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Z. Reznikova

Studying Animal Languages Without Translation: An Insight from Ants

- ▶ Explains how to apply the ideas of information theory for studying communication systems in far detail
- ▶ Treats both theoretical and practical aspects of communication in ants
- ▶ Gives an interdisciplinary view to the topic, bridging ethology, zoology, ecology and behaviour with robotics and information theory

The Author of this new volume on ant communication demonstrates that information theory is a valuable tool for studying the natural communication of animals. To do so, she pursues a fundamentally new approach to studying animal communication and “linguistic” capacities on the basis of measuring the rate of information transmission and the complexity of transmitted messages.

Animals’ communication systems and cognitive abilities have long-since been a topic of particular interest to biologists, psychologists, linguists, and many others, including researchers in the fields of robotics and artificial intelligence. The main difficulties in the analysis of animal language have to date been predominantly methodological in nature. Addressing this perennial problem, the elaborated experimental paradigm presented here has been applied to ants, and can be extended to other social species of animals that have the need to memorize and relay complex “messages”. Accordingly, the method opens exciting new dimensions in the study of natural communications in the wild.



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