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Using playback to investigate multimodal signalling of attractiveness in ring doves (*Streptopelia risoria*)

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Abstract

Multimodal signals consist of multiple components in multiple sensory channels and are common in animal courtship. Signal components can carry unique or redundant information about the courting animal. The response to such multimodal displays might additionally reveal multisensory integration such that the response to the whole display is not simply the sum of the responses to the individual parts. In this study, we used high-quality audiovisual recordings of courting male ring doves and measured female behavioural responses to video playback. 21 females were split into three conditions: one featured multimodal, audiovisual playback, while in the other two, either the visual or auditory courtship component was occluded using familiar stimuli (foliage; vacuum cleaner sound). We analysed female behaviours associated with sexual stimulation and compared frequency of behaviours across conditions and between playback and control intervals. Additionally, we measured blood levels of oestradiol before and after testing.