

What are the linguistic skills of birds?

Songbirds have relatively complex, well structured, learned vocalizations and for that reason birdsong is seen as the closest animal analogue for language. I am interested in whether this similarity is also present in the cognitive skills of birds, in particular in the processing of phonetic or syntactic features. In both areas there is debate on whether specific abilities are uniquely human, and evolved in consort with language, or whether they originate from more general cognitive abilities that might also be present in other animal species, either by common descent or by independent evolution. In our studies we use the zebra finch as a model species to examine such questions and in my presentation I will discuss some of our studies, concentrating on two subjects. One concerns the human ability to recognize words regardless of individual variation across speakers. The other topic is the ability, already present in young infants, to derive abstract 'syntactical' rules from exposure to strings of meaningless vocal elements, ordered according to specific algorithms that are assumed to be relevant in linguistic contexts. Using this Artificial Grammar Learning paradigm, we explore the presence and scope of rule learning abilities in zebra finches. I will discuss our findings in relation to those obtained in other bird species, in mammals and in humans.