

Introductory Remarks to Symposium 25

A comparative perspective on social communication

Daniela Vallentin and Steffen Hage, Seewiesen and Tuebingen

Many animals, as well as humans, are able to modify their vocal output depending on the behavioral context. Some examples of these context-dependent vocalizations include the song of the zebra finch, which is more stereotyped when directed toward a female; calls of vervet monkeys, which can either serve as alarm or rivalry calls; and echolocation calls in bats, which are used for both hunting prey and intra-specific communication. Hereby, the capability to modulate vocal onset and patterns is not always dependent on whether animals produce learned or innate vocalizations. The underlying brain mechanisms that are controlling context-dependent changes in vocal output are still largely not well understood and it is a matter of debate, whether neural circuits underlying vocal pattern generation in vocal learners and non-learners share common neural coding properties.

The symposium will present different speakers that approach this issue in different animal models such as songbirds, bats, and monkeys, by using a wide range of behavioral observation, psychophysical approaches, and neurophysiological techniques. The goal is to uncover commonalities and disparities in behavioral strategies involved in initiating a context-dependent vocal modification. Our symposium will provide a new perspective on the behavioral and neural control of vocalizations produced within different contexts. It will give new and important insights into common mechanisms that might be shared across species. Furthermore, the symposium will provide new insight into different neural computations underlying contextual changes across a diverse subset of avian and mammalian species and will give an overview of recent advances in the study of context-dependent vocalizations.

Symposium 25

*Friday, March 24, 2023
08:30 - 10:30, Lecture Hall 102*

Chairs: Daniela Vallentin and Steffen Hage,
Seewiesen and Tuebingen

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| 08:30 | Opening Remarks |
| 08:35 | Lena Veit, Tuebingen
FLEXIBLE CONTEXTUAL CONTROL OVER BIRDSONG SEQUENCING AND STRUCTURE (S25-1) |
| 09:00 | Mirjam Knörnschild, Berlin
A COMPARATIVE PERSPECTIVE ON VOCAL PRODUCTION LEARNING IN BATS (S25-2) |
| 09:25 | Julio Hechavarria, Frankfurt/Main
A TOUR THROUGH THE BRAIN OF VOCALIZING BATS (S25-3) |
| 09:50 | Julia Löschner, Tuebingen
AUDIO-VOCAL INTEGRATION MECHANISMS IN MARMOSET MONKEYS (S25-4) |
| 10:05 | Andreas Nieder, Tuebingen
NEUROBIOLOGY OF COGNITIVE VOCAL CONTROL IN MACAQUES AND CROWS (S25-5) |