

Parrots sing a musical melody in unison

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It is known among aviculturists that cockatiels imitate human music with their whistle-like vocal sounds. Yoshimasa Seki, a professor of Psychology Department of Aichi University, examined whether cockatiels are also able to sing in unison, or, line up their vocalizations with a musical melody so that they occur at the same time.

Three hand-raised cockatiels were exposed to a musical melody of human whistling produced by Dr. Seki. All the birds learned to sing the melody. Then, two out of these three birds spontaneously joined in singing during an ongoing melody, so that the singing by each one of the birds and the whistling by the human were nearly perfectly synchronous.

Then, Dr. Seki began two experiments using a [playback](#) of the melody of the whistling to examine whether the birds actively adjusted their vocal [timing](#) to the melody. First, A playback sequence was presented after a bird started singing. The melody was composed of the two parts; the first half and the second half separated by a long pause. Thus, the birds changed the pause duration of their own song to synchronize the vocal timing with the melody of the playback; when the latency of the playback was longer, the pause of the singing was longer. Second, a playback sequence was presented when a bird was not singing to observe whether the bird begins to sing following the playback, and how he modulates his vocal timing to synchronize with the playback of the melody. One of the birds joined in the singing from the middle of the melody by skipping several initial notes to synchronize his vocal timing with the playback. The lack of the initial notes was never observed when the bird sang songs spontaneously during the experimental period; the bird always began singing from the beginning of the melody.

The results reveal that the [birds](#) actively adjust their vocal timing to playback of a recording of the same [melody](#). This means cockatiels have a remarkable ability for flexible vocal control, similar to that observed in human singing.

More information: Seki Y (2021) Cockatiels sing human music in synchrony with a playback of the melody. *PLoS ONE* 16(9): e0256613. doi.org/10.1371/journal.pone.0256613

Provided by Aichi University

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