

Crows do not plan their clever tricks

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Credit: Sarah Jelbert

New Caledonian crows can spontaneously solve problems without planning their actions, a study published today in *Proceedings of the Royal Society B* reveals.

Animals rarely solve problems spontaneously, yet certain [bird species](#) are able to rapidly gain access to food hung on the end of a long string, by repeatedly pulling and then stepping on the string. For over 400 years it has been a mystery as to how birds spontaneously solve this problem. Researchers from the University of Auckland found that such problem solving is not created by birds first solving the problem in their heads.

Rather, problem solving occurs spontaneously as the bird makes the food on the end of the string move.

In the experiment, crows were shown two ropes, each with a piece of meat tied to the far end. One rope was continuously attached to the meat and the other was visibly broken by a 10cm gap, so only the continuous rope would give the reward when pulled. However, crows showed no significant preference for choosing to pull on the continuous rope.

"Crows and [parrots](#) have long been known to solve the 'string pulling problem' immediately. What our new research shows is that these performances are due to the [birds](#) being able to react in the moment to the effects of their actions, rather than being able to mentally plan out their actions," Dr Alex Taylor, lead author on the study explains.

"Thus string pulling appears to be based on a different type of [intelligence](#) than we had thought. Instead of the crows using sophisticated cognitive software to model the world, it appears their neural hardware is sufficiently well connected and/or specialised for them to react to the effect of their actions immediately. This allows them to solve problems that other bird species cannot.

More information: Taylor, A., Knaebe, B., Gray, R. An end to insight? New Caledonian crows can spontaneously solve problems without planning their actions. *Proceedings of the Royal Society B*. http://dx.doi.org/10.1098/rspb.2012.1998?utm_source=royalsociety-org&utm_medium=referral&utm_campaign=journal-news&utm_content=2012-10-24

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