Mammalian Social Learning: Comparative and Ecological Perspectives

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who played a significant role. The book is comprised of 7 chapters, arranged chronologically: Personal Beginnings; Yale Years; Cambridge Idyll; Duke in the Troubled Sixties; Flights to the Field; The Later Years; and Reflecting on My Trade. A journal Klopfer wrote while studying goats on Aldabra Atoll forms an appendix which adds little to the main text, but gives readers a feeling for field research in a remote setting. Black-and-white photographs of the people and places discussed add a personal touch.

Klopfer's treatment presents a highly selective and personal perspective. His view of the development of ethology and behavioral ecology is based on his own experiences with some of its most influential and often colorful practitioners. Klopfer emphasizes that his book is not a proper history of the field, but an idiosyncratic treatment influenced by individuals he had occasion to meet and interact with. Still, he has known an impressive array of influential individuals. This might be more difficult to achieve today because "ethologists have become too numerous and diverse for its future Nobelists to have as tight control over the field as did their forebears" (p 124).

Klopfer seems evenhanded in assessing people and events, inasmuch as that is possible when dealing with strong personalities and their interactions. He suggests that Lorenz's charm and charisma was at least as important as intellectual achievement in attaining his status in ethology and wonders "[m]ight not Karl Lashley have won a Nobel Prize rather than Lorenz had Lashley been less modest in his pronouncements?" (p 14). Klopfer discusses Lorenz's pro-Nazi stance during the 1930s and 1940s, and includes selections from two of Lorenz's papers on species-specific (race specific?) traits, which support Nazi racist policies. We can never know what was going through Lorenz's mind at the time, but Klopfer provides food for thought while withholding such strong value judgments that others have made on this point.

Overall, the book is a quick read and of particular interest to those who encountered some of the people and places described therein. It should be worthwhile to graduate students in history and philosophy of science and to students in behavior, ecology, and related disciplines because it focuses on the social and political side of these disciplines. The final chapter contains sections on teaching; the social construction of ethology; the future of ethology; and problems of the young scientist that should also be of interest to budding ethologists.

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MAMMALIAN SOCIAL LEARNING: COMPARATIVE AND ECOLOGICAL PERSPECTIVES. *Based on a conference held in London, November 1996. Symposia of the Zoological Society of London, Volume 72.*

Edited by Hilary O Box and Kathleen R Gibson. Cambridge and New York: Cambridge University Press. $95.00. xiv + 424 p; ill.; index. ISBN: 0-521-63263-3. 1999.

This volume contains twenty-one chapters that summarize current research, observation, and speculation concerning social learning in mammals. Five of the six parts are organized by phylogeny or ecological niche (primates, herbivores, carnivores, cetaceans, apes); the sixth (and most interesting) part considers social learning in three central-place foraging species (rats, bats, and naked mole-rats).

As is often the case in edited volumes, the chapters are uneven. Higginbottom and Croft introduce their paper on social learning in marsupials by stating "[n]o studies of marsupials . . . have demonstrated or explicitly investigated social learning" (p 80). The same could be said of arctic herbivores, African elephants, bears, foxes, and many other mammals discussed in various chapters. One author after another proposes that members of some species should learn socially because in that species: parent-offspring contact is extensive; feeding is opportunistic and foods diverse; the environment is relatively stable; and individuals participate in complex social networks or acquire complex feeding skills. Unfortunately, evidence that members of the species in question do learn socially is frequently either sparse or nonexistent.

Other more substantive chapters should be read by anyone interested in animal social learning. Wilkinson and Boughman's excellent review of social foraging by bats includes material not reviewed elsewhere. Boran and Heimlich's recounting of observations of development of foraging skills by killer whales and spread of complex feeding techniques through a populations of humpback whales is informative. So is Mithen's use of handaxes fabricated by early hominids to argue that an ability to imitate need not produce cumulative cultural change. Byrne's examination of differences in how monkeys and apes learn feeding techniques is insightful, and Sibly provides a fine overview of formal models of social learning. Laland and Hudson review long-term research programs investigating social learning in, respectively, rats and rabbits.

Mammalian Social Learning, although considerably longer and more expensive than necessary, contains a number of valuable contributions. The uneven quality of the chapters will make the volume only partially successful in achieving the editors' stated goal of increasing attention paid to social learning by all who study mammalian behavior in natural circumstances.

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