A modified form of Sigel's Styles of Categorization Test was constructed, permitting the independent measurement of Descriptive Part-Whole (DPW), Relational-Contextual (RC), and Categorical-Inferential (CI) categorizations. The test was administered to 243 5th, 8th, and 11th graders on two occasions. At each grade level, a majority of categorizations were CI in nature, followed by a lower frequency of DPW responses, and a minimal frequency of RC responses. DPW responses of boys exceeded those of girls, and categorization modes were independent of intelligence. Reliable individual preferences for one or more categorization modes were obtained, as well as substantial individual differences in such preferences. Results were discussed in terms of hierarchical cognitive stage theory and a conceptual orientation shift hypothesis. (Author/JMB)
The Relationship of Social Participation to Role-Taking Skill in Preschool Children

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Summary

Twelve male and eight female preschoolers were individually administered a measure of role-taking skill. Moreover, each child was observed during free play on 30 consecutive school days. The behaviors of the children were coded according to the social participation categories of Parten (4). Significant negative relationships were found to exist between the role-taking task and the incidence of parallel and onlooker-unoccupied activity. Role-taking skill was positively related to associative play. The results provide correlational support for Piaget's belief that peer interaction leads to a decline of egocentrism in childhood.

A. Introduction

Piaget (5) has posited that children who are active and cooperative participants in peer interaction will be less egocentric than their less social age-mates. The rationale underlying this assumption is that during social interaction the child is often faced with conflicts such that he is forced to take the points of view of others. In an effort
to discover the veracity of this notion, a number of recent studies (e.g., 2, 6) have attempted to relate sociometric popularity with the child's ability to communicate information to a listener. Ostensibly, sociometric popularity has been equated with a high degree of peer interaction, while communicative skill has served as a measure of egocentricity (3). The results of these studies have been equivocal, sometimes reporting significant correlations (6), and at other times non-significant correlations (2) between measures.

To investigate the aforementioned Piagetian premise, it appeared that a more logical approach to take would be to consider the relationship of the quality of actual peer interaction and the ability to take the role of others into account. Using the classic Parten (4) definitions of social participation, it was hypothesized that a positive relationship would exist between the frequency of associative and cooperative play and role-taking skill. A negative relationship between the latter measure and the incidence of unoccupied and/or onlooker activity, and solitary and parallel play was also predicted.

B. Method

1. Subjects

The subjects were 20 middle-class, preschool-aged children (12 males, 8 females) attending an on-campus laboratory preschool in Southwestern Ontario. The mean age
of the sample was 3.73 years (SD = .32 years).

2. Procedure and Task Materials

Each child was individually administered a measure of role-taking skill by a male honor undergraduate student. This student, along with a female undergraduate student, observed the social play behavior of each child for 30 consecutive school days. The role-taking data were gathered during the same 30 day interval. The measures are described below.

Role-taking - The measure of role-taking skill was taken directly from Borke (1). Two sets of stories were told to the subjects: (a) stories describing general situations that might make a child feel happy, afraid, sad, or angry, and (b) stories describing situations in which the child tested does something that might cause another child to feel happy, afraid, sad, or angry. The objective was for the subject to choose the facial expression appropriate to the story being told. There were eight stories denoting emotion in the first series, and eight stories denoting emotion in the second. Thus, the maximum role-taking score that a child could attain was 16.

Social participation - Each child was observed during the free play hour for one minute on 30 consecutive school days. The order of child observation was randomized daily. All observations were made from a booth equipped with a one-way mirror and earphones, thereby allowing visual and verbal
categorization of the data. The subject's behavior was classified on a checklist denoting the social participation categories of Parten (4); i.e., solitary, parallel, associative, cooperative, onlooker, and unoccupied behaviors. Definitions for the social play categories were taken directly from Parten (1932).

During each one minute time sample the observer noted the exact number of seconds the subjects engaged in a particular form of play. Thus, if a child was playing beside others for 40 seconds, and was observing the behaviors of other children for the remaining 20 seconds, the observer recorded these times in the parallel and onlooker categories respectively. In order to calculate inter-judge reliability, twenty observations of child's play were simultaneously recorded by the two observers. The percent agreement was 95.0 percent.

C. Results and Discussion

The results indicated that the children engaged in solitary, parallel, associative, cooperative, and a combination of onlooker and unoccupied activities 15.56, 30.15, 28.14, 10.12, and 15.93 percent of the time respectively. The mean number of seconds the children participated in each activity was 280, 542.68, 508.37, 182.11, and 286.84 for the aforementioned categories respectively. The percentages closely approximated those found in Parten's (1932) original study of social play.
Sex differences were apparent in neither the play nor the role-taking data. Performance on the role-taking task was negatively correlated with the incidence of parallel play, $r (19) = -.46, p<.05$ and onlooker-unoccupied activity, $r (19) = -.47, p<.04$. Role-taking skill was positively related to associative play, $r (19) = .43, p<.05$. The correlations between role-taking and solitary and cooperative play were .32 and .27 respectively.

Since cooperative play was a relatively rare occurrence, the non-significant correlation may not be too surprising. Moreover, the finding of a non-significant but positive correlation found to exist between role-taking and solitary play may support the notion that this form of play may not be as immature for three-and four-year-olds as Parten and others have suggested it to be (8). Thus, in the Rubin et al. study (8) approximately 70 percent of the activity of middle-class preschoolers during solitary play was found to be constructive or dramatic. On the other hand, only 55 percent of parallel play was found to be constructive or dramatic. It may be that when three- and four-year-olds choose to be alone, it is for constructive purposes. Those preschoolers who played beside other children, but who did not engage them in conversation, or did not actively share toys and materials appeared to be the most egocentric in the present study. Conversely, sharing,
helping, and talking with others appeared to be a positive correlate or role-taking skill. Thus, the Piagetian notion that active peer involvement should be related to the ability to take the point of view of others was supported by the present data.

The present data also support the earlier findings of Deutsch (2) and Rubin (7) who found actual peer interaction to be negatively related to egocentrism. However, these latter investigators were concerned with the communicative nature of egocentrism; i.e., "how others think", while the present study investigated the role-taking component of "how others feel" (9). None of these studies, however, have investigated the cause-effect relationship between children's social play preferences and the decline of egocentric thought. Future studies would do well to consider the effects of training children to engage in associative or cooperative play on role-taking abilities.
References


8. Rubin, K. H., Maloni, T. L., & Hornung, M. Free play behaviors in middle and lower class preschoolers: