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ABSTRACT

This paper gives the results of a study of two measures of delay gratification: age and socio-economic status (SES) in young children. The subjects included 180 four-, five-, and six-year old children. Sixty children at each age level were selected, twenty children within each level of high, 20 of middle, and 20 of low SES. Delay choice scores were unrelated to SES. Age proved to be the only significant variable. The six-year olds were significantly more willing to delay gratification than the five-year olds, who in turn obtained higher delay choice scores than the four-year olds. This study, within the limits imposed by the tasks used and the groups involved, lends no support to the thesis that lower class children are less willing or able to delay gratification than other children of the same age, or that they are less willing to trust adults. (KG)

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TWO MEASURES OF DELAY OF GRATIFICATION: AGE
AND SOCIOECONOMIC STATUS IN YOUNG CHILDREN

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Delay of gratification has been shown to be a construct which enters into meaningful relationships with a number of other variables which can be subsumed under a more generalized notion of "ego strength" or "impulse control". For example, the choice of delayed reinforcement increases with age and intelligence (Mischel & Metzner, 1962). Choice of delayed reinforcement also has been shown to differentiate between degrees of pathology (Shybut, 1966) and to be affected by family and cultural patterns (Mischel, 1961). In addition, delay choice has been shown to be determined partially by situational conditions (such as examiner variables, length of delay interval, and experimental manipulation of probability of reward) which would be assumed to have an effect on S's expectation of reward in the particular situation, but would not represent the generalized ability to delay gratification, as measured in studies referred to above (i.e., choice of a larger delayed reward in preference to an immediate smaller reward), may be thought of as determined by two factors (a) a generalized and relatively enduring personality or motivational characteristic which may be called ego strength, and (b) an individual's expectation of reinforcement in the particular situation, which may be called trust. Although the theoretical and practical implications of the distinction would seem to be important, no effort has been made previously to distinguish between these two determinants of delay choice.

The existence of another method of measuring delay choice makes such a distinction possible. Block and Martin (1955) measured delay of gratification by the number of pieces of candy each child obtained (by cranking the handle of a toy) when it was understood that he could have as many pieces of candy as he earned until he ate one. This score proved to be related positively to constructive play behaviour following frustration.

The determinants of inability to delay gratification seem particularly relevant to questions involving the relationship of delay of gratification to academic achievement and socioeconomic status (SES) in children. Maitland (1967) found choice of delayed reinforcement to be related directly to SES

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and inversely related to family disorganization. Seagull (1965) found the ability to delay gratification to be related to the degree of trust but not to SES. Additionally, some investigators have suggested that low SES children have lower frustration tolerance, while other theorists suggest that low SES children have less reason to trust their environment. Since poor academic achievement and low SES seem to be frequent associates, it is important to inquire whether these low SES children do not perform well academically because of a lack of belief in their chances of obtaining the rewards associated with school, or because of failure to inhibit their own impulses in seeking immediate gratification.

The present study is designed to assess the relative importance of these two possible components of delay of gratification in young children of low, middle and high SES. Because age has been shown to be related to impulse control, one would expect that older children would perform better on both tasks than younger. If poor impulse control is associated with low SES, one would expect that low SES children would be inferior to both middle and upper class on both tasks. If low SES children have equally strong impulse control but less trust, low SES Ss would be expected to be inferior on the delay choice task but not on the task in which impulse control only is involved ("work"). Correlations between the two scores, therefore, should be lower for low SES children than those of higher SES.

METHOD

The Ss included 180 4-, 5-, and 6-yr.-old children. Sixty children at each age level were selected - 20 children within each age level of high, 20 of middle, and 20 of low SES.

The Ss were seen individually. A culture-free intelligence test was administered followed by the delay choice task. One suppositional and two actual choices were included.

1. Suppositional Choice - The child was given a suppositional choice between a less and more highly valued toy now or later.
2. Candy Choice - The child was given a choice between one piece of candy now and five pieces of the same kind of candy the next day.
3. Money Choice - The same procedure as that above was followed, except that one and five pennies, respectively, were substituted for the candy.

Children were assigned a score of 2 for a delayed choice in each of the real choice situations and a score of 1 for a delayed choice in the suppositional situation. The possible range of delay choice scores was, therefore, 0-5.

4. Work Task - In the last task, S was asked to put dried beans through a hole in a plain rectangular box. It was explained that he could continue the game as long as he liked, and that he would receive one candy for every five beans placed in the box. It was explained also that he could continue to play the game until he ate one of the candies, but that when he did so, the game was over and he could no longer play.

RESULTS AND DISCUSSION

The effects of age and SES upon the two delay of gratification measures were tested by analyses of variance. All analyses of the work measures were performed on the scores which had been normalized by means of a log transformation.

When delay of gratification was measured by the delay choice method, age proved to be the only significant variable. The 6 year olds were significantly more willing to delay gratification than the 5 year olds, who in turn obtained higher delay choice scores than the 4 year olds.

The increase with age of this measure of delay of gratification has been observed previously and repeatedly in older children. Our findings confirm previous work. To the writers' knowledge, this is the first attempt to use this measure of delay of gratification at the preschool ages; it is of some interest that children so young appear able to grasp the idea and to respond appropriately.

The interpretation of the work scores was complicated by an Age X SES interaction. SES was significantly related to work scores at the 4- and 5-year old levels, but not at the 6- year old level. Contrary to expectations, the low SES Ss obtained significantly higher scores in the work situation at 4 years of age than either the middle or upper class youngsters, upper class Ss in their turn obtaining higher scores than middle class children. Positions were reversed for the 5 year olds; at this age level the upper class children obtained significantly higher scores than either the lower or middle class groups. The latter two groups did not differ significantly from one another. Results of work scores differentiated between age groups only at the middle class level; here the 6 year olds obtained significantly higher scores than the 4 and 5 year olds. The mean transformed scores of the latter two groups were virtually identical.

It may be concluded, therefore, that scores on the work measure were not related to age. The one significant finding (the superiority of the 6 year old group within the middle class level) is probably spurious.

Delay choice scores were unrelated to SES. The interaction of age and SES, resulting in opposite findings at the 4 and 5 year old levels, rendered the interpretation of these results for work scores difficult in terms of any theory. The most parsimonious conclusion would seem to be that, at the age levels studied, SES bears no consistent and meaningful relationship to either measure of delay of gratification.

The two delay of gratification tasks were correlated with one another at each age-SES combination and at each age and SES level separately. The resultant Pearson product moment correlations ranged from .01 to .45. For the total group of 180 Sx, the correlation was low but statistically significant ($r = .20$). The correlations between the two delay of gratification measures were no greater for younger Ss and those of higher SES than older low SES children. The trend was in the opposite direction.

The present study, within the limitations imposed by the nature of the tasks used and the groups involved, lends no support to the thesis that lower class children are less willing or able to delay gratification than other children of the same age - or, for that matter, that they are less willing to trust adults.

However, unanswered questions still remain. Would the same results hold at older age levels? What about the subjective importance of various kinds of rewards? The reinforcements used in this study were small material ones, perhaps less valued by more affluent children. Might the circumstances be otherwise in the school situation? Have lower class children learned to value the typical school relevant rewards, or are they less meaningful than to children of higher SES?

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