

## Book Review

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**Wessel A., Menzel R. & Tembrock G.: Quo Vadis, Behavioural Biology? Past, Present and Future of an Evolving Science.** *International Symposium of the Humboldt University in Berlin and the German National Academy of Sciences, Leopoldina, Wissenschaftliche Verlagsgesellschaft, Stuttgart, 2013, 396 pp. ISBN: 978-3-8047-2805-9.*

On September 1<sup>st</sup> 1948, the first behavioural research institute in Germany, the “Research Institution of Animal Psychology”, was founded (with support from the German Academy of Sciences) at Berlin University by one of the leading figures in the field of comparative ethology, the late Professor Günter Tembrock. To commemorate the 60<sup>th</sup> anniversary of this event, the “Berlin Behavioural Biology Symposium” was organised in 2009 at Humboldt University (Berlin) on the topic “Past, Present and Future of an Evolving Science”. In order to promote the spread of the issues, thoughts and views presented at the meeting, the symposium proceedings have now been published as a book consisting of 22 papers covering the breadth and depth of topics presented, 21 of which deal directly with behavioural science.

In keeping with the title of the symposium, the book starts with a somewhat localised overview of the history of behavioural science and the central figures associated with the subject, and particularly those professionally linked to Berlin. Deservedly, the most significant figure addressed is Prof. Tembrock himself, who is the author of the following contribution. In his paper, Prof. Tembrock accompanies the reader through 60 years of conceptual shifts in the understanding of behaviour at his *alma mater*. Along the way, he describes some of his influential scientific achievements (such as the foundation of bioacoustics as a science) while emphasising the importance of a multidisciplinary approach.

The two introductory papers, both of which have a strong affinity with the institution hosting the meeting, are followed by several, more general essays. The first two of these deal with the multipart nature of behaviour as viewed through the complexity of communication and social organisation. A further particularly interesting contribution covers the role of development in shaping the behaviour of an individual,

wherein epigenetic processes are emphasised as an important mechanism in the potential adaptive behavioural match or mismatch of an organism with its environment. The next author uses a lively, alluring writing style in a remarkable essay that integrates animal and human behavioural research, economics, policy and wildlife protection as examples of how subtle and seemingly unimportant interconnections can affect our efforts to conserve biodiversity. The essay of the late primatologist H. Kummer advocates patient, unprejudiced observation rather than the more usual hypothesis acceptance or rejection to an *a priori* theory. This appealing opinion is so well supported by examples from the author’s lifelong research experience that one can hardly disagree.

Further on in the book, theoretical papers, such as a philosophical aside as to the very basics of what really differentiate us from chimpanzees, are interspersed with more specific contributions, including issues related to vocal repertoire in primate communication, lemur hibernation, ethnographic observations of the Eipo tribe (New Guinea), capuchin monkey tool use and a case study comparing the numerical competence of a grey parrot with that of humans and apes. Prof. A. Zahavi, in a most persuasive contribution, presents his theory of signal selection within the framework of his influential Handicap Principle, well known to evolutionary biologists. Last, but not least, we are briefly reminded of the theoretical essentials of operant conditioning and of using appropriate methodology, the latter stressed using social insects as an example, and we are taken on a tour through the life and career of B. Heinrich in a catchy narrative.

As conference proceedings, the book “Past, Present and Future of an Evolving Science” inevitably reflects the general nature of its source event. For example, the 22 contributions comprising the book ‘chapters’ are arranged in the order they appeared during the meeting and consist of a mixture of topics, authorial approaches and writing styles that will inevitably have a varying and subjective attractiveness for the individual reader. Moreover, a number of the works contributed had a localised character clearly linked to the venue hosting the meeting. As a result, the book represents more of a chronicle of that particular symposium than a coherent publication with a unifying message. In my opinion, this thematic mixture makes the book difficult to navigate and I am not convinced that this was the best choice.

Does the book answer the main question raised in its title, i.e. what is the present and future state of behavioural biology? In my opinion it does not as this task simply cannot be accomplished in a single publication, primarily due to the rapid pace of change in this relatively new and continuously evolving scientific discipline. If, on the other hand, I was asked whether the book provides us with some illuminating

papers, original views and conceptual advances I would most definitely answer yes! Most of the public interested in the subject of behavioural biology can find valuable new information and original and inspiring ideas to follow up on in this new publication.

Matej Poláčik