

Here's one I made earlier: Chimps learn from watching videos

July 1 2009



A still from the demonstration video used to teach chimpanzees to construct a tool. Credit: E Price

(PhysOrg.com) -- Lots of species have been discovered to use simple tools. Some birds use twigs to pull grubs out of their hiding places, and chimpanzees will strip leaves from branches to fish for termites - but is making a tool from separate parts simply a stretch too far for a non-human species?

An international team of researchers led by Elizabeth Price and Professor Andrew Whiten at the University of St Andrews have found that this is not the case as they discovered that [chimpanzees](#) can learn to

make a tool long enough to capture out-of-reach food.

In their paper published today (Wednesday July 1st), Price and Whiten proved that chimps could learn and apply the skill by watching a video of a chimpanzee they had earlier trained to demonstrate the construction process.

Chimpanzees at a University of Texas primate centre were presented with an out of reach grape. Some [chimps](#) were then shown a video of another chimpanzee expertly slotting one stick into another to create a rake, and then using the tool to obtain the food.

Others were shown videos with less information, for example, a chimpanzee using a readymade tool. The researchers found that chimpanzees who watched the full video demonstration were able to copy what they saw and make the tools themselves.

In a follow up test, the grapes were sometimes put within reach, making the use of a longer tool unnecessary. The chimpanzees that had learned the skill by watching the full video persisted in making the rake, which in the new scenario was more awkward to use.

However, a few individual chimpanzees who had not seen the full demonstration but still managed to make a tool, did not do so when the grape was close enough to reach without help.

Lead researcher Elizabeth Price commented, "These results are important not only because they provide the first evidence that chimpanzees can socially learn how to construct tools, but also because they suggest that [social learning](#) can have a potent effect on how an individual approaches related problems later."

These surprising results suggest that learning from others - or 'social

learning' - can lead to a less flexible approach to novel situations. The researchers are now planning to discover the extent to which our own species is vulnerable to a similar effect.

Ms Price continued, "Social learning plays a major role in the spread of complex technologies in humans, and the extent to which behaviour is faithfully replicated may tell us much about the cultural abilities of other species such as chimpanzees. Our results show that in some situations, social learning can have powerful effects in chimpanzees. If captive chimpanzees are cognitively savvy enough to innovate and socially learn complex tool construction to solve problems, the lack of such behaviour in the wild is unlikely to result simply from cognitive limitations."

The research has been published electronically in *Proceedings of the Royal Society B* today (Wednesday 1st July).

Provided by University of St Andrews

Citation: Here's one I made earlier: Chimps learn from watching videos (2009, July 1) retrieved 2 May 2024 from <https://phys.org/news/2009-07-earlier-chimps-videos.html>

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