

Cognitive performance of four-months-old ravens may parallel adult apes

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By four months of age the cognitive performance of ravens in experimental tasks testing their understanding of the physical world and

how they interact with other ravens may be similar to those of adult great apes, according to a study published in *Scientific Reports*.

Simone Pika and colleagues tested the cognitive skills of eight hand-raised ravens at four, eight, 12 and 16 months of age using a series of tests. The skills the authors investigated included spatial memory, object permanence—understanding that an object still exists when it is out of sight—understanding relative numbers and addition, and the ability to communicate with and learn from a human experimenter.

The authors found that the cognitive performance of ravens was similar from four to 16 months of age, suggesting that the speed at which the ravens' cognitive skills develop is relatively rapid and near-to-complete by four months of age. At this age ravens become more and more independent from their parents and start to discover their ecological and social environments. Although [task performance](#) varied between individuals, ravens generally performed best in tasks testing addition and understanding of relative numbers and worst in tasks testing spatial memory.

Comparing the cognitive performance of the ravens with those of 106 chimpanzees and 32 orangutans who completed similar tasks in a previous study, the authors found that with the exception of [spatial memory](#), the cognitive performance of the ravens was very similar to those of orangutans and chimpanzees.

The findings provide evidence that ravens, similarly to great apes, may have evolved general, sophisticated [cognitive skills](#). The authors propose that ravens developed these skills in response to living in a constantly changing environment where survival and reproduction are reliant on cooperation and alliances between ravens. However, the authors caution that the performance of the ravens studied may not be representative of the species in general.

More information: Ravens parallel great apes in physical and social cognitive skills, *Scientific Reports* (2020). DOI: [10.1038/s41598-020-77060-8](https://doi.org/10.1038/s41598-020-77060-8) , www.nature.com/articles/s41598-020-77060-8

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