

ALTERNATION IN CHOICE BEHAVIOUR AND EXTRAVERSION

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It may be deduced from Eysenck's general theory relating extraversion to exaggerated inhibitory effects that alternation would occur with greater frequency in extraverted Ss as compared with introverted Ss; the assumption is of course made in this context that alternation behaviour is due to central inhibition or satiation (1). Some animal experiments, using Eysenck's drug postulate, have given support to this general view (2), but no direct experimental evidence seems to be available regarding human Ss. In the present experiment, 48 army volunteers of between 20 and 30 years of age were tested, their personality assessments being obtained with the newly developed Eysenck Personality Inventory (3), which gives scores for Extraversion (E), Neuroticism (N), and a Lie scale (L). The distribution of these scores was not dissimilar to that found with the standardization group.

The alternation test itself consisted of two parts. In the first of these Ss sorted 100 picture postcards into five piles according to their individual preferences; the pictures were all by recognised painters and ranged from classical through impressionistic to ultra modern. Each person then chose the two best-liked pictures (first pair), and also the two next-best liked (second pair). He was then seated in front of a specially constructed tachistoscope which allowed him to view one or the other picture in

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a given pair; and was told that he could alter the picture seen by pushing a button. His score was (a) the number of alternations made, and (b) the average time in seconds each picture was looked at before changing; as the latter score is more informative, it has been used in this report. Two five-minute tests were performed on each person, the second pair of pictures following the first after an average of 5 min. The test-retest correlation (product-moment) for mean time was 0.81; which is significant at $p < .01$.

Inspection of the results suggested that times for viewing increase from first to second test, and that this increase might be different at different points of the practice curve. In order to assess this observation statistically performance scores were Vincentised in a rough and ready fashion by averaging scores over the first observation period (A), the midmost (B), and the last (C); this obviates the difficulty created by the fact that different observers have different numbers of observation periods (Fig.1). Analysis of variance was done separately for the A, B and C scores, both for tests (first against second) and for personality (E, Intermediate, and I). No significant interactions were observed: personality differences were significant ($p < .05$) for A, but not for B or C, and period differences were significant ($p < .01$) for A and B, but not for C. We may conclude that extraverts alternate more (have shorter inspection periods) at the beginning of the test, but that this superiority wears off; and that alternation periods are longer during the second test as compared with the first, except towards the end of the test.

Correlations (product-moment) were run between test scores and personality scales: neither N nor L gave significant results. E correlated -0.20 with total length of inspection times, summed for tests 1 and 2; this is significant ($p < .05$) for a one-tailed test. The correlation for test I alone is equally significant, while that for test 2 just fails to be significant.

When A, B and C scores were correlated with E, correlations at the $p < 0.1$ level (one-tail) are observed for A_2 and B_2 ; all the other correlations are negative as predicted but fall short of significance. ($r_{E; A_2} = -0.31$; $r_{E; B_2} = -0.29$).

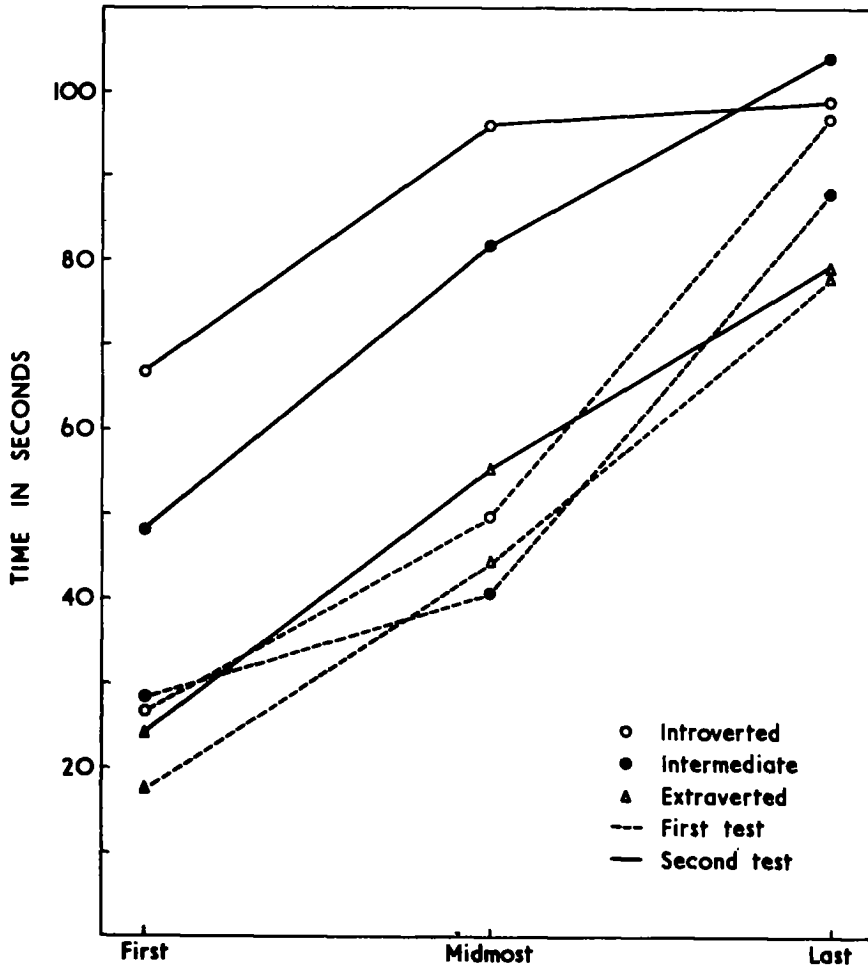


FIG. 1.

Inspection times of pictures during first and second test, and at first, midmost and last exposure, given separately for introverts, extraverts and intermediate subjects.

Discussion

The results on the whole bear out the hypothesis that inspection periods will be shorter for extraverted than for introverted Ss. Whether this finding can be interpreted in terms of inhibition/satiation producing alternation must of course remain doubtful; it is to be noted that contrary to expectation alternation periods lengthened during the course of the test, a finding observed both from test 1 to test 2, and also from period A through B to C. Inhibition/satiation might have been expected to have shown cumulative results, with a shortening rather than a lengthening of alternation periods. Observation of the conduct of Ss, discussion with some, and reports of introspections suggest that the experimental conditions permit of other ways of dissipating inhibition besides alternation behaviour. Thus S might "go outside the situation" by looking away altogether from the picture in the tachistoscope; he might try to engage E in a discussion; or he might play some form of game with the cards, such as counting items in the picture, or weaving stories around them. Two Ss (both extraverts) found the task so "boring" that they gave up without completing it; they are of course not included in this account. It seems reasonable to speculate that alternative ways of dissipating inhibition were increasingly and differentially resorted to as the experiment progressed, thus increasing alternation times and decreasing the amount of correlation with E. Future experiments might with advantage attempt to control or at least measure inhibition-produced behaviour of this kind, in order to test the truth of these hypotheses.

Summary

A reliable choice alternation test was given to 48 Ss in which S could alternate looking at one or other of two picture postcards (paintings) chosen by him from 100 cards. He was scored for average time spent on each presentation, both on the original test and on a repetition, using two other pictures chosen in a similar manner. Extraverted Ss were expected and found to have shorter alternation periods, particularly at the beginning of each

test; alternation periods lengthened during each test, from test 1 to test 2, and correlations between E and alternation period decreased as the test went on. An hypothesis is presented to account for these additional facts.

References

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