

CHAPTER VI
INTERPRETATION AND DISCUSSION

The significant effect of reinforcement at .05 means that at a probability of .05 or only 5% of the time that reinforcement is used on children doing a puzzle to test motor performance, will reinforcement have no effect. 95% of the time, reinforcement will have a significant effect. Differences in the performances of the sexes are very insignificant meaning that the boys and girls performed and completed the puzzle at almost the same speed. Differences in performance of each grade level is significant at .01 therefore this means that children in these children grade levels perform with different speeds 99% of the time. The interaction of reinforcement and sex is significant which shows that whether reinforcement influences motor performance or not depends on the sex of the child and whether or not sex influences motor performance depends on reinforcement. Likewise, the other interactions, reinforcement and grade level, and sex and grade level have the same interpretation as above. However, it is curious to note that the interaction of the three independent variables is not significant. This may mean that when taking all three together, one of the variables has a negative effect on the other two. In order to pinpoint exactly which variable, it may then

be necessary to hold one variable constant while varying the other two variables. The fact that difference in sex did not have a significant effect on motor performance may be due to the period at which the children are. That is, during this period boys and girls have almost the same steady growth patterns, unlike in their infant to pre-school years where girls accelerate faster than boys and unlike the adolescent years.

An attempt at randomization to minimize intervening variables was done but not sufficiently enough. That is, although a control group was utilized to more or less even out the differences (as in the Campbell and Stanley designs) there are still several loopholes. One of these is the fact that it was the teacher who picked out the subjects, thus she may have picked her "best" pupils although the purpose of the experiment was explained to her clearly. This bias on the teacher's part is hard to eliminate because as teachers, they naturally have their favorite star pupils. In order then to avoid this, the E or an objective outsider must be the one to pick out the Ss. Another loophole may be that of experimenter effect. Perhaps because the E was alone in doing this experiment, her sex may have been a factor which may have affected the performance of the children. The girls may have related to the E more than the boys

because they were of the same sex or vice versa. Thus, those who related to the E may have tried to please the E by doing well in the solution of the puzzle. Another extraneous variable left uncontrolled is the novelty of situation mentioned earlier, for novel events have been shown to have reinforcing properties. So in addition to the verbal reinforcement, the situation itself was a reinforcer, although of course this is hard to avoid as experimental situations often are novel. In connection with this, the puzzle itself may have served as an additional reinforcer as putting the right piece in place will immediately show the Ss that what they did was right and may have given them satisfaction and thus reinforcement. The places where the experiment was held were not also controlled. As one might remember, the Kindergarten children did their puzzle in the principal's office and this may have given them anxiety. Because of course, they already have pre-conceived notions about the authority of the principal and being in her office might have a different connotation to them. Although of course, the E tried to put the children at ease by talking to them casually and telling them that we would be playing a game. The Grade I children did their puzzle in the library at the second floor. As one very well knows, the library is not a very private place. On the contrary

the library has many people milling around and where many children could just approach the table and stare at the Ss and the Ss of course would be conscious of the stares thus their minds would be diverted from their task. The library was utilized due to the unavailability of a secluded empty classroom. The Grade 2 children were better off since at the time they did their puzzles an empty classroom was available thus they had the most "ideal" environment for the experiment and thus, they have performed a little better than the Kindergarten children. An action which may have caused anxiety to the children is the fact that they saw the stop watch. Thus they became aware that they were being timed. As is commonly known awareness of being timed puts additional pressure on a person thus making anxiety crowd and divert the concentration.