

## **CELEBRATING TINBERGEN'S INFLUENCE ON HUMAN ETHOLOGY**

This year marks the 50th anniversary of the publication of Tinbergen's (1963) paper "On aims and methods of Ethology". The paper, dedicated to Konrad Lorenz on his 60th birthday, presented a very personal, and perhaps therefore, particularly insightful, view of Tinbergen's thinking about the field of ethology as a whole – its "nature", in his words. In so doing, he constructed a simple, but hugely influential, framework within which a rich diversity of methodological and theoretical approaches could be seen as essential components of a larger enterprise – a comprehensive, integrated understanding of an animal's behavior. As is now well-known, his view of ethology, "the biological study of behavior", incorporated four interconnected strands – what causes a behavior, how does it develop, what is its functional significance, and how did it evolve.

Even now, 50 years on, we have few single examples of animal behavior for which we have satisfactory answers to each of these questions – but see Bateson and Laland (2013) for an interesting synthesis in the case of birdsong. There remain many unanswered questions, but Tinbergen's framework nonetheless provides researchers with the essential skeleton on which to flesh out the larger picture.

The focus of the paper was on explaining animal behavior, reflecting of course his own, and Lorenz's, research interests. But in noting the combined explanatory value of these different levels of inquiry, Tinbergen writes (p.430): "one of the measures of this value which I will mention in passing is the fact that students of human behavior are showing a growing interest in ethological methods". One of the first and most notable of these, of course, was Irenaus Eibl-Eibesfeldt, the founder of the International Society for Human Ethology (ISHE), to which this journal belongs. Eibl-Eibesfeldt and others demonstrated how the ethological approach developed by Lorenz and Tinbergen could indeed provide the critical foundation for describing human behavior in all its marvelous diversity and complexity, in much the same way as zoologists study animals.

This biological study of human behaviour, human ethology, continues to build on the rich heritage provided by these intellectual forebears. In honor of this anniversary, therefore, this issue of Human Ethology Bulletin contains a series of papers which celebrate the influence of Tinbergen's paper. First, Hladký and Havlíček compare and contrast his approach with that of the philosopher Aristotle, an exploration of a possible ontogeny of Tinbergen's ideas, perhaps. Next, three papers explore the influence of Tinbergen's levels of explanation in specific research areas of human ethology: Weisfeld and Weisfeld address ethological approaches to understanding children's social interactions with a particular focus on bullying, Fisher discusses Tinbergian influence on research in female intrasexual competition, and Stephen demonstrates how different levels of explanation are useful in the study of human facial judgments. Finally, Barrett

and Stulp provide a thoughtful and personal account of why Tinbergen's synthesis remains as useful today as it was 50 years ago.

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