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Agonistic behavior in preschool children: A comparison of same-sex versus opposite-sex interactions

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Patterns of agonistic behavior in preschool children were examined in order to compare same-sex and opposite-sex interactions. Observational reports were supplemented with videotape analysis to provide details concerning three separate measures of agonistic behavior: threats, attacks, and displacements. Significant differences were found in attacks, displacements, and in combined scores for the three measures. Two different explanations are offered: One explanation concerns the socialization of "sex-appropriate" behavior, and the other focuses on the development of dominance relationships in young children.

The influence of gender on the agonistic behavior of children has been examined by researchers using a variety of methodological approaches. Research strategies have included surveys of parents, teachers, and peers (Lott, 1978; Semler, Eron, Meyerson, & Williams, 1967; Wohlford, Santrock, Berger, & Liberman, 1971); projective techniques and clinical diagnoses (Crain & Smoke, 1981; Santrock, 1970); and reports based on naturalistic observation (Barrett, 1979; Fagot, 1974; McGrew, 1972). The primary focus of the research, regardless of the methodological strategy employed, has been the assessment of sex differences in various forms of agonistic behavior. Findings generally indicate a relatively greater level of aggression among male subjects (see, e.g., Eme, 1979; Maccoby & Jacklin, 1974), although it has been shown that situational factors can sometimes eliminate and even reverse this trend (see Caplan, 1975; Frodi, Macaulay, & Thome, 1977).

The emphasis on sex differences in agonistic behavior has the effect of focusing attention on subjects who happen to be the initiators of agonistic interactions. Consequently, other aspects of agonistic behavior, including the relationship between the sex of the aggressor and the sex of the victim, are often neglected. The current study was designed in part to address this issue; therefore, I have concentrated my analysis on patterns of agonistic behavior as they apply to this relationship. I used observational reports and videotape analysis to compare same-sex and opposite-sex incidents of agonistic behavior in a group of preschool children.

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METHOD

Subjects

The subjects included 24 preschool children (13 males, 11 females) enrolled in the McGuffey Laboratory School, affiliated with Miami University in Oxford, Ohio. Subjects' ages ranged from 4.4 to 5.8 years, with a mean age of 5.3 years.

Observation and Recording

Subjects were observed during "free-play" periods which lasted approximately 30 min. Observations were focused on a single subject at a time for a 30-min period. With one "free-play" period scheduled each day, a total of 24 days was needed to complete the study. So that potential order effects could be avoided, the sequence of subjects to be observed was determined randomly.

Before actual data collection began, a period of 5 days was allocated as an adaptation period. During this time, the subjects became habituated to the presence of both the observer and the videotape equipment. In fact, the adaptation period necessary for an observational study of this kind could well be shorter than 5 days, since the subjects found in a laboratory school are generally accustomed to the presence of observers in the form of student teachers and adult supervisors. Although the presence of camera equipment is not a routine occurrence in this setting, the subjects' interest in the apparatus diminished to a minimal level within several days.

Observations were made by a trained observer and were supplemented by filmed accounts of relevant behaviors. In addition, two undergraduate research assistants made independent reports that were used to establish interobserver reliability figures for the behaviors of interest. These behaviors included the following three measures of agonistic behavior.

(1) Threats. This classification includes such behaviors as feigned punches and kicks. Threats are viewed as examples of agonistic behavior in which no actual physical contact occurs, although a threat may clearly lead to some form of physical confrontation.

(2) Attacks. This category includes such behaviors as hitting, kicking, and pushing. It should be noted that the number of attacks observed in this study was probably affected by the presence and potential intervention of the teacher. If observations were conducted in a less con-

trolled setting (e.g., a playground), it is likely that the number of recorded attacks would increase.

(3) Displacements. A displacement is defined as an interaction between two subjects in which one individual, through an explicit or implicit act, causes the other individual to move from a given location. Physical contact, an example of an explicit act, may or may not be involved in a displacement. The mere approach of a dominant individual (an implicit act) is often sufficient cause for a subordinate individual to move away, even in the complete absence of physical contact between the two individuals. A displacement is analogous to the act of *supplanting* that has been used as a criterion of dominance in field studies of nonhuman subjects (see Brown, 1975, p. 85; Struhsaker, 1967).

Frequency counts of the three measures were recorded, as was the specific nature of each interaction (same-sex or opposite-sex). These three measures clearly do not exhaust all possible forms of agonistic behavior. However, researchers involved in similar studies of both human and nonhuman subjects have found such measures to be particularly useful in ascertaining the details of social organization (Addison, 1984; Blurton Jones, 1972; Deag, 1977; Hall, 1967).

RESULTS

Figure 1 shows the relative percentages of same-sex and opposite-sex incidents of agonistic behavior. The differences are clearly substantial, and they are consistent across the three different measures. In order to statistically assess differences in frequencies, a series of Wilcoxon tests for correlated groups was conducted. Four separate tests were conducted: one for each of the three measures of agonistic behavior, and an overall test on the combined data from the three measures. Three of the four tests yielded significant differences at the p=.05 level. For attacks, the Wilcoxon test resulted in a W-value of 9.0 ($n=9$, $p < .02$). For displacements, the test yielded a W-value of 3.0 ($n=9$, $p < .02$). The test on the combined scores resulted in a W-value of 19.0 ($n=17$, $p < .01$) Although the test for differences in threats yielded a nonsignificant value ($W=22.5$, $n=14$, $p < .10$), the direction of the results is clearly consistent with the other findings.

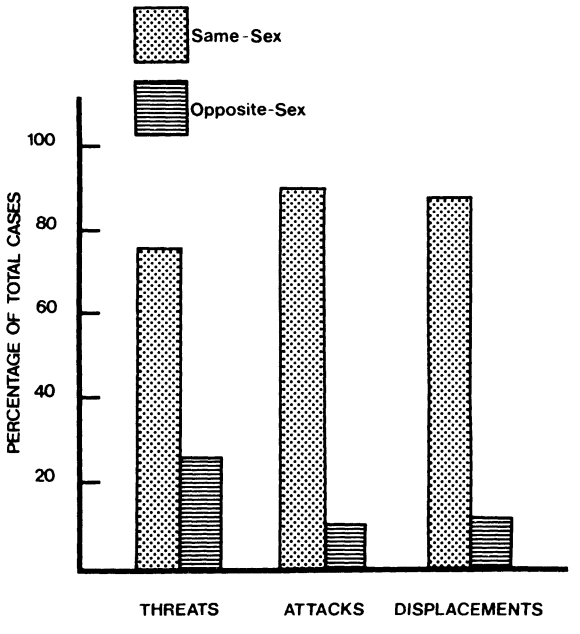

Figure 1. Percentage of cases of agonistic behavior: Same-sex versus opposite-sex interactions.

Interobserver reliability figures were calculated separately for the three measures and also for the combined scores. The reliability figure for threats is $r=.86$, for attacks $r=.96$, for displacements $r=.81$, and for the combined scores $r=.88$.

DISCUSSION

The results indicate that agonistic interactions in preschool children occur primarily between members of the same sex. These findings are consistent with the results from studies of play behavior, which show that preschoolers tend to spend more time playing with peers of the same sex than with those of the opposite sex (McCandless & Hoyt, 1961; Parten, 1933). In fact, this preference for same-sex play groups has been found consistently not only in this culture, but in other cultures as well (e.g. see Clark, Wyon, & Richards, 1969). Of course, play behavior and agonistic behavior are two entirely different processes, and I am not suggesting that they are analogous behavior patterns. However, agonistic interactions among young children often occur in conjunction with play activity (Strayer & Strayer, 1976), and since children seem to prefer to play with same-sex peers, it is not surprising that agonistic interactions usually involve members of the same sex.

One explanation for these findings focuses on the socialization of young children. It has been shown that sex-appropriate behavior in children is rewarded more often than sex-inappropriate behavior (Eisenberg, Tryon, & Cameron, 1984). Because same-sex interactions among children of this age group are often viewed by adults and peers as more appropriate than opposite-sex interactions, these behavior patterns tend to be reinforced. It should be noted that the tendency to engage in social interactions with members of the same sex can be reversed by reinforcing opposite-sex interactions (Serbin, Tronick, & Sternglanz, 1977); but for obvious ethical reasons, this line of research is not applied specifically to agonistic behavior.

In addition, agonistic interactions may serve to establish dominance relationships among group members. Studies of social organization in nonhuman primates have shown this to be the case (Alexander & Bowers, 1969; Kummer, 1971; Strayer, Bovenkerk, & Koopman, 1975), and there is evidence to suggest the existence of a similar process in children (Edelman & Omark, 1973; Sluckin & Smith, 1977). Given this position, the current findings suggest the possibility that male and female children tend to form separate dominance hierarchies. This notion has been offered as an explanation for the lack of intersexual aggression in other species (see Brown, 1975), and it would certainly explain the relatively small number of observed incidents of agonistic behavior involving opposite-sex individuals.

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