

17 August 2007

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A crow named Betty, from a previous experiment, trying to retrieve the bucket from the well, using a stick with a hook on the end of it
Alex Kacelnik / University of Oxford

Birds' Einsteins, More Intelligent than Chimps!

Analogical reasoning found in the New Caledonian crow

Having a bird's brain cannot be bad at all. The New Caledonian crow is already known for its ability to use and craft tools, but a new research shows that the birds' cognitive skills could surpass the monkeys'. The bird, endemic to New Caledonia (northeast of Australia) employs sticks in the wild to fish out big juicy beetle larvae from dead wood. The new study reveals that the birds can also use common sense, not just trial and error, to see how to use available tools for getting a snack. "It was surprising to find that these 'bird-brained' creatures performed at the same levels as the best performances by great apes on such a difficult problem," said co-author Russell Gray of the University of Auckland in New Zealand. The scientists put a piece of meat in a hole too deep for the crows to reach it, so that the birds needed to fish it out with a long stick, like they do in nature in the case of a larva. But the long stick was also located out of reach, leaving the birds with just a small stick. "The creative thing the crows did was to use the short stick to get the long tool out of the box, so that they could then use the long stick to get the meat," said co-author Alex Taylor. The birds' tooling skills appeared comparable with great apes' capacities. "Analogical reasoning requires the ability to view a new situation as being essentially the same as a previous one. Evidence suggests that, from the earliest human stone tools, analogical reasoning has been at the core of human innovation. This hallmark of human intelligence may also be at work in both the great apes and New Caledonian crows and may explain why, out of all the crow species in the world, only these crows routinely make and use tools." said Gray. Like in all species, individuals' abilities varied and 3 of 7 crows solved the short-stick/snack issue on the first try without previous attempts and all individuals eventually got the trick within 25 tries. That's much better than in the case of capuchin monkeys, which in a similar experiment in 2003 required 50 tries for 80 % of the monkeys to succeed. In the last test, the two sticks were reversed. "Although the crows probed the box containing the short stick at first, they eventually figured things out and took the long stick directly to the meat-filled hole - a clear demonstration of their analogical reasoning power," wrote the researchers.