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The flexible listener: exploring zebra finch sensitivity to spectral and temporal sound features

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Stellingen
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The flexible listener: exploring zebra finch sensitivity to spectral and temporal sound features

1. Zebra finches flexibly integrate spectral features and song duration in song discrimination, challenging the notion of exclusive reliance on fine spectral features (this thesis, Chapter 2).

2. The varying perceptual relevance of acoustic features in song attractiveness and discrimination emphasizes the need for diverse experimental approaches to gain insights into the cognitive mechanisms underlying avian auditory perception (this thesis, Chapter 3).

3. Contrary to the notion of fixed discrimination strategies, zebra finches learn syllable sequences in parallel with phonology, while their contribution to discrimination is influenced by the nature of stimuli (this thesis, Chapter 4).

4. Zebra finches prioritize pitch and formant cues for tone sequence recognition regardless of whether pitch and formant over a series of sounds change in parallel or in opposite directions, but this does not necessarily imply that they cannot attend to changes in contours direction (this thesis, Chapter 5).

5. Notable variations in auditory perception between avian species, as suggested by comparing zebra finches (this thesis) and starlings (e.g., Bregman *et al*., 2016), prompt a comprehensive investigation into the intricate and species-specific auditory processing of songbirds.

6. Species differences in the weighting of acoustic parameters may depend on the nature of the stimuli, influencing the perceptual prioritization of one parameter over the other.

7. Even as adults, songbirds can learn (recognize) sequential info in their songs, suggesting but not proving that they must have an understanding of the structural patterns of their "speech".

8. Although not all animals showcase musical skills like beat perception or relative pitch in laboratory conditions, certain non-human species might attend to more than just those "musical" features when listening.

9. While the depth of knowledge on a subject may undergo substantial changes over time, the aspects that originally ignited curiosity, persisting from the period before acquiring exhaustive details, remain constant and unchanged.

10. Exploring the intricacies of animal behaviour serves as a reflective mirror, offering valuable insights that contribute to a deeper understanding of our own human nature.

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