PERCEPTIONS OF PERCEPTUAL LEARNING

Editorial

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The five papers in this special section of *Learning & Behavior*, “Perceptions of Perceptual Learning,” were originally presented in a seminar by the same name in 2008 at the 79th Annual Meeting of the Eastern Psychological Association in Boston. The association is the oldest of the regional Psychological Associations in the United States. Its meeting has been always been well attended by researchers in animal learning from both the United States and abroad, providing one of the major outlets for the presentation of new research in learning.

In 2007, the EPA decided to reinvigorate its Perception specialty area. As the chairperson of their program committee at that time, I put together a joint symposium between the organization’s Animal Learning and new Perception groups. One goal was simply to draw attention to our newly re-created area. Beyond that, it was an opportunity to bring together researchers with a common topic who seldom saw each other’s work. The goal was to bring together established and emerging leaders who had researched “Perceptual Learning” from a variety of viewpoints so that they might find common ground, discover new phenomena and explanatory frameworks, and uncover and clarify misconceptions that might exist.

Two of the authors, Nick Mackintosh and Geoff Hall, will be familiar to the readers here; they discuss their particular take on what “perceptual learning” is, as well as important variables of interest in its study from an associative learning framework. Two others, Takeo Watanabe of Boston University and Jozsef Fiser of Brandeis University, will perhaps be less familiar. Takeo Watanabe is an expert on perceptual learning, especially in the visual system; his research delves into the psychological construct of attention—how it is involved in perceptual learning, and its underlying physiology. Jozsef Fiser, who comes from a computational background, elucidates how current thinking and analysis involving Bayesian modeling can be applied to perceptual learning problems. His approach provides information not only about the recognition of individual features, but even more so on how information is extracted from complex visual scenes. Finally, Chris Mitchell of the University of New South Wales was given the unenviable task of serving as a discussant and synthesizing the diverse information presented, a task that he met boldly and capably.

The papers are presented here in the order in which they were presented at the meeting, beginning with “Varieties of Perceptual Learning,” by Nick Mackintosh, and “Roles of Attention in Perceptual Learning From Perspectives of Psychophysics and Animal Learning,” written by Yoshiaki Tsushima and Takeo Watanabe (presented by Takeo Watanabe at the meeting). “Perceptual Learning in Human and Nonhuman Animals: A Search for Common Ground,” by Geoff Hall, comes next, followed by “Perceptual Learning and Representational Learning in Humans and Animals,” by Jozsef Fiser. The section concludes with “Human and Animal Perceptual Learning: Some Common and Some Unique Features,” by Chris Mitchell.