

# Researchers find evidence of negative emotional contagion in lab ravens

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A raven named 'Louise' in the home enclosure at the Haidlhof Research Station in Austria. Credit: Jessie E.C. Adriaense.

A team of researchers affiliated with institutions in Austria, the U.S. and Switzerland has found evidence of negative emotional contagion in lab

ravens. In their paper published in *Proceedings of the National Academy of Sciences*, the group describes their experiments with lab ravens and what they learned.

Emotional [contagion](#) describes the [emotional state](#) of one person impacting that of another, followed by a cascade of subsequent impacts in other people. In such a scenario, one crabby person could conceivably push an entire crowd into crabbiness. In this new effort, the researchers report that ravens apparently have some form of negative emotional contagion, as well.

To find out if ravens are impacted by the moods of another in [close proximity](#), they paired eight of the birds and put each pair through an experiment. Both birds were given a choice between a box containing nothing and one with cheese, which the birds like to eat. After several trials, the birds learned which box held the cheese and which one was empty. After that, the researchers presented them with a third box and then noted how they both behaved. This part of the experiment was known as a cognitive bias test, intended to measure the degree of optimism or pessimism. Next, the birds were separated, and one was given a choice between eating carrots, which ravens do not really care for, or dried dog food, which they like. The other raven (the observer) could see how its comrade was behaving, but was not allowed to see which choices it was given. Afterward, both of the [birds](#) were given the cognitive bias test again.

The researchers report that the observer ravens that had watched their paired comrade behave badly took much longer to investigate the third box presented to them, suggesting they had been negatively emotionally impacted by watching their fellow [raven](#) behave negatively. Those observer ravens who had witnessed normal behavior, on the other hand, also exhibited normal behavior when tested. The researchers suggest their experiments indicate that ravens can experience negative emotional

contagion.



Habituation and training of the ravens in the experimental compartments, Haidlhof Research Station, Austria. Credit: Jessie E.C. Adriaense





A raven named 'Joey' pecking the positive box during the cognitive bias test at Haidlhof Research Station, Austria. Credit: Jessie E.C. Adriaense

**More information:** Jessie E. C. Adriaense et al. Negative emotional contagion and cognitive bias in common ravens (*Corvus corax*), *Proceedings of the National Academy of Sciences* (2019). [DOI: 10.1073/pnas.1817066116](https://doi.org/10.1073/pnas.1817066116)

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