Reply to Babb

N. S. SUTHERLAND, *University of Sussex, Falmer, Brighton, Sussex, England*

It seems worth making four brief points about Babb's (1968) criticisms of Sutherland & Andelman (1967).

(1) Babb alleges that we "criticized" his experimental design. We made no such criticism either implicit or explicit. We merely pointed out that the "finding" of his experiment "of most interest for our present purposes" could be explained either in terms of selective attention or in terms of generalization decrement. When animals are trained with two relevant cues for a fixed number of trials and are tested with one, they sometimes perform less well on the tests than when they are trained with only one cue for the same number of trials. This result (obtained by Babb) could be caused either by generalization decrement or by the animal learning less about a single cue at the first stage of the experiment, or by both factors. We nowhere deny that generalization decrement cannot account for Babb's own results. We were interested only in discovering whether when two cues are relevant in training less is *learned* about one than when only that cue is relevant.

(2) We did not attempt to repeat Babb's experiment. In our first experiment, we obtained the surprising result that, when generalization decrement was eliminated, animals learned more about one cue when there were two relevant cues present in training than when there was only one. This result can be explained neither in terms of generalization decrement nor in terms of selective attention; hence, we postulated a "hierarchy of analyzers." Since this was not postulated to explain Babb's

result, and since neither generalization decrement nor selective attention can explain our own result, it is not clear why postulating such a hierarchy conflicts with "the law of parsimony."

(3) Babb argues that in our second experiment generalization decrement was not controlled, but his argument is obscure. The group trained with two cues was trained with different values of the second cue (rubber-metal) on each side of the jumping platform and tested with both arms having the same value (rubber on some trials, metal on others); similarly one control group trained with one cue had different values of the irrelevant rubber-metal cue present on each side of the platform during training and it had the same values during testing. The second cue, therefore, changed from training to testing to exactly the same extent for the experimental group and for one control group and both groups should have suffered the same amount of generalization decrement. Generalization decrement refers to a change in the stimulus configuration impinging on the animal at the time when the instrumental response is made; it does not refer to a change in reinforcement contingencies.

(4) Babb is correct in saying that the difference in errors made by two of his groups was larger than we reported. We apologize for our carelessness in reading his table.

REFERENCES

- BABB, H. Reply to Sutherland and Andelman, *Psychonomic Science*, 1968, 13, 283.
SUTHERLAND, N. S., & ANDELMAN, L. Learning with one and two cues. *Psychonomic Science*, 1967, 7, 107-108.