

# Curiosity behavior in normal and mentally retarded children\*

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Normal and mentally retarded preschool children were tested for curiosity behavior and general activity. Although general activity was not found to be related to IQ scores, the results did indicate that the normal children's level of curiosity behavior was greater than that of the mentally retarded ones. It was suggested that previous investigators have not reported a relationship between curiosity behavior and intelligence because of their use of Ss having a restricted range of IQ scores.

There is little evidence to suggest that measures of intelligence and curiosity are related (King, 1968; Day, 1968; Penney & McCann, 1964). Possibly this is due to the use of Ss with only a narrow range of IQ scores. Since our measures of intelligence and curiosity are, at best, only moderately adequate in assessing the amount and variety of stored information (intelligence) and information-seeking behavior (curiosity), it is not surprising that these two behaviors have been reported to be unrelated. The primary purpose of this study is to investigate the relationship between intelligence, employing Ss with a wide range of IQ scores and two measures of curiosity.

## METHOD

Six female and 16 male children from a day care center (13 Ss, mean CA = 4.5) and a special enrichment center (9 Ss, mean CA = 5.0) were used as Ss; the average IQ scores, as measured by the Stanford-Binet, were 101 and 55, respectively.

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The experiment was conducted in 12 x 15 ft classrooms containing a small table and chairs. Prior to testing, the Es spent 2 days with the children.

## Multiple Stimulus Test

Twelve junk objects placed on a table served as stimuli. The number of objects picked up and manipulated served as measures of activity and curiosity, respectively. A manipulative or investigatory response was recorded whenever the child turned the object in a vertical or horizontal direction. The number of objects picked up served as a measure of activity. The child was taken to the experimental room and told he could play with the toys on the table. It was emphasized that they could pick up the stimuli and play with them. Testing was continued for 5 min or until the S left the table.

## Forced-Choice Test

A toy jeep, doll, stuffed dog and rabbit, and a 14 x 6 x 8 in. red and green cardboard box served as stimuli. The child, here, was first presented with the jeep, doll, dog, and rabbit and told to pick out the one he liked best to play with. After the S selected a toy, the remaining toys were removed and the child was asked to choose between the preferred toy and the unknown toy in the box. Curiosity was inferred when the child chose the box over the preferred toy.

## RESULTS AND DISCUSSION

The results were unambiguous. Although the retarded children's activity scores did not differ from those of the normal Ss (mean number of pick-ups = 19.8 and 20.4, respectively;  $F < 1.00$ ), the former Ss manipulated the stimuli less often than did the latter ones (mean vertical and horizontal manipulations = 10.3 and 23.5, respectively;  $F = 6.28$ ,  $df = 1/20$ ,  $p < .025$ ). The forced-choice test indicated similar results; 56% of the retarded and 84% of the normal children chose the box over the preferred toy. A chi-square test based on chance expectancy showed that the retarded children showed a lack of preference for the box ( $\chi^2 < 1.00$ ), whereas the normal children's choice of the box was significantly greater than chance ( $\chi^2 = 9.00$ ,  $df = 1$ ,  $p < .01$ ). There were no apparent sex differences in the children's activity and manipulation scores ( $F_s < 1.00$ ). Thirty-three percent of the females and 25% of the males chose the toy over the box.

The present results demonstrating a relationship between IQ and investigatory measures support an information theory analysis of intelligence (the amount and variation in acquired informational units) and curiosity (motivational aspects of uncertainty reduction). That is, a necessary condition for intelligence is information-seeking behavior. These results also suggest that previous investigators failed to show a relationship between intelligence and curiosity measures because they employed Ss having a restricted range of IQ scores.

## REFERENCES

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