



Parrots learn to make video calls to chat with other parrots, then develop friendships, Northeastern University researchers say



by **Schuyler Velasco**

April 21, 2023

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Video chats like Zoom and FaceTime are great ways to stay in touch with loved ones—so great, in fact, that parrots are catching on.

A new study from researchers at Northeastern University, in collaboration with scientists from MIT and the University of Glasgow, investigated what happened when a group of domesticated birds were taught to call one another on tablets and smartphones.

The results suggest that video calls could help parrots approximate birds' communication in the wild, improving their behavior—and, likely, their well-being—in their owners' homes.

Rébecca Kleinberger, an assistant professor at Northeastern; Jennifer Cunha, a parrot behaviorist and Northeastern-affiliated researcher; and Ilyena Hirskyj-Douglas, an assistant professor at the University of Glasgow, showed a group of parrots across a range of species and their volunteer caregivers to use tablets and smartphones how to video-call one another on Facebook Messenger.



Photos by Matthew Modoono/Northeastern University

The researchers then observed how the birds used that newfound ability over a three-month period. They wondered: If given the choice, would the birds call each other?

The answer, relayed in delighted squawks and head bobs, was a resounding yes. “Some strong social dynamics started appearing,” Kleinberger says.

Not only did the birds initiate calls freely and seem to understand that a real fellow parrot was on the other end, but caretakers overwhelmingly reported the calls as positive experiences for their parrots. Some caregivers watched their birds learn skills from their video friends, including foraging, new vocalizations and even flying. “She came alive during the calls,” reported one.

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According to Kleinberger, the types of vocalizations the birds used suggested they were mirroring the call and response nature they engage in in the wild—“hello, I’m here!” in parrot-speak.



Photos by Matthew Modoono/Northeastern University

The most popular parrots were also the ones who initiated the most calls, suggesting a reciprocal dynamic similar to human socialization. And while, in large part, the birds seemed to enjoy the activity itself, the human participants played a big part in that. Some parrots relished the extra attention they were getting from their humans, while others formed attachments for the humans on the other side of the screen.

The research team, which has deployed computer interaction to enrich and understand the lives of animal species ranging from dogs to orcas, honed in on parrots for a few reasons. Their intelligence is extraordinary; certain species, like cockatoos and African greys, have demonstrated cognitive capabilities equal to that of an early-elementary-aged child.

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Their vision lets them make sense of movements on a screen. And as anyone who's heard a pet bird perfectly repeat a relative's greeting or sing the refrain of "Yellow Submarine" knows, they are perceptive and well-equipped vocalists—a trait wild parrots use to find and communicate with their flock-mates under dense rainforest canopies.

With the team's instructions, the caregivers of the 18 parrots in the study first taught the birds to ring a bell in order to signal that they wished to make a call. (An important experimental design consideration was that the birds had free choice to make the calls or not; once they learned to use the tablet interface, they were not rewarded with treats for doing so.) Once the parrots rang their bells, caretakers presented them with a tablet home screen with pictures of possible friends to call, with pairs and trios of parrots grouped together mainly according to size and time zone.

Photo by Matthew Modoono/Northeastern University

During coordinated three-hour sessions, using their beaks to tap the screen, each bird could initiate up to two calls lasting no longer than five minutes each. Caregivers received careful instruction to end calls at the first signs of fear or aggression. Fifteen birds completed the full study; three dropped out early on.

Kleinberger cautions that the findings don't mean parrot owners should fire up a Zoom call and assume it will go well. The participant parrots had experienced handlers who had time to introduce the technology slowly and to carefully monitor their parrots' reactions. As the study underscored, parrots are finicky about which fellow birds they will respond to—unmediated interactions could lead to fear, even violence and property damage; larger parrots have beaks more than capable of cracking an iPad into pieces.

Photos by Matthew Modoono/Northeastern University

Still, the findings suggest that video calls can improve a pet parrot's quality of life.

Kleinberger says that parrots, who have only been kept as pets for a generation or two, are not domesticated in the same way as dogs, cats and horses. "We're not saying you can make them as happy as they would be in the wild," she says. "We're trying to serve those who are already [in captivity]."

That includes the many parrots who, for a multitude of reasons, can't physically be close to other birds—for one, disease is pervasive among certain captive species. Two sickly, elderly male macaws paired together in the study had scarcely seen another macaw in their lives, yet formed a deep bond—dancing and singing enthusiastically together through the screen and

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