



**Review: [Untitled]**

Reviewed Work(s):

*Selected Writings of T. C. Schneirla.* by Lester R. Aronson; Ethel Tobach; Jay S. Rosenblatt;  
Daniel S. Lehrman

Mary Jane West Eberhard

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The *Summaries* are also a bargain for the quality of their contents. Instead of the usual symposium product—an insular article from each participant—we are presented here with a coherent account of the entire work session, written by the symposium's chairman. Each symposium brings together approximately two dozen neuroscientists for several days of presentations and discussions; thus the production of a coherent summary is an achievement. The level of difficulty of the reports is suitable for persons with some neurosciences background, including advanced undergraduates. The summaries are surprisingly detailed for their clarity, and are accompanied by full reference lists, drawings, graphs, and well-reproduced electron micrographs.

The topics covered in this volume are:

1. The Mode of Action of Psychotomimetic Drugs, by J. R. Smythies, based on a work session held in November 1968: mostly LSD, from the viewpoints of biochemistry and metabolism, interaction with transmitters and receptors, electrophysiology and behavior, subjective experience, and relation to mental illness.

2. The Structural and Functional Organization of the Neocortex, by K. L. Chow and A. L. Leiman (March 1969): light and electron microscopy, electrophysiology, and brief sections on somatosensory, auditory, and visual cortex.

3. The Role of Cyclic AMP in the Nervous System, by T. W. Rall and A. G. Gilman (October 1969): general cellular role of cyclic AMP, localization of AMP enzymes in neural tissues, possible role in synaptic transmission, AMP and brain biochemistry.

4. Macromolecules in Synaptic Function, by F. E. Bloom, L. L. Iversen, and F. O. Schmitt (November 1969): synaptic ultrastructure (with 14 figures), interaction of proteins in storage and release of transmitters, cell recognition in synaptic development, receptor molecules, regulation of postsynaptic RNA and protein synthesis, mechanism of vesicle release.

5. Sensory Transduction, by L. M. Beidler and W. E. Reichardt (July 1967): vision, gustation, olfaction, mechanoreception, and electrical reception, from the viewpoints of ultrastructure, biochemistry, and electrophysiology, in (largely) vertebrate and insect preparations.

RICHARD F. OLIVO, *Biology, Williams College*

#### SELECTED WRITINGS OF T. C. SCHNEIRLA.

*Edited by Lester R. Aronson, Ethel Tobach, Jay S. Rosenblatt and Daniel S. Lehrman. W. H. Freeman, San Francisco. \$22.50. xvi + 1032 p.; ill.; index. 1972.*

Sometimes the best entrée to a complex field is a close, critical examination of the writings of a single thoughtful writer. This may justify such an extensive re-publication of Schneirla's papers: his work was probably as broad and important as that of any American comparative psychologist, although his "levels" approach to behavior—assigning species to "higher" or "lower" categories according to intellectual capacity—seems of limited heuristic value today and promotes a misleading brand of evolutionary interpretation. The editors have done a good job of choosing readable samples of Schneirla's sometimes abstruse writing, and of organizing the selections around topics of general interest, making the book more than the sentimental memorial volume it might appear from the title.

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#### COMMUNICATION BY CHEMICAL SIGNALS. *Advances in Chemoreception, Volume 1.*

*Edited by James W. Johnson, Jr., David G. Moulton, and Amos Turk. Appleton-Century-Crofts, New York. \$21.00. xi + 412 p.; ill.; index. 1970.*

The present volume, the first of a new series, does not merely contain a number of unrelated reviews, but is devoted to a particular aspect of chemoreception. Communication by chemical signals has recently been recognized to play a major role in the biology of both vertebrates and invertebrates, as is expertly and convincingly attested in these 13 articles on insects (4 chapters), fishes (1), reptiles (1), mammals (2), and man (1). Although they deal with different animal groups and consequently with different approaches, the various chapters show a reasonable coherence, which no doubt resulted from a meeting of all contributors during the preparation of this volume. The emphasis in most articles is on olfaction. All discussions stress the functional significance of the chemosenses in terms of behavioral and ethological relationships, whereas only little attention is given to purely physiological aspects, in marked contrast to the proceedings of the symposia on olfaction and taste.

In the present volume, the contributors have tried to show the conceptual development of pheromones, and the notion that animals are dependent on many other chemical signals as well. In the reviewer's opinion, this approach has been met with success. Since there is a rapidly increasing interest and progress in the field of chemoreception, there seems to be justification for a new series on this topic, especially if the editors can continue this policy of having a particular aspect of chemo-