Effects of a "boredom" treatment on children's simple RT performance

GORDON N. CANTOR[1]
UNIVERSITY OF IOWA

First-graders were given alternating blocks of trials on a picture-viewing and a simple RT task. Half the Ss were "bored" during picture viewing via repeated exposure to a simple geometric form; the remaining Ss viewed nonrepeated colored pictures of high interest value. Bored girls had significantly slower travel speeds on the RT task than did nonbored girls. For boys, a difference of only slightly lesser magnitude, but in the opposite direction and nonsignificant, was obtained.

In his analysis of exploratory behavior, Fowler (1967) suggests that continued exposure of an organism to an unchanging stimulus situation serves as a source of generalized drive (D) for that organism. The present study was designed to test the applicability of this assertion to child behavior by exposing Ss to alternating blocks of picture-viewing and simple RT trials, half the Ss (bored) viewing repeated presentations of a simple geometric form and the remaining Ss (nonbored) viewing nonrepeated presentations of pictures assumed to be of high interest value. It was expected that an increment in D due to boredom would enhance RT performance.

Subjects [2]

The Ss were 60 first-graders with a mean CA of six years, eight months. There were 15 boys and 15 girls in each treatment group.

Apparatus

Two apparatus units were placed side by side, each with its own S chair. Seated on the left-hand chair, S faced a screen upon which stimuli were projected from behind via a Kodak Carousel projector. Seated on the right-hand chair, S faced an RT apparatus consisting of a vertical panel containing a light aperture and a horizontal panel projecting toward S from the base of the vertical panel. The horizontal panel had mounted on it a start button located 5/8 in. from the near edge of the panel and a response button placed 8-1/4 in. from the start button. The two buttons and the light aperture all fell on the midline of the apparatus.

Method

The Ss were run individually. Five blocks of 10 picture presentations each were alternated with five blocks of eight simple RT trials. The bored group viewed 10 8 sec projections of a cross (black on white) in each block of picture viewing trials. The interstimulus interval was approximately .5 sec. The nonbored group viewed 10 different colored slides (mainly action shots of children, animals, etc.) in each block of picture viewing trials, with no picture repetitions occurring across the 50 viewing trials. The stimulus and interstimulus intervals were the same as for the bored group.

Following a given block of picture viewing trials, S changed chairs and placed a finger on the start button of the RT apparatus. On each trial, E said "Get set," and then presented the light stimulus following a 2 or 3 sec anticipation interval. The S's pressing of the response button deactivated the light. Each RT trial was begun with S's finger depressing the start button. An electric clock was activated at the time of light onset. The S's removal of his finger from the start button stopped that clock and activated a second one which, in turn, was deactivated upon depression of the response button. Thus, measures of start and travel time were obtained on each RT trial. Following a block of RT trials, S returned to the other chair for the next picture viewing sequence. The intertask intervals were approximately 5-10 sec in length.

Results and Discussion

Start and travel times obtained from the RT task were reciprocalized to produce speed measures. These were first analyzed using a mixed analysis of variance design. Bored vs nonbored and sex were between-Ss variables, and trial blocks (five blocks of eight trials each) was a within-Ss variable.

For start speed, the only significant effect was that for trial blocks (reflecting a decrease in start speed across trial blocks). For travel speed, the following effects were significant: (a) sex (males faster than females) ($F = 11.42$, $df = 1/56$, $p < .01$); (b) bored vs nonbored by sex ($F = 5.24$, $df = 1/56$, $p < .05$); and (c) the triple interaction ($F = 2.89$, $df = 4/224$, $p < .05$). The interactions were followed up with two major sets of analyses. First, five separate 2 by 2 factorials were run (one for each trial block), with bored vs nonbored and sex as the variables. In all five analyses, sex was a significant effect (males faster in each case). In addition, the interaction of bored vs nonbored with sex was significant on trial blocks two ($F = 4.12$, $df = 1/56$, $p < .05$), three ($F = 7.16$, $df = 1/56$, $p < .01$), and four ($F = 5.84$, $df = 1/56$, $p < .05$). However, t test follow-ups failed to reveal any significant boredom effects for males or females on any of the three trial blocks in question.

The second major set of analyses included two mixed designs (one for each sex) in which bored vs nonbored was a between-Ss variable and trial blocks was a within-Ss effect. Figure 1 presents the means pertinent to these analyses.

For females, the boredom effect was significant

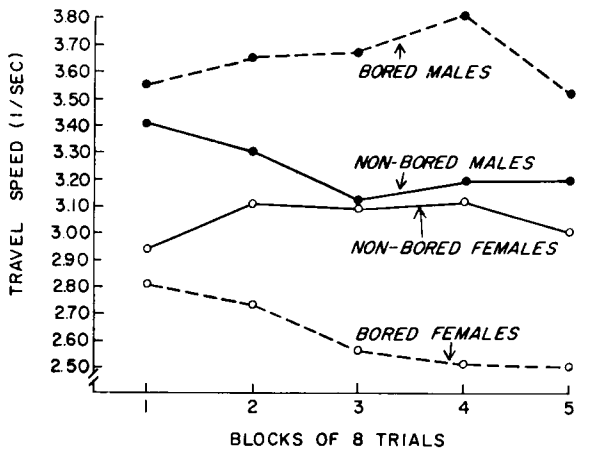

Fig. 1. Mean travel speeds for the four subgroups across trial blocks.

($F = 4.47$, $df = 1/28$, $p < .05$), the bored females responding *slower* than the nonbored females (mean speeds of 2.62 and 3.04, respectively). In contrast, no significant effects were obtained in the analysis for males. As indicated in Fig. 1, however, the bored males did respond faster than the nonbored males (mean speeds of 3.64 and 3.24, respectively). The male data were considerably more variable than the female, the error mean square for the former being more than twice that for the latter.

The finding for the females is clearly not in accord with the prediction made from boredom theory. Though the mechanism responsible for the female boredom effect is not apparent to the writer, the fact that a significant difference was obtained for travel but not start speed suggests that a motivational (rather than an attentional) phenomenon was involved. The (nonsignificant) difference in the expected direction for males is in accord with the prediction. In view of the consistency of this difference across trial blocks and the relatively variable nature of the male data, this finding would appear to call for attempts at replication.

Reference

FOWLER, H. Satiation and curiosity: Constructs for a drive and incentive-motivational theory of exploration. In K. W. Spence and Janet T. Spence (Eds.). *The psychology of learning and motivation: Advances in research and theory,* Vol. 1. New York: Academic Press, 1967.

Notes

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