meaningful signals because of their [general intelligence](#), physical resemblance, and similar social goals.

The authors additionally include [a link](#) where people can take a quiz version of the experiment (no data are collected).



The online experiment could be completed on a laptop or tablet. A little cartoon showed participants what gesture they were looking for in the video and half of participants were told what the apes were doing. Credit: Kirsty E. Graham (CC-BY 4.0, creativecommons.org/licenses/by/4.0/)

"All great apes use gestures, but humans are so gestural—using gestures while we speak and sign, learning new gestures, pantomiming etc.—that it's really hard to pick out shared great ape gestures just by observing people," says Graham.

"By showing participants videos of common great ape gestures instead, we found that people can understand these gestures, suggesting that they may form part of an evolutionarily ancient, shared gesture vocabulary across all great ape species including us."

More information: Towards a great ape dictionary: Inexperienced humans understand common nonhuman ape gestures, *PLoS Biology* (2023). [DOI: 10.1371/journal.pbio.3001939](https://doi.org/10.1371/journal.pbio.3001939)

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