

BOOK REVIEWS

BOUTON, MARK E. (2007). *Learning and behavior: A contemporary synthesis*. Sunderland, MA. Sinauer. Pp. vii + 482. ISBN-13: 978-0-87893-063-0 (hard cover). \$94.95

This excellent textbook is directed at an advanced undergraduate or first-year graduate course. It is organized a bit differently from most learning texts, in part because it attempts to integrate the large body of research within a contemporary framework that includes the evolutionary basis of behavior (e.g., conditioning and behavioral systems) and the contribution of cognitive processes (e.g., cognitive maps and search images). Bouton does not oversimplify the complex determinants of learning but presents them in a clear, readable form. His writing style is relaxed and un-self-conscious. He seems aware of the difficulty in understanding sections that address complex issues and provides additional descriptions of those topics to clarify them.

The complexity of research in the field of contemporary learning makes the author's task daunting. His effort to be complete and not cut corners is admirable. However, as I progressed through the book and put myself in the place of the typical undergraduate, I found the book's thoroughness difficult to integrate into a manageable whole. To his credit, however, Bouton includes summaries at the end of each chapter and clever "What does it all mean?" summaries at the end of sections that might be difficult to integrate.

The first chapter not only places learning theory in historical context but also summarizes what is to come. Chapter 4, about theories of conditioning, exemplifies Bouton's commitment to presenting a true picture of contemporary theory. The Rescorla-Wagner model is elegant for its simplicity, but sometimes predictions may be difficult for students to understand. Bouton correctly emphasizes that these novel predictions are what gives the theory its strength, but he is also objective about its flaws and is not reluctant to present alternatives, such as the Mackintosh and Pearce-Hall attentional models. The student looking to memorize the current state of learning models will be disappointed in the absence of an all-inclusive explanatory model, but anyone interested in the process by which experimental psychologists attempt to understand the flexibility of behavior will appreciate Bouton's candid approach.

Based on what is known about the functioning of the nervous system, connectionist models of learning are exciting in their attempts to link the behavior of organisms with neural mechanisms. Bouton introduces these models in a way that demonstrates their power to explain learning without overinvolving the reader in their complexity.

In chapter 8, Bouton nicely presents the role of cognitive processes in learning. He appreciates the approach espoused by Tolman, in which experiments are designed to distinguish between cognitive mechanisms and other, simpler accounts, accepting a cognitive explanation only when simpler mechanisms are not sufficient to explain the results. Bouton's discussion of judgments of the passage of time exemplifies his thorough but clear style of presentation, in which several models are presented, none of which is able to account for all of the results that have been reported.

The chapter on motivation occurs later in this book than is typical, because recent evidence suggests that motivation is not just a modulator of learning but can serve as a discriminatory cue and in some cases may actually require learning. The final chapter starts with a discussion of aversive control (also typically presented earlier in learning texts), because Bouton recognizes the complex interaction among stimulus-reinforcer associations, response-reinforcer associations, and the cognitive and emotional mechanisms that are involved. He ends the book by proposing that all of these mechanisms are also involved in all instrumental behavior.

Any textbook about learning and behavior must be selective and omit discussion of topics that some teachers believe are important. I would like to have seen a discussion of social learning and, in particular, learning through observation. The ability of animals to acquire new behavior by observing the behavior of others has important implications for behavioral flexibility and poses an interesting challenge for learning theorists.

Although the book mentions contrast effects, so important because of their implications for the determination of associative strength, it does not address behavioral contrast (the effect that a change in one component of a multiple schedule has on the unchanged component). Behavioral contrast is of particular interest because the presumed instrumental effect has been attributed to Pavlovian associations involving the signal for the unchanged component, which has now become a better predictor of reinforcement than it was prior to the change. Furthermore, recent research has shown that behavioral contrast results primarily from the anticipation of the worsening of the rate of reinforcement (anticipatory contrast) rather than the sudden improvement in the rate of reinforcement (local contrast).

These omissions notwithstanding, Bouton's book presents an excellent picture of contemporary learning theory. I strongly recommend it, especially for a survey course on learning at the graduate level.

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OATES, J., WOOD, C., & GRAYSON, A. (2005). *Psychological development and early childhood*. Oxford, UK: Blackwell Publishing. ISBN 1-4051-1693-5.

In their collaboration, *Psychological Development and Early Childhood*, John Oates, Clare Wood, and Andrew Grayson aim to provide an introduction to the essential components of the primary years of childhood. The field of developmental psychology is open to a wide variety of perspectives, theories, and interpretations, and the authors of this book have not limited themselves by focusing on only certain models of early child development. Rather, they approach the field from various perspectives, including the biological, social, and cultural components that are involved in shaping a child's development. The breadth of viewpoints addressed in the authors' analysis includes behavioral approaches, social learning models, and Piagetian theory. Because of the global nature of the material, the book endows the reader with an excellent framework for understanding the early psychological development of children.

The structure of the book aids in the ease of understanding the topics addressed throughout the text. The content is divided into seven chapters, each focusing on one vital aspect of developmental psychology. These aspects include children and development, theories of development, sensation and