Secondary reinforcing properties of informative and non-informative stimuli: Reply to Seligman

by Bert Forrin

Seligman's (1966) comment on our recent investigation of the Egger-Miller hypothesis (McKeever & Forrin, 1966) seems to reflect a basic disagreement as to the definition of the term *critical cue*. In our experiment we sought to compare the secondary reinforcing properties of two cues distinguished on the basis of their prior significance in a brightness discrimination problem: a cue discriminative for reinforcement but not present in the goal region (a nonredundant predictor of reward) and a cue present in the goal region but irrelevant to the acquisition of the required discrimination (a redundant predictor of reward). By the discriminative or choice-point cue we referred specifically to the *brightness* (black or white) of the entrance door leading to the antechamber of identical brightness and followed by the baited goal box of complementary brightness (white when the positive discriminandum was black and vice versa). By the goal box cue we referred, in like fashion, to the *brightness* of the reinforced goal region. Antechambers were interposed between entrance doors and goal boxes on practical rather than on logical grounds; they were intended to eliminate the possibility that Ss at the choice-point might, by pushing the swinging doors forward, catch sight of the brightness of the baited goal chamber and guide their behavior accordingly.

It is our view, then, that during discrimination training two brightness values—say, black and white, in that

order—became the sole cues predictive of reinforcement; the first was informative, the second redundant. All structural features of the maze, save brightness, were uncorrelated with reinforcement and were, therefore, neither informative nor predictive of reward; no special significance can be attached to the non-brightness stimulus properties of doors, antechambers, or goal boxes. In this light, and in the absence of evidence to the contrary, we find no reason to suspect that, during testing, a *black* door would prove more reinforcing than a *black* chamber. We construe Seligman's comments as suggesting only that our findings might have been stated with greater precision: with respect to the subsequent acquisition of a position habit, the brightness of the prior positive discriminandum was no more potent a secondary reinforcing stimulus than the complementary brightness of the former positive goal box. We find, however, no justification for the conclusion that this result offers support for the proposition—admittedly conceptually attractive—that the secondary reward value of a cue varies inversely with its redundancy.

References

- McKeever, B., & Forrin, B. Secondary reinforcing properties of informative and non-informative stimuli. *Psychon. Sci.*, 1966, 4, 115-116.
Seligman, M. E. P. Comment on McKeever and Forrin. *Psychon. Sci.*, 1966, 5,

Erratum

FORRIN, B. Affect conditioning associated with the onset and termination of electric shock. *Psychon. Sci.*, 1966, 4(5), 191-192—The labels on the curves in the upper left hand quadrant of Fig. 1 should be reversed; for "Onset" read "Offset" and vice versa. As correctly stated in the text, "the performance decrement associated with the onset cue exceeded that associated with the offset cue"