

## LENGTH OF SPIRAL AFTER-EFFECT AS A FUNCTION OF DRIVE

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There is a dearth of studies investigating the effect of drive on perceptual phenomena, such as the rotating spiral after-effect. In the present study, the performance of 245 industrial applicant apprentices studied under a condition of high drive (they were under the impression that the test was part of a battery administered for selection purposes) was compared with that of 80 apprentices of similar age, sex, and intelligence who were administered the test under low drive conditions, i.e., long after selection had taken place. Also given are scores for 17 university students and 8 psychologists tested under conditions of presumably low drive, i.e., without special motivation. Conditions of testing and mean scores of the high drive group have been given elsewhere (Holland & Eysenck, 1960). As will be seen from Fig. 1, stimulation times for the low drive groups were not identical at all points with those of the high drive group, although covering the same range.

Except for the 15-sec. stimulation after-effect, the scores for the low drive groups all lie some 4 to 6 sec. higher than those for the high drive group. These values should be compared with the absolute after-effects of the high drive group, ranging from 13.06 sec. (15-sec. stimulation) to 19.05 sec. (120-sec.

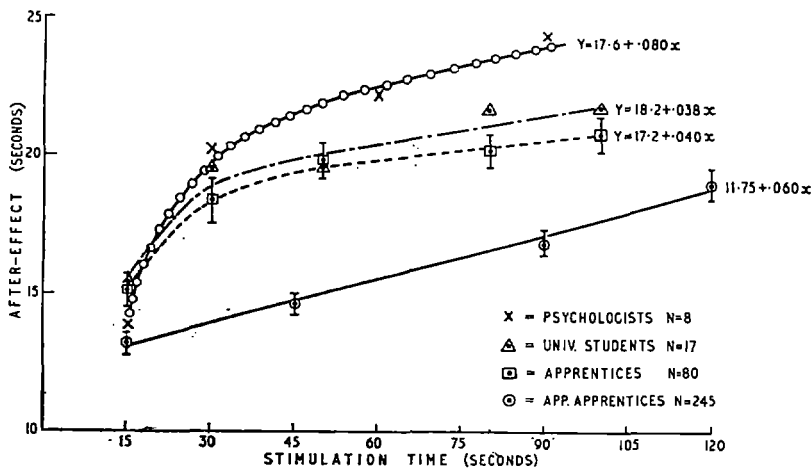


FIG. 1. Performance of various groups under different levels of drive

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stimulation). For the 45-sec. stimulation period, the difference between high and low drive groups (apprentices only) is almost exactly equal to 1 *SD*; for the other two low drive groups it is even greater. Except for the 15-sec. stimulation period, the other data for all groups can be considered as straight-line functions, and their formulae have been included in Fig. 1, to make comparison easier.

There is no doubt about the significance of the observed differences; the standard errors of the observed values have been indicated in connection with the means of the two apprentice groups in Fig. 1. It appears that high drive reduces significantly the length of spiral after-effect. One possible explanation of this phenomenon may relate to the greater build-up of inhibition permitted by higher drive levels (Eysenck & Maxwell, 1961). It should be possible to test this hypothesis by examining the reminiscence effects for high and low drive groups in connection with spiral after-effect. The existence of such reminiscence effects has been demonstrated by one of us elsewhere (Eysenck & Eysenck, 1960). The results do not confirm a view quite widespread, namely, that under low drive *Ss* would be less watchful, and would say "finished" earlier than those under high drive, who would be trying to make quite sure that no further rotation was observed. It is of course possible that this factor was in fact present, but so much weaker than that posited above that it could not be observed in the final scores.

#### SUMMARY

*Ss* ( $N = 350$ ) under high and low drive, respectively, were administered the rotating spiral. It was found that high drive significantly reduces the duration of after-effect.

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