

BOOK REVIEW

TULLOCK G.: *THE ECONOMICS OF NON-HUMAN SOCIETIES*. Pallas Press, Tucson, 1994, 87 pp. ISBN 1-882969-18-9.

Although the author is a professor of economics and political science at the University of Arizona, most of the content of his book is devoted to eusocial insects such as ants, bees and termites. Therefore, no empirical results, but concepts and ideas adopted from economy should be expected in his book. At the beginning he claims: "I am not suggesting that human society is something which we can understand by looking at animal societies. Indeed my approach is the reverse. I am taking tools developed to deal with human society and using them to understand nonhuman societies."

The book is concerned with animal societies, but little attention is paid to societies consisting of less than a few hundreds of individuals. Tullock suggests that comparison between principles governing animal and human societies is possible if the numbers of individuals involved are of the same scale.

The following five chapters of the book (The genetics of society, Coordination and the prisoner's dilemma, Consider the ant, Termite and bees, Mole rats, sponges and slime molds) are written as a brief critical review of biological thinking about animal societies written for non-biologists. This review should not appear controversial to confirmed neodarwinists.

While biologists have focused on a traditional problem, that of why individuals share their common interests, Tullock emphasizes the problem of the role of the individual as a part of extremely complicated organised structure of complex society. He is fascinated by the lack of any central governing power in insect societies: "... I should say that human beings have both an economy and a government. Social insects and other social species normally only have an economy, but no government. Humans think that government is a necessary precondition for the function of the economy, thus this proposition may seem bizzare." This approach leads him to introduce the concept of preference functions which deal sensibly with biological rationale of bouts of activity (Chapter 7: A theory of cooperation). This seems to be the most original part of the argument for the biological audience.

The book offers stimulating reading for any biologist interested in large theoretical issues related to insect behaviour. It contains a plausible alternative vision of such societies, which may be a source of new questions. However, the compatibility with recent biological approaches is a matter of complex discussion.

However, this inspiring book also raises questions about the applicability of some analytical tools used in social sciences.

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