

Social Cognition and Behavior Correlates of Preadolescent Chumship

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MCGUIRE, KATHY D., and WEISZ, JOHN R. *Social Cognition and Behavior Correlates of Preadolescent Chumship*. CHILD DEVELOPMENT, 1982, 53, 1478-1484. Previous research on children's friendship has often involved measures that actually gauge their popularity. The present study was an attempt to distinguish behavioral correlates of friendship from correlates of popularity. Friendship and popularity were construed as orthogonal factors. Friendship was defined in terms consistent with Sullivan's theory of preadolescent chumship. Popularity was operationally defined in terms of a traditional peer nomination measure. As predicted by Sullivan, children with friends were more likely than those without friends to display high levels of altruism and affective perspective-taking skill. By contrast, no measures showed significant effects of popularity. Overall, the findings suggest that operational definitions growing out of Sullivan's theory may enrich our understanding of friendship in childhood.

Less than a decade ago, a prominent figure in the field of peer relations described research on children's friendships as "barren of theory" (Hartup 1975). Since that time, there have been efforts to link the study of friendship to Piaget's theory of cognitive development (see, e.g., Selman & Selman 1978) and to Harry Stack Sullivan's (1953) "interpersonal theory" (see Youniss 1980, Youniss & Volpe 1978).

Sullivan proposed a stagelike sequence in the development of interpersonal relations. Children were said to move from a stage (ages 2 to about 5 years) dominated by a need for adult participation, to a stage (4-8 years) in which children have playmates but interact with them in self-serving ways, and then to a third stage (8-11 years), the period of "chumship." In this third stage, children were described as being able for the first time to form an intense attachment to a same-sex friend—an attachment characterized by intimacy and reciprocity. The give and take of this relation-

ship, according to Sullivan, teaches the children to identify others' thoughts and feelings and to behave in ways that are truly altruistic. Research supports parts of Sullivan's theory. Youniss and his colleagues (Youniss 1980, Youniss & Volpe 1978) have found that during the age period from 6 to 14 years, children's conceptions of friendship show increasing emphasis on reciprocity, intimacy, and mutual understanding. Support for some aspects of Sullivan's theory can be found in other studies that were not actually stimulated by the theory. Horrocks and Buker (1951) found that best-friend choices were more stable among 10-year-olds than among younger children, and Gesell, Ilg, and Ames (1956) reported that best-friend relationships were not even characteristic of peer relations until children were about 10 years old. In three studies, roughly Sullivanian progressions were found in the perceived nature of friendship—for example, with young children perceiving friendship as involving common activities, propinquity, and the like, but older children (e.g., sixth graders)

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referring to such factors as intimacy and empathy (Bigelow & La Gaipa 1975, Hayes 1978, Reisman & Schorr 1978) Selman and Selman (1978) reported a somewhat similar progression the young child is said to view friendship as a way of achieving various self-oriented objectives, in older children (ages 9–15 years), by contrast, friendship is reportedly construed as a form of mutuality involving shared experiences and goals

Sullivan's theory is similar to that of Piaget in some respects but quite different in others (for a detailed description of the similarities, see Youniss [1980], pp 1–42) Like Sullivan, Piaget believed that interaction with peers plays an important role in liberating children from egocentrism Piaget (1926) argued that peers are likely to demand that their viewpoints be taken into account, thus a child who interacts often with peers will face frequent pressure to consider perspectives other than his or her own Children older than about 7 years, having entered concrete operations, are able to respond to such pressure by taking the perspective of their peers Our impression, shared by several other investigators (e.g., Rardin & Moan 1971, Rubin 1972) is that Piaget emphasized social status, or popularity, as the principal correlate of perspective-taking ability Piaget believed that this ability to identify the perspective of others and to behave accordingly (e.g., by showing altruism) would both enhance a child's popularity with others and be strengthened, in turn, by that popularity—that is, because the popular child would so often be exposed to other children and their points of view Sullivan, by contrast, saw perspective taking and altruism as most closely related to the existence of mutual best friend or chum relationships

The distinction between friendship and popularity is a potentially important one Friendship denotes ongoing reciprocal liking and behavioral involvement between two individuals Popularity typically means being liked or regarded as a friend by a relatively large number of peers It seems quite possible that one might be popular but not have any ongoing reciprocal peer attachment which qualified as a friendship Similarly, one might have a good friend but not be popular, as defined above Masters and Furman (1981) have stressed the importance of the popularity versus friendship distinction They found that popularity, at least among preschoolers, was associated with "overall rates of receiving and

dispensing reinforcing and neutral acts" (p 344), friend selection, though, was related not to overall social behavior but, instead, to specific interactions between individuals and the peers they selected as best liked

Unlike Masters and Furman (1981), many investigators have failed to distinguish clearly between friendship and popularity We suspect that this may have interfered with accurate interpretation of findings in the area For example, in a number of studies designed to address friendship, the investigators actually used measures (e.g., peer nomination) which appear to have gauged popularity instead (see, e.g., Asher, Oden, & Gottman 1976, Gottman, Gonso, & Rasmussen 1975, Oden & Asher 1977, Peevers & Secord 1973) Studies like these have been incorporated into the "friendship" literature, but the group differences they yielded may actually reveal more about popularity or peer status than about friendship per se

In the present study, friendship and popularity were included as orthogonal dimensions within a factorial design This permitted us to assess the extent to which certain key behaviors which are said to involve perspective taking were related to friendship, as opposed to popularity These key behaviors were of three types cognitive perspective taking (inferring what another is thinking), affective perspective taking (inferring what another is feeling), and altruism

Method

Subjects and Experimental Design

Initially, 293 rural North Carolina youngsters were surveyed in their fifth- and sixth-grade public school classrooms We focused on preadolescence because this is the age at which Sullivan described chumship as emerging From the 293, 80 students were selected to form a 2 (chum vs no chum) \times 2 (high vs low popularity) \times 2 (sex) factorial design Each of the eight cells contained 10 children

Identification of Chumship and Popularity Groups

Classroom teachers administered a sociometric measure in which children listed their five best friends in order of preference Teachers repeated this assessment 3 weeks later, instructing children to name their current best friends Teachers then administered the Chumship Checklist (Mannarino 1976, Mannarino, Note 1) which lists 17 activities that preado-

lescents might do together—for example, “Tell each other things you wouldn’t tell anyone else” and “Sleep over at each other’s house” Each child checked activities that he or she did with the designated friend All children filled out two checklists—one for their first-best friend and one for their second-best friend The checklist was developed to reflect Sullivan’s definition of a chum relationship Mannarino (Note 1) reported an internal consistency of .86 (Kuder-Richardson formula 20) among preadolescents He also reported that preadolescents who meet strict criteria of friendship stability and reciprocal liking check significantly more items than do their peers who do not have stable, mutual friendships

To be included in a chum group in the present study, children had to meet all of the following criteria (a) reciprocal liking—the child’s first- or second-best friend choice on the two sociometric measures also must have chosen him or her as first- or second-best friend, (b) friendship stability—best-friend pairs who met the criterion of reciprocity on the initial sociometric measure must have remained as best-friend pairs on the second sociometric measure, (c) behavioral involvement—the child’s score on the Chumship Checklist must have been above the mean for his or her grade and sex Those children who met no more than one of the above criteria formed the no-chum groups

Popularity was determined by the rank order and frequency of each name on the sociometric measures First choice received 5 points, second choice, 4 points, etc Thus, if a girl received one second-best friend nomination and three fifth-best friend nominations, her popularity score was 7 The criterion for high popularity groups was a score within the top 30% of one’s classroom on both sociometric measures, the criterion for low popularity was a score within the lowest 30% Children whose IQ scores were below 88 were excluded from the final sample to minimize confounding of ability level with friendship and popularity

Earlier we suggested that friendship and popularity are conceptually independent and might not be highly correlated among preadolescents This suggestion was supported by the data Within our original sample of 293, the correlation between Chumship Checklist scores

and popularity scores was .14, $p < .05$, significant because of the large sample Within the experimental sample ($N = 80$), the correlation between popularity and chumship scores was .13, $p > .20$ ¹

Assessment of Perspective Taking and Altruism

Perspective-taking behavior was assessed in individual sessions The experimenter (the senior author, a graduate student in her late twenties) was blind to popularity and chumship information on the children being tested

Cognitive perspective taking—Kuhn’s (Note 2) revision of the Flavell, Botkin, Fry, Wright, and Jarvis (1968) “nickel-dime” task was used to assess cognitive perspective taking In this task the children took the role of hider and guesser in a two-person game in which money was hidden in one of two boxes Each box contained either one or two nickels, with that amount taped to its top As hider, the child was to remove the money from one box in preparation for another child who would (ostensibly) come later to guess which box had money inside The hider’s job was to arrange things so that the next child would guess wrong, the hider explained his or her choice of box to remove money from, and the explanation was scored for awareness of the recursive nature of thought (“He will think that I was thinking that . . .” etc) In the guessing version of this task, the child was shown two boxes similar to those he or she had just used Another child supposedly had played the role of hider with these boxes, the task was to guess which box now contained money and to explain the reasoning behind the guess This explanation was also scored for recursive perspective taking All explanations were tape-recorded and transcribed Two judges independently scored all 80 protocols, they obtained exact agreement on 89% of the hiding protocols and on 93% of the guessing protocols A third judge was used to resolve disagreements

This task was used partly because there is evidence of its validity as an index of cognitive perspective taking (see, e.g., Hudson 1978) It also has a level of difficulty appropriate for fifth and sixth graders, whereas many other cognitive perspective-taking measures show a ceiling effect around the ages of 9 or 10 years (see, e.g., Flavell et al 1968, Hudson 1978)

¹ We also assessed the relation between friendship and popularity by constructing a contingency table with three levels of popularity (high, middle, low) plotted against number of friendship criteria met (none or one vs two vs three) This table revealed a merely marginal relationship between friendship and popularity, $\chi^2(4) = 8.41$, $p < .10$

Affective perspective taking—Rothenberg's (1970) measure of "social sensitivity" was used to measure affective perspective taking. Four tape-recorded stories were played. Each tape presented an interaction between two adults which was characterized by a central emotion (happiness, anger, sadness, or anxiety). The child was asked how various actors felt and why they felt that way. Responses were scored for "description of feelings" and "understanding of motives." Two judges independently scored all protocols and obtained exact agreement as follows: story 1—feelings, 100%, motives, 88%, story 2—feelings, 95%, motives, 87%, story 3—feelings, 100%, motives, 90%, story 4—feelings, 99%, motives, 88%. Disagreements were resolved by a third judge.

Rothenberg's task was selected in part because there is support for its validity (see, e.g., Rothenberg 1970, Rubin 1978). In addition, it was designed to minimize mere projections of children's own remembered feelings by maximizing dissimilarity between the child and the persons and situations being judged. This feature makes the task difficult enough to be appropriate for preadolescents, tasks that involve similar others in familiar situations tend to be too simple for the age levels sampled here (see, e.g., Borke 1971).

Altruism—donation—Finally, children were given an open plastic bag of 10 candy kisses in return for their participation. They were invited to share their candy with others in their class who would not get to participate in the study. The experimenter left the room for 1 min, during which time the child could share his or her candy by placing some in a designated can. But the children were told, "Only do it if you want to." The can always contained 20 kisses, so each child's donation could be calculated easily. Instructions and procedure were those of Moore, Underwood, and Rosenhan (1973). Although similar measures have been used by others (e.g., Staub, Note 3), there is little evidence of their external validity. Concerned that time of day (and thus, hunger) might influence donation behavior, we arranged for each child to be interviewed either from 8:30 A.M. to 10:00 A.M. or within 1 hour after lunch. Roughly equal proportions from each experimental group were seen in the morning and afternoon sessions, respectively.

Altruism—teachers' ratings—Teachers rated each child on eight dimensions of altruistic behavior (from Severy & Davis 1971, Yarrow & Waxler 1976): (a) shares possessions,

(b) shows concern, (c) advises, suggests, interprets, (d) comforts, reassures, (e) protects, warns, defends, (f) helps others accomplish tasks, (g) gets help for others, (h) helps others out of distress. For each dimension teachers used a three-point scale: 0 = seldom or never true of the child, 1 = somewhat or sometimes true, 2 = very true or often true. Scores summed across the eight dimensions could range from 0 to 16. The correlation between randomly selected halves of the total scale was .78, so the measure showed some internal consistency. However, we found no previous evidence of the external validity of such ratings by teachers.

Altruism—observations—A female observer who was unaware of the children's chumship/popularity status or of their performance in the individual sessions observed each child during free periods which permitted unstructured peer interaction. Each child was observed for four 5-min periods, two during lunch on separate days and two during recess on separate days. Methodology and behavior categories were patterned after Yarrow and Waxler (1976) and Severy and Davis (1971). The observer coded the target child's behavior every 25 sec. A concealed earphone signaled onset of coding and observing periods. Altruism categories were those used in the teachers' ratings. The observer and a second, young adult female coded concurrently for one-fourth of the observations, (a) at the beginning, (b) when one-third of the subjects had been observed, and (c) when two-thirds had been observed. Interobserver reliability was calculated for the total number of altruistic behaviors. The overall percentage of observation periods in which the observers agreed was 98%, 99%, and 99% at the three times. Harris and Lahey's (1978) "weighted agreement" formula, used to correct for the low frequency of altruistic behaviors, yielded reliabilities of 81%, 84%, and 85%.

Results

Initially, we examined the relation of the independent variables to age, IQ, and MA. Mental age and IQ scores were obtained from the Otis-Lennon Mental Ability Test, administered by the school system. The analysis involved three 2 (chumship) \times 2 (popularity) \times 2 (sex) ANOVAs. Children with chums were marginally older than children without chums (means 11.6 and 11.3 years), $F(1,72) = 3.38$, $p < .10$. Popular children were older than those low

1482 Child Development

in popularity (means 11.6 and 11.3 years), $F(1,72) = 5.79$, $p < .01$. Popular children were also higher in MA than low-popularity children (means 12.3 and 11.7 years), $F(1,72) = 4.96$, $p < .05$. The group differences in age and MA led us to covary these two variables in subsequent analyses. Dependent variables were analyzed initially via three 2 (chumship) \times 2 (popularity) \times 2 (sex) multivariate analyses of covariance (MANCOVAs, with age and MA controlled) on the following variable sets: (a) hiding and guessing scores (cognitive perspective taking), (b) feeling and motive scores (affective perspective taking), (c) donation, teacher's rating, and observation scores (altruism). Significant effects were further examined via analyses of covariance (ANCOVAs) and simple effects tests, where appropriate.

Cognitive Perspective Taking

The cognitive role-taking measure yielded only a multivariate sex effect, $F(2,69) = 3.35$, $p < .05$. The ANCOVAs revealed a significant effect only for the hiding score, $F(1,70) = 6.98$, $p < .01$. Boys did better than girls at inferring what an opponent might be thinking in game strategy (means 1.05 and .59)².

Affective Perspective Taking

Children with chums were better able to infer what another was feeling than were children without chums. The MANCOVA revealed a significant chum effect for affective perspective taking, $F(2,69) = 13.52$, $p < .0001$. Univariate analyses revealed a significant chum effect for the motive score, $F(1,70) = 23.85$, $p < .0001$. Children with chums demonstrated greater "social sensitivity" or ability to infer why others feel the way they do than did children without chums (means 5.95 and 4.11)³. A marginal chum effect was obtained for the feeling score, $F(1,70) = 2.84$, $p < .09$, with the chum group scoring higher than the no-chum group (means 4.11 and 3.73).

Altruism

The MANCOVA of altruism scores revealed a significant chum effect, $F(3,68) = 3.95$, $p < .01$, and a significant sex effect, $F(3,68) = 2.77$, $p < .05$. Univariate analyses revealed that the significant chum effect was associated only with observed altruism, $F(1,70) = 10.00$, $p < .001$, with the chum group mean

(1.62 altruistic acts in 20 min) greater than the no-chum group mean (.77). The significant sex effect was found only in teacher-rated altruism, $F(1,70) = 6.33$, $p < .01$, females were rated more altruistic than males (means 1.18 and .95).

Correlational Analysis

Finally, we sought evidence of the widespread view that facility in perspective taking is associated with altruistic behavior. We calculated all possible correlations ($N = 12$) between the four perspective-taking measures and the three altruism measures, with MA and CA partialled out. Only two coefficients attained significance. Scores on the hiding measure correlated .25 ($p < .05$) with donation. Motive scores from the affective perspective-taking task correlated .34 ($p < .01$) with observed altruism.

Discussion

The findings revealed partial support for Sullivan's theory of chumship. Having a chum was significantly associated with affective perspective taking and with altruism. Popularity level was unrelated to either behavior, as measured in ongoing one-to-one interaction, may be more closely related to altruism and certain kinds of perspective taking than is peer status, at least among preadolescents. Rubin (1972) has argued that the ability to take another's point of view may be related to popularity in the early school years but not by grades 4-6, when popularity may be influenced by other factors. His data (Rubin 1972) support this argument with respect to communicative competence in early versus late childhood. Rubin's thesis may help to explain our negative findings with respect to popularity among older children.

Consistent with Sullivanian theory, preadolescents with chums were superior to those without chums in identifying the emotions of others (a marginal effect) and in understanding the antecedents of various emotions in an interpersonal context. One advantage of these skills, according to Sullivan, is that they permit the child successfully to coordinate his own behavior with the behavior of others and thus to contribute significantly to the well-being of others. Our data do show more of such positive

² Some investigators combine hiding and guessing performance into a single score. We also followed this procedure to facilitate comparison between earlier findings and ours. The composite score method also yielded a significant sex effect, $F(1,70) = 5.30$, $p < .05$.

³ The composite score, with feeling and motive combined, produced almost identical results—i.e., a significant chum main effect, $F(1,70) = 26.54$, $p < .0001$.

social behavior by children in the chum groups than by children in the no-chum groups, but only in the form of naturally occurring altruistic behavior. The greater altruism displayed by those with chums took a variety of forms, including verbal expressions of support for a peer whom others were deriding, offering to call the parent of a peer who was ill, saving part of one's lunch to share with a teacher who had to forgo lunch due to an emergency, and physical assistance when another child had an accident. Although we did find group differences in altruism, we should reiterate that relatively few altruistic acts were produced by either the chum or the no-chum groups. Nonetheless, the observational method of assessing altruism seems intuitively superior to the somewhat artificial donation measure and the indirect, global ratings by teachers (see Weisz 1978). The failure to find altruism as a generalizable trait yielding similar group differences across diverse measures such as these is quite common in altruism studies (see Rushton [1976], see, also, mixed evidence in Yarrow & Waxler [1976]). Our data do not provide information about whether children in the chumship group directed their altruistic acts primarily toward chums, there is evidence that children are more likely to receive "reinforcing acts" from the peers they like than from other peers (Masters & Furman 1981), but this evidence was drawn exclusively from preschoolers. Further, investigators in the future might profitably test Sullivan's argument that chumship in preadolescence leads to expressions of altruism that are directed to persons outside the confines of the chum relationship.

What of the view that perspective-taking ability is expressed in altruistic behavior? This intuitively plausible hypothesis is widely endorsed by social cognitive theorists. Yet the evidence for perspective taking as a prerequisite for altruism is mixed. Some studies have found the expected relationship in school-aged children (see, e.g., Rubin & Schneider 1973), but others have failed to find it (see, e.g., Waxler, Yarrow, & Smith 1977). Our data revealed non-significant relations between perspective taking and altruism in 10 of the 12 correlations we computed. Uncorrelated measures are not likely to be causally linked, so, our correlation data are generally inconsistent with the view that perspective taking is causally (or even non-causally) related to altruism.

The most important contributions of this study are the findings that chumship is significantly associated with social cognition and al-

truism. Sullivan argued that the intimacy, opportunities for feedback about oneself, and emphasis on mutuality which are experienced in a chumship *cause* the development of both perspective-taking ability and altruism. Our findings are in harmony with this view but cannot directly support any conclusions about causality. It may be reasonable to contend, in contrast to Sullivan's hypothesis, that a child's greater initial sensitivity to others' feelings and his helpful behavior *cause* and sustain friendship. Other variables, such as parental modeling and reinforcement of "other-centeredness" could also be important causal factors. Although it is difficult to believe that chumship does not act as a cause in at least some important ways, we must reserve judgment about precise causal patterns until appropriate data have been gathered.

Overall, this study represents a modest step toward empirical validation of Sullivan's interpersonal theory. The findings suggest that chumship does actually occur in preadolescence. Of the 230 youngsters originally sampled, 109 showed a reciprocity of best-friend choice with another child that was stable over a period of 3 weeks. Of these 109, 87 had a relationship which met our criteria on the Chumship Checklist. In future research it would be useful to determine whether chumship, in the form of stable reciprocity, appears initially in preadolescence (as hypothesized by Sullivan) or whether it occurs to a significant degree earlier in development.

The most general implication of this study is that investigators who study peer relations must not equate friendship with popularity. A child's degree of involvement with a friend appears, on the basis of the present data, to be virtually unrelated to his or her level of popularity. Friendship may be harder to measure than popularity, but the techniques used in this study evidently succeeded in tapping some aspects of the friendship phenomenon. Involvement with a chum is likely to be a significant asset in the child's social development. Unfortunately, our data indicate that many preadolescents may be deprived of chumship and its companion benefits. It is toward the enhancement of social relationships for such children that future research on friendship, or the chum relationship, should be directed.

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1484 Child Development

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