

This Week's Citation Classic

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Gibson E J. *Principles of perceptual learning and development*. New York: Appleton-Century-Crofts, 1969. 537 p.

This book surveyed traditional and current theories of perceptual learning and presented the author's theory, that perceptual learning is a process of differentiation of distinctive features of objects, permanent features of the spatial layout and invariants of events. The theory is applied to phylogenetic development of perception over species and especially to development of perceiving objects, places, events, and pictorial and symbolic information in children. [The *Science Citation Index*[®] (SCI[®]) and the *Social Sciences Citation Index*[™] (SSCI[™]) indicate that this book has been cited over 365 times since 1969.]

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"Learning by perceiving the world around us, its permanent properties, its furnishings and ongoing events has always been of interest to philosophers, and deservedly so. Where else has an adult acquired the information about his environment that permits him to act adaptively in it and upon it? Yet modern experimental psychologists generally ignored the problem, although their interests for many years were dominated by learning. Motor learning, verbal learning, affective learning, and simple contingency learning were studied intensively, but comprehensive books on learning never mentioned perceptual learning. Developmental psychology, a younger branch of the science than experimental psychology, was almost equally negligent, but for better reasons — no one had devised feasible, reliable methods for studying early perceptual development.

"It is gratifying, therefore, to see that the problems discussed in this book and the attempt to provide a frame-work for understanding them have had an impact. The book alone, however, was not responsible for the progress that has taken place since its publication in our knowledge of perceptual development. There is always an element of luck in the success of a book or a theory. There has to be an audience ready to listen and experimental progress depends on concomitant advances in technology. Fortunately, the theory and these factors appeared together at the right time. Psychologists were dissatisfied with S-R learning theory and were ready to pay attention to a theory of perceptual learning. At the same time, new methods of studying perception in infants were being worked out and a whole new field of research opened up.

"A third factor explains why this book is widely cited. It has an important field of application. While I was writing the book, I was conducting research on processes involved in learning to read. Reading was making a comeback as an area for scientific study. Granting agencies were generous with funds, and my own work made the connection between a theory of perceptual learning and learning to read.

"It is interesting to consider progress in the book's field since its publication. The theory of perceptual learning in adults has progressed scarcely at all. Work on reading has burgeoned. There has been a surge of research on perception in infants and very young children, accounting for many of the citations. I have recently directed my own research to this area, and I find that the theory generating my experiments is reflected more and more in work of others on similar problems. As we discover more about early development, it will be possible to refine the theory of perceptual development and to provide guidelines for applied work.

"A recent review of the subject can be found in *Review of Child Development Research*."¹

1. Appleton T, Clifton R & Goldberg S. The development of behavioral competence in infancy. *Review of child development research*. (Horowitz F D. ed.) Chicago: University of Chicago Press. 1975. Vol. 4, p. 101-85.