

Hinde R A. *Animal behaviour*. New York: McGraw-Hill, (1966) 1970. 876 p. [St. John's College, Cambridge University; and MRC Unit on the Development and Integration of Behaviour, Cambridge, England]

*Animal Behaviour* attempted to synthesize current knowledge from ethology and comparative psychology. It dealt primarily with the causation and development of behaviour and more briefly with function and evolution. Much of the discussion concerned conceptual issues, such as the nature/nurture controversy and the status of the drive concept. [The SSC<sup>®</sup> and the SCI<sup>®</sup> indicate that this book has been cited in more than 885 publications.]

## Animal Behaviour: A Synthesis of Ethology and Comparative Psychology

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*Animal Behaviour* was originally planned as a joint enterprise with Niko Tinbergen, but pressures of work caused him to drop out before writing started. Niko took his duties to his students and others so seriously that it handicapped his own enterprises. Had he been able to continue, the book's most serious defect—the relatively brief treatment of functional and evolutionary aspects—would have been overcome.

The book was intended as a synthesis, to focus on the conceptual problems that divided ethologists and psychologists. At that time, the extreme ethologists (characterised by K. Lorenz<sup>1</sup>) and the extreme comparative psychologists (characterised by T.C. Schneirla<sup>2</sup>) were still at loggerheads. This in spite of the flexibility of some who came from either camp (e.g., Tinbergen,<sup>3</sup> Danny Lehrman<sup>4</sup>). Although I was, I suppose, an ethologist, I did not use this word in the title because I disagreed with many of Lorenz's views. Occasional discussions with Danny and Jay Rosenblatt helped me a great deal to understand the viewpoint of the Schneirla group.

Tinbergen was partly responsible for my interest in another aspect of psychology. He had been asked to write a chapter on ethology for S. Koch's *Psychology: A Study of a Science*,<sup>5</sup> but passed it on to me when I was only a few years postdoctoral. I was too young and inse-

sure not to comply, but had to struggle with the protocols Koch had laid down—"What are the mensurational and quantificational procedures in your system?" or "Discuss the function forms"—fine for the self-destructing optimism of 1950s learning theory but totally inappropriate for ethology. Bill Verplanck had given me a copy of W.K. Estes et al.'s *Modern Learning Theory*,<sup>6</sup> and I struggled with that and got some inkling of what it was all about. Joan Stevenson, later Joan Stevenson-Hinde, was then a Skinnerian (though she now knows better) and her hardheadedness helped enormously over this and many other issues.

I also had a background in aspects of psychiatry from attending John Bowlby's wonderfully eclectic seminars in the 1950s—seminars which brought together people from diverse backgrounds to focus on the problem of parent-offspring relationships. And the immense kindness of Frank Beach to a young research worker coupled with close friendships with Lehrman and Rosenblatt had brought me into contact with aspects of physiological psychology. Bowlby had helped me start a monkey colony, and this resulted in close working relationships with a number of women, such as Thelma Rowell, Yvette Spencer-Booth, Jane Goodall, and Dian Fossey, who taught me to see animals as individuals. And for a more general background I owed a great deal to W.H. (Bill) Thorpe,<sup>7</sup> who started the Madingley laboratory and allowed me lots of rope even when our ideas conflicted.

The book received multiple reviews in the journal *Animal Behaviour*. There were two principal criticisms. Some said the text was too difficult for undergraduates, especially when dealing with conceptual issues. Others lamented that only 2 out of 28 chapters dealt with function and evolution. I defended myself on the latter issue on the grounds that the book was aimed at the common ground between ethology and comparative psychology. And E.O. Wilson's *Sociobiology*<sup>8</sup> had not yet appeared. But in retrospect those sections should have been fuller—after all, David Lack, a pioneer in the study of function and evolution, had been my research supervisor.

For further reading, see reference 9.

1. Lorenz K. *Studies in animal and human behavior*. Cambridge, MA: Harvard University Press. Vol. 1, 1970. 403 p.

(Cited 80 times.) Vol. 2, 1971. 366 p. (Cited 40 times.)

2. Schneirla T C. Behavioral development and comparative psychology. *Quart. Rev. Biol.* 41:283-302, 1966. (Cited 50 times.)

3. Tinbergen N. *The study of instinct*. Oxford, England: Clarendon Press, 1951. 208 p. (Cited 965 times.)

4. Lehrman D S. A critique of Konrad Lorenz's theory of instinctive behaviour. *Quart. Rev. Biol.* 28:337-63, 1953. (Cited 145 times.)

5. Koch S, ed. *Psychology: a study of a science*. New York: McGraw-Hill, 1959. Vols. 1 & 2.

6. Estes W K, Koch S, MacCortuodale K, Meehl P E, Mueller C G, Schoenfeld W N & Verplanck W S. *Modern learning theory*. New York: Appleton-Century-Crofts, 1954. 379 p.

7. Thorpe W H. *Learning and instinct in animals*. London: Methuen, 1956. 558 p. (Cited 290 times.)

8. Wilson E O. *Sociobiology: the new synthesis*. Cambridge, MA: Belknap Press, 1975. 697 p. (Cited 3,615 times.) [See also:

Wilson E O. Citation Classic. *Current Contents /Agriculture, Biology & Environmental Sciences* 19(38):20, 19 September 1988; *CC /Arts & Humanities* 10(38):20, 19 September 1988; and *CC/Social & Behavioral Sciences* 20(38):20, 19 September 1988.]

9. Beach F A, ed. *Sex and behavior*. New York: Wiley, 1965. 592 p.

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