

Study finds chimps can use gestures to communicate in their hunt for food

January 17 2014, by Ann Claycombe



Common chimpanzee in the Leipzig Zoo. Image credit: Thomas Lersch, via Wikipedia.

(Phys.org) —Remember the children's game "warmer/colder," where one person uses those words to guide the other person to a hidden toy or treat? Well, it turns out that chimpanzees can play, too.

Researchers at Georgia State University's Language Research Center examined how two language-trained chimpanzees communicated with a human experimenter to find food. Their results are the most compelling evidence to date that primates can use [gestures](#) to coordinate actions in pursuit of a specific goal.

The team devised a task that demanded coordination among the chimps and a human to find a piece of food that had been hidden in a large

outdoor area. The human experimenter did not know where the food was hidden, and the chimpanzees used gestures such as pointing to guide the experimenter to the food.

Dr. Charles Menzel, a senior research scientist at the Language Research Center, said the design of the experiment with the "chimpanzee-as-director" created new ways to study the primate.

"It allows the chimpanzees to communicate information in the manner of their choosing, but also requires them to initiate and to persist in communication," Menzel said. "The chimpanzees used gestures to recruit the assistance of an otherwise uninformed person and to direct the person to hidden objects 10 or more meters away. Because of the openness of this paradigm, the findings illustrate the high level of intentionality chimpanzees are capable of, including their use of directional gestures. This study adds to our understanding of how well chimpanzees can remember and communicate about their environment."

The paper, "Chimpanzees Modify Intentional Gestures to Co-ordinate a Search for Hidden Food," has been published in *Nature Communications*. Academics at the University of Chester and University of Stirling collaborated on the research project.

Dr. Anna Roberts of the University of Chester said the findings are important.

"The use of gestures to coordinate joint activities such as finding food may have been an important building block in the evolution of language," she said.

Dr. Sarah-Jane Vick of the University of Stirling added, "Previous findings in both wild and captive chimpanzees have indicated flexibility in their gestural production, but the more complex coordination task

used here demonstrates the considerable cognitive abilities that underpin chimpanzee communication."

Dr. Sam Roberts, also from the University of Chester, pointed out the analogy to childhood games.

"This flexible use of pointing, taking into account both the location of the [food](#) and the actions of the experimenter, has not been observed in [chimpanzees](#) before," Roberts said.

More information: "Chimpanzees modify intentional gestures to coordinate a search for hidden food." Anna Ilona Roberts, Sarah-Jane Vick, Sam George Bradley Roberts, Charles R. Menzel. *Nature Communications* 5, Article number: 3088 [DOI: 10.1038/ncomms4088](https://doi.org/10.1038/ncomms4088). Received 04 July 2013 Accepted 10 December 2013 Published 16 January 2014

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