

First study to show that birds and not just mammals copy yawns

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Melopsittacus undulatus. Credit: Andrew Gallup

Have you ever caught yourself yawning right after someone else did? The same happens to budgies, says Andrew Gallup of State University of New York in the US. His research team is the first to note that contagious yawning also occurs between members of a bird species. Thus far, it has only been known to happen with a few mammals. The results are published in Springer's journal *Animal Cognition*.

Contagious yawning was previously thought only to occur between humans, domestic dogs, chimpanzees and a type of rodent aptly called the high-yawning Sprague-Dawley rat.

"To date, this is the first experimental evidence of contagious yawning in a non-mammalian species," says study leader Gallup. Budgies are of Australian origin and are often kept in cages as pets.

The findings that contagious yawning occurs between budgerigars (*Melopsittacus undulatus*), also known as parakeets, in a controlled laboratory setting corroborate a previous observation of the same thing happening in a flock of these social parrots. In the wild, these birds form lasting bonds within breeding pairs and interact within coordinated flocks throughout the year. In a laboratory setting, budgies are known to automatically imitate video stimuli shown to them.

Gallup's team conducted two experiments. In the first, 16 birds were paired in adjacent cages with and without barriers blocking their view. If contagious, yawns should be clustered in time only when the birds can see another. In the second experiment, the same birds were shown separate [video clips](#) of a budgie yawning and not yawning.

Yawning was found to occur three times as often within a five-minute window when the birds could see one another than when their view was blocked from the other bird. When they were viewing video clips of another budgie yawning, yawns occurred twice as often. This response

was not the result of stress or anxiety.

The researchers believe that contagious yawning is more than just an involuntary action, but is rather a primitive form of showing empathy. It has for instance been found that it is more common among people who are deemed to be more empathic. Thanks to a process called emotional contagion or state matching, [contagious yawning](#) occurs when a person thinks about or senses someone else carrying out this somewhat drowsy action.

Birds are known to have certain emphatic responses. Gallup therefore proposes that since contagious yawns can be experimentally manipulated, budgies could be used as a good model to explore other primitive forms of empathic processing in [birds](#).

More information: "Experimental evidence of contagious yawning in budgerigars (*Melopsittacus undulatus*)." *Animal Cognition*. [DOI: 10.1007/s10071-015-0873-1](#)

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