

## Social Entry and Rejection Among Preschool Children

### A. Objectives and Aims

Objective: The objective of the proposed study is to examine the processes whereby social popularity and social unpopularity are established among preschool children. Two particular processes are the focus of interest, as a consequence of their conceptual and empirical importance: processes of entry into a social group, and processes of rejection by a group. The long term objective is to develop forms of intervention which will alleviate social rejection among preschoolers, with consequences for their transition to elementary school and beyond. Although design and implementation of an intervention program for preschool children is not within the scope of the project proposed here, it is intended that funding will be sought in the future for such design and implementation, and an interest in intervention guides the design of this project.

Aims: The following are the major aims of the proposed study:

1. To observe the genesis of sociometric status. The first aim of the study is to observe the development of consistent sociometric status -- popularity and unpopularity -- in preschool age children. A longitudinal assessment is planned during the year in preschool, for 2 separate cohorts. This will enable the study of the origins of unpopularity, since these children will have no history of interaction with each other, and will in some cases be forming their first friendships outside the context of the family. The adoption of a longitudinal strategy permits assessment of causal relations between factors that are hard to manipulate experimentally. Hartup (1983), reviewing research on popularity among young children, remarks that "nor has sufficient use been made of longitudinal analysis--especially to study social differentiation at critical times (e.g., when new groups are being formed, new associations are made, or major developmental transitions occur)" (p. 126). The year at preschool is critical in each of these areas.

2. To assess whether unpopular children show a skill deficit, or a different social style. The second aim is to test the hypothesis that unpopular children are not deficient in social skills pertinent to making friends and gaining popularity but, rather, that they show a different style of interaction, and are guided by different goals and concerns when they make social contacts. Specifically, study is planned of the entry

strategies that popular and unpopular children employ when they are attempting to join groups of their peers. If unpopular children differ in their skills, they will be expected to show significant differences in the range of entry strategies they use. One indication that, in contrast, they differ in their interactive style will be that popular and unpopular children differ, instead, in the differential frequencies with which they use the entry strategies.

3. To examine both naturally occurring and experimentally structured interactions. The third aim is to broaden the study of entry strategies by applying two complementary methodologies: that of naturalistic observation, and that of experimental analogue tasks. Thus far, the relationship between popularity type and entry strategies has been examined only in the laboratory (e.g., Puttallaz & Gottman, 1981). Naturalistic research on the preschool playground (e.g., Corsaro, 1979; 1981; 1985) has not included assessment of popularity differences. In this study, entry strategies will be coded as they are employed in spontaneous playground contact episodes, and also when they occur in experimental analogue small-group tasks, where a child whose popularity type has previously been identified is introduced to a room where two other children have been interacting together.

4. To study rejection strategies. The fourth aim of the study is to examine the rejection strategies that are employed by groups into which entry is attempted, in both analogue tasks and playground contact episodes. An improved understanding of why, when, and how children reject another's bids for inclusion in their group has potential use for understanding and ameliorating childhood unpopularity.

5. To examine the relationship between sociometric status and incidence of behavioral disorders. The fifth aim is to relate the differential frequency of use of entry and rejection strategies, together with sociometric status, to the reported incidence of behavioral disorders among the children, as indexed by Achenbach and Edelbrock's (1981) checklist.

6. To identify concerns and social goals underlying entry behavior. The sixth aim is to generate hypotheses about the functions of rejection, and how it might be minimized, and hypotheses about the concerns and goals that underly unpopular children's choice of entry strategies, and the implications for intervention efforts. To this end, both quantitative and qualitative analyses will be conducted with the data. A hermeneutic or interpretive analysis will be employed with videotapes and transcripts of

childrens' interactions, to supplement the coding and quantitative analysis of children's behavior. The aim is to generate hypotheses which will then be tested by appropriate coding and analysis.

## B. Background and Significance

### 1. Popularity in Childhood

Social popularity and unpopularity among children is a facet of peer relations which has, deservedly, returned to the attention of research psychologists in recent years. A fresh application of sociometric methods for the assessment of status and popularity has been combined with sensitive observational systems and careful experimental manipulation. Social unpopularity has been identified as a cause or likely cause of a wide range of social and intellectual difficulties, including personality problems in adolescence and adulthood, and poor academic achievement (Bonney, 1971; Roff, Sells, & Golden, 1972; Cowen, Pederson, Babigian, Izzo, & Trost, 1973; Kohlberg, LaCrosse, & Ricks, 1972; Hartup, 1982, 1983; Shantz, 1983; Rubin, 1980). The mechanisms of these long-term effects are not entirely understood. It has been proposed (Furman, 1980) that effective social interaction is necessary for cognitive development, as well as for further social development. Also, the importance of social networks in preventing both psychological and physical disorders and disease in adulthood has been documented, and it is likely that social support is important for children too. We now know a great deal about the types of behavior typically manifest by rejected and isolated young children, when compared with their popular peers. Research has also started to examine in detail the ongoing processes of interaction which underly social popularity and unpopularity: children's use of entry strategies when they attempt to join groups of their peers; and rejection strategies which groups adopt to exclude newcomers. However, there is still much to be learned about these processes. This project takes as its focus the entry and rejection strategies that are employed by preschool-age children, who are a group important for theoretical reasons, and highly appropriate candidates for programs of intervention.

Because of the long-term consequences associated with it, childhood unpopularity is viewed as an important target for intervention efforts. Patterns of social support or social isolation may be laid down early in life, and be hard to change once established. Intervention with young children seems sensible, but if this intervention is to be effective, we must understand the characteristics of children which predispose them to unpopularity, and the social processes whereby social rejection occurs and

is maintained. Popularity has been evaluated by means of a variety of sociometric techniques (Masten, Morison & Pellegrini, 1985). Children typically are asked to make both positive and negative nominations or ratings of their peers. (Some of the methodological issues associated with sociometrics, particularly as employed with a preschool population, are described below in section D.) A variety of typological distinctions have been made on the basis of the resulting data. Generally two kinds of unpopular child are distinguished: rejected and isolated (or neglected) children. The former receive few positive nominations and many negative nominations; the latter receive few of either type. (The term 'unpopular' as used here refers to both rejected and isolated children.)

## 2. Explanations for Unpopularity

Three broad kinds of explanation have been advanced to account for childhood unpopularity. The first is that unpopular children are deficient in the social skills that are needed to make and sustain friendships. The second is that rigid social grouping results in the formation of an unpopular out-group. The third is that unpopular children have a style of social interchange which leads to social rejection, perhaps contrary to their own intentions. It is important to consider briefly each of these three:

2.1 Unpopularity is the result of a deficit in social skills. This view is a frequently advanced explanation for childhood unpopularity, and it has been the basis for many of the intervention programs aimed at amelioration of poor social status. It is a reasonable hypothesis, particularly given the range of negative and apparently dysfunctional social behaviors that isolated and rejected children manifest. A large number of studies have concentrated on identifying the behavioral correlates of sociometric status, and the results are consistent with the hypothesis that unpopular children lack certain skills. A range of negative behaviors has been found to be manifest by unpopular children. Hartup (1983) describes the resulting picture of rejected children: "the rejected child is not less sociable or less friendly than the nonrejected child, but displays more antisocial, disruptive, and inappropriate behaviors in interaction with other children" (p. 133). In contrast, Asher and Renshaw (1981) summarize the characteristic behavior of popular children: "children who are well liked participate in peer activities, are cooperative and helpful, communicate effectively, and are friendly toward their peers" (p. 277).

Researchers have recently introduced designs which enable causal, rather than correlational, connections to be identified. Puttalaz (1983)

observed boys the summer before they entered first grade, and correlated their behavior with two confederate playmates with their sociometric status 4 months later. Socially relevant behaviors such as contributing to conversation predicted popularity status. Dodge (1983) observed second-grade boys, strangers to each other, in a series of analogue task sessions, and determined sociometric status between and after the sessions. Again, the children's behaviors could be used to predict later sociometric status. Coie and Kupersmidt (1983), also using analogue tasks, found that for boys who became rejected or popular, their new status resembled status assessed in their school the previous year. Previously isolated boys, however, showed a greater range in their new popularity types. These studies support the view that characteristic behavior leads to the development of consistent sociometric status. They also indicate that different types of unpopular child behave differently, and that rejected and isolated children must be distinguished in research in this area. They leave open, however, the question of whether this characteristic behavior is a consequence of a deficit in social skills, or is a result of a particular interactive style.

The deficit view has been criticized as being unduly focussed on deficiencies. A focus instead on social competence has been argued for (Wine, 1981); this would draw researchers' attention to the question of whether unpopular children are pursuing social goals which differ from, but are no less competent than, those of popular children. The deficit approach may also be developmentally insensitive; Puttalaz and Gottman (1983) note that some intervention training programs have been based on adult researchers' intuitions and speculation concerning what constitute effective social skills for children, rather than on the basis of empirical knowledge. Asher and Renshaw (1981) remark that the social skills required to form and maintain friendships are likely to change as children grow older, and that age-appropriate training programs are needed. An example of relevant social skills changing with age is provided by Corsaro's work (1979; 1981; described in more detail below). In naturally occurring social encounters among preschoolers, exit from a social group was frequent, and was typically unmarked (i.e., the children provided no grounds or explanations for their leaving). Such behavior among adults would be considered deviant, but it is the norm for 4-year olds. An effort to train these children in leave-taking skills would presumably be ineffective, because the skills have no social application.

2.2 Unpopularity is a consequence of rigid social grouping. A second explanation that has been advanced for the rejection and isolation of some children is that rigid social groupings develop, from which some children

are necessarily excluded. Gottman (Puttallaz & Gottman, 1981) has formulated a "membership group" theory. Sociometric tests suggest that there are generally several popularity groupings among elementary school age children. Unpopular children indicate that they would prefer to associate with the popular children. However, the popular children form a clique from which other children are excluded, for a variety of reasons. It would seem that social-organizational factors are at work here, in addition to the consequences of the skills of individual children.

The spontaneous sex and ethnicity grouping that occurs among a wide age-range of children also suggests that non-behavioral factors, such as differences in some salient physical characteristic, may produce out-grouping (Singleton & Asher, 1977). A child may be popular with same-sex peers, and yet be unable to establish or maintain cross-sex friendships. What is involved in such groupings is often not lack of social skill, but characteristics such as gender, physical attractiveness (Young & Cooper, 1944), or the commonness of a child's first name (McDavid & Harari, 1966).

Furthermore, recent research in the preschool playground has shown that social rejection is a frequent aspect of the social relations of even young children, and serves important social functions. Corsaro (1985) employed a microsociological approach, identifying forms of entry-bid and of rejection as a participant-observer. Social associations in the playground tended to be fleeting, with 51% lasting less than 5 minutes and 84% less than 10 minutes. As a consequence, attempts at entry to an ongoing group were frequent, and Corsaro observed 128 episodes involving entry bids and associated rebuffs over a three month period, even though they were not the primary focus of his observations. Rejection was the response to 54% of entry attempts and of these 51% ended in permanent exclusion.

Corsaro identified two interrelated concerns that children showed in their social interchanges. First, children who found themselves alone consistently tried to gain entry into one of the ongoing peer episodes. Second, children who were playing together protected their interaction by resisting those who wanted to join in. They were typically protecting not objects or territory, but what Corsaro termed their interactive space (the ecological area of their interactive episode). These two concerns were the source of recurrent conflict.

Corsaro could identify no children who were consistently either accepted or excluded, but he did not attempt to identify children's

membership group or popularity status. The proposed study will have this information, and systematic patterns of rejection will probably be identifiable. Corsaro did note that girls were excluded more from boys' groups. Resistance was overcome nearly 50% of the time, suggesting that approximately half the time children employed effective strategies for entry. Five types of resistance were distinctive, and are shown in Table 2.

If rejection occurs frequently in the playground interactions of young children, and if membership groups develop on the basis of both popularity and non-behavioral characteristics, then it seems accurate to say that important causes of persistent unpopularity lie not in unpopular children themselves, but in their peers. If this is so, then prevention programs which intervene only with the unpopular child may not be as successful as programs which work also with popular children. As yet, however, little research has been conducted on the functions and consequences of the rejection strategies children employ. We do know that children show great variation in their responses to rejection (Dweck, 1981), and that some rapidly give up their entry attempts when faced with rejection. It is important to see whether groups use different kinds of rejection with children of different popularity type, or whether all children are rejected equally at the start of the year, but those who withdraw subsequently become rejected or isolated.

If rejection by peers is a contributing factor in the genesis of unpopularity, then intervention efforts might profitably try to influence the forms of rejection used by popular children. Putallaz & Gottman (1981) make a suggestion for intervention along these lines. "It would... seem essential to add a component to the intervention program that would provide a mechanism for increasing the group's likelihood of accepting new members. Establishing some form of incentive for the group members to accept other children might be one way to accomplish this goal" (p. 146).

2.3 Unpopularity is the consequence of a particular style of interaction. A further set of studies has focussed on the strategies which children employ when attempting to gain entry into a social group of their peers. Studies of this type have involved investigations of naturally occurring entry situations (e.g., Rubin, 1983; Phillips, Shenker, & Ravitz, 1951; Ziller & Behringer, 1961) and also experimentally established analogue tasks (Asher & Hymel, 1981; Gottman, 1983).

There is a provocative suggestion in these recent studies that unpopular children are not necessarily deficient in social skills, but rather that they employ their skills to different social goals than do popular

children. A study by Puttalaz and Gottman (1981, 1981b), with 2nd and 3rd grade children, is particularly interesting, and I shall summarize its results briefly. Using an analogue task, these investigators established dyads of popular and of unpopular children, and then introduced a third child into each dyad. The occurrence of eight particular entry behaviors (Table 1) was coded from transcripts of the sessions.

One important analysis involved an attempt to identify the criteria guiding children's use of entry strategies, by computing the correlations between the probability of each entry behavior and the likelihood of acceptance, rejection or being ignored by the group. When they were entering dyads of their own popularity type, popular children acted so as to maximize the probability of their acceptance, and minimize the probability of being ignored. Unpopular children acted so as to maximize the probability of being ignored, and also the probability of being rejected.

During entry into a cross-membership dyad, popular children acted so as to maximize the probability of acceptance, and also the probability of being ignored (probably behaving as newcomers do). Unpopular children acted in such a way as to maximize the probability of being ignored. Four entry strategies in particular were used more by the unpopular children: self-statements, feeling statements, disagreements, and information questions. All were genuine attempts at entry, however they had the effect that the children drew too much attention to themselves, and as a result they were typically rejected. What, then, accounts for their use of such strategies? Puttalaz and Gottman rule out a skills-deficit explanation, since the unpopular children show the same range of entry behaviors; they employ them with different frequency. They propose that "unpopular children are doing just what they would have to do if their goal were to be rejected. Here then is a dynamic that maintains the social rejection of unpopular children" (p. 140). "Popular children acted to maximize their benefits and minimize their costs, unlike unpopular children. We are not implying that unpopular children were deliberately intending to be ignored or rejected when attempting to enter groups, but, rather, that this was the net effect of their behavior" (p. 139).

So it would appear that unpopular children behave in a manner which has the effect of perpetuating their social marginality, although they indicate that they would prefer to associate with popular peers. This finding has significant implications for the design of intervention programs aimed at increasing children's popularity. These programs often employ training of specific skills that are considered necessary for social approval and successful relations. If unpopular children already have many of these

social skills, but employ them to self-destructive goals, intervention may need to uncover these goals and attempt to modify them.

### 3. Derivation of Hypotheses

Several interesting questions are raised by these recent studies of unpopular children's strategies for entry into a group of peers, and of entry and rejection on the preschool playground. In particular, the following major questions will be addressed in the research proposed here:

3.1 How does sociometric status develop? How does sociometric status or popularity type develop with a group of preschoolers, as they interact together over the course of a school year? Do consistent popularity types develop for the group as a whole, or is popularity consistent only within the membership group or clique a child is a member of, and inconsistent among these groups? How rapidly do cliques develop, and how does their membership alter over time? Preschoolers generally show much variation over time in their friendship sociometrics, and it is possible that the membership groups that Gottman found with older children will not become rapidly established. One question this project will aim to answer is to what extent, and how quickly, fixed popularity types develop among preschoolers.

3.2 Do unpopular preschoolers have a different entry style? Puttalaz and Gottman's findings suggest that at least some unpopular children lose favor with their peers because of the unpleasant style that structures their interactions, rather than because they are deficient in particular social skills and strategies. It is interesting to consider whether preschool children will show the same pattern of results as did grades 2 and 3. These children will be forming new friendships with peers in their preschool. In the absence, initially at least, of established cliques and popularity groupings, unpopular children may not experience persistent rejection, and so may not develop the strategies Puttulaz and Gottman describe, adaptive in the short-term but with unfortunate long-term consequences.

A related question concerns differences among types of unpopular child. Puttulaz and Gottman used the total number of positive nominations on a sociometric questionnaire in order to distinguish popular from unpopular children, and did not discriminate further within the unpopular group. However, it is likely that rejected and isolated children will show differences in their interactive styles. Recall, for example, that Coie and Kupersmidt (1983) found that isolated fourth grade boys were more able

than their rejected peers to respond functionally in a new social setting, and change their sociometric status.

3.3 Are rejection strategies related to sociometric status? Do the rejection strategies employed by groups of preschool children differ depending on the sociometric status of the child attempting entry? It seems likely that children identified by sociometric nomination and rating as rejected or isolated will be responded to with more extreme rejection strategies than their popular peers. Does the choice of rejection strategy vary with the sociometric composition of the group being entered?

3.4 Do analogue tasks differ from spontaneous interactions? Puttuz and Gottman employed an analogue setting; another question is whether unpopular children would show the same pattern of responses (the same range of entry strategies, but a different distribution in the frequency of their use), in naturally occurring playground contact episodes. Analogue tasks have proved very useful when researchers need to study social phenomena which occur infrequently in natural settings; Corsaro's work demonstrates that entry attempts and rejection are frequent occurrences among preschoolers, suggesting that the study of naturally-occurring contact episodes is feasible with this age group. The form of analysis conducted by Puttuz and Gottman (1981) will be applied to entry strategies used in a natural setting.

3.5 Is sociometric status linked to behavioral problems? Childhood unpopularity has been linked to a range of later disturbances and problems. It would be a significant finding if behavioral problems shown by young children were correlated with their popularity among peers. Normative data are now available on a range of behavioral disorders for the 4-year-old age group, for both normal and disturbed children (Achenbach & Edelbrock, 1981), and so unpopular children can be compared to these norms, as well as to their popular peers.

The proposed research design is in brief as follows. Two cohorts of 4-year-old children will be studied during the course of their year in preschool. Sociometric assessments will be used, on a repeated basis, to identify children's popularity type, and changes in type. Entry and rejection strategies will be examined as they are employed in an analogue small-group entry task, and in spontaneous contact episodes on the preschool playground. Reports will be requested from parents on the incidence of behavioral problems among the children. Such a design will permit data-collection and analyses which are pertinent to the six sets of questions listed above.

## D. Research Design and Method

### 1. Data Collection and Description of Measures

Data collection will be carried out over the course of two school years. Approximately 25 children, 4 years of age, will be studied each year. The use of multiple assessments of sociometric status, and of naturally occurring social interactions, permits detailed study of the way children's employment of different entry strategies changes over time, the consequences for their popularity, and assessment of causal relations between factors that are hard to manipulate experimentally.

In a sense, the cohort of children studied each year makes up a single research object. The second year of observation permits assessment of the reproducibility of findings from the first year, and is also important for the testing of hypotheses generated on the basis of the first year's findings.

There are four contexts for data collection. The first is sociometric assessment of social popularity. Second, naturally occurring episodes of peer interaction involving attempted entry into and rejection from social groups will be observed. Third, children will take part in small-group analogue entry tasks. Fourth, parents will be requested to provide information on family structure, and any behavioral problems their child manifests. Each of these contexts will be described in turn.

#### 1.1 Sociometric Data

1.1.1 Sociometric measure. A sociometric assessment will be used in order to identify popular and unpopular children. The choice of a sociometric appropriate for use with preschoolers is an important and somewhat problematic one (Hallinan, 1981). Three sociometric techniques have been used in past studies: nomination, paired-comparison, and rating scale approaches. The nomination technique requires that children name three or four peers with whom they would and would not like to play, or whom they do and do not like (Wiggins & Winder, 1961). With preschoolers, photographs are usually shown the child, to reduce memory strain (McCandless & Marshall, 1957). This technique is fast and easy, but provides no information on unnominated children. It proves to have relatively low reliability, and low concurrent and predictive validity (Asher & Hymel, 1981; Willingham, 1959). A version of this approach is the Class

Play Method, where children are asked to nominate peers for roles in a hypothetical play (Baldwin, Cole, & Baldwin, 1982; Masten, Morison, & Pellegrini, 1985).

The paired-comparison technique involves showing children photographs of all possible pairs of their classmates. A preference choice is made for each pair. This provides information on all the children and a greater quantity of information, and the resulting scores are generally more reliable, but it is a time-consuming task, requiring perhaps 30 minutes per child (Asher & Renshaw, 1981).

In the rating scales technique, children are shown a photo of each of their peers and a 3-point rating is made (e.g., "children you like a lot," "children you kinda like," "children you don't like"; Rubin & Daniels-Beirness, 1983). Smiling, neutral and sad faces typically illustrate these response categories. The rating scale technique requires comparatively little time to administer, and provides information on each child. Reliability and validity of scores are higher than the other two techniques. However, Asher and Hymel (1981) point out that rating-scale sociometric measures cannot be used to distinguish isolated and rejected children, since isolated children can be identified only on the basis of an absence of nominations.

1.1.2 Deriving categories of sociometric status. Several category systems have been used. Peery (1979) used social preference (polarity of nominations) and social impact (number of nominations, positive or negative) as the basis for a 4-fold typology: popular (high on both), rejected (low social preference, high social impact), amiable (high preference, low impact) and isolated (low significance, low impact). However, between 8% and 43% of children prove unclassifiable in this system, and placement of individual children differs significantly from placement according to the scheme described next.

The scheme more commonly used is one originated by Gronlund (1959). It utilizes positive and negative nomination data, and defines stars (high positive, low negative nominations), isolates (low positive, low negative), rejected (low positive, high negative), and controversial (high positive, high negative) children.

Two points must be made about the placement into sociometric categories of preschool-age children. First, the lability of friendships and enmities among children of this age suggests that any placement will shift. Second, if children are in the process of forming cliques, there is likely to be positive nomination or rating among children within a clique, but low

nomination or rating between cliques. In such a case, placement based on average scores will not differentiate between children very popular in a clique but unpopular out of it, and those children who are slightly popular to all their peers. Gender-grouping is one extreme but clear example of this. It is common practice to assign sociometric scores on the basis only of ratings by same-sex peers. This leaves unexamined the question of whether children rejected by same-sex peers might court or achieve popularity with their cross-sex peers. For these reasons, sociometric data will be examined using techniques which will identify cliques (see below).

Sociometric assessment interviews will take place with each child individually, in a room adjacent to the preschool. Small (approx 3" x 4") photos of the children in the class will be used as a memory aid. Photos of this kind are already used within some preschools to help children identify and name their peers.

The sociometric sessions will be tape-recorded. The child will be informed that nothing he or she says about the other children in the school will be repeated to children, staff, or parents. The child will then be asked first to make positive and negative nominations, and then ratings of the remaining children. That is, the child will be asked to point to three children with whom he or she likes to play, and then three with whom he or she most dislikes playing. Then the child will be asked to rate the remaining, un-nominated children on a 3-point scale, as children who he or she likes a lot, likes somewhat, and dislikes. The nomination data will permit rejected and isolated children to be distinguished: the latter will receive no nominations; the former will receive negative nominations. At the same time, the ratings data provide a greater amount of information on each child, improving overall reliability of the sociometric data.

The child will be asked to explain or justify each of the nominations, and responses will be transcribed and categorized. This will be a valuable and economically collected source of information on the children's perceptions of their popular and unpopular peers. Hayes, Gershman & Bolin (1980), examining preschoolers' reported reasons for liking and disliking another child found that reasons given for liking a best friend fell into categories of propinquity, physical possessions, general play, common activities, and evaluation, while reasons for disliking another child included aggressive behavior, rule violations, and aberrant behavior.

## 1.2 Analogue Entry Task

Use of entry and rejection strategies will be studied in experimentally-established small-group sessions: these have become known as analogue tasks (Asher & Hymel, 1981; Asher, 1983). This kind of task has been used to study various aspects of moral and social development (e.g., Doise, Mugny and Perret-Clermont, 1975; Bearison, 1982). Two children will be interacting together in a small research room in the preschool, and a third child, of the same gender, will be introduced to the dyad.

The task will be a sticker-decorating activity. Children will be asked to work together placing colored stickers along a single paper strip. The task bears a certain resemblance to Damon's Bracelet Task (Damon, 1977). With 4-year olds, it is necessary that the task be physically very straightforward: using scissors or gluing paper strips is tricky for young children. It is necessary to ensure, though, that the children must arrange between themselves how to share materials (the single strip) and resources (the stickers). When the third child joins the group, the practicalities of the task must be renegotiated. It is expected that the third child will try to join in the activity of the dyad, and so will employ various entry strategies. It is also expected that the dyad will, at least initially, employ rejection strategies to order to exclude the new child.

The children making up each of the dyads will be recruited from the second preschool at the Child Study Center: the parent cooperative school. They will consequently be strangers to the third, entering child. (Children from the university run school are picked up from school by their parents, while children from the parent coop are picked up by parents or leave on a school bus. There is no opportunity for interaction among the children from the two schools.) The children in each dyad will both be of popular or average popularity type among their own school peers. This will be assessed by means of informal observation in the parent coop preschool, and on the advice of the head teacher and aids in that school. This is to ensure that the children entering the dyad will on each occasion be interacting with children of equivalent sociometric status, though the incoming child will not, of course, know the popularity status of the dyad.

The analogue task sessions will be video-recorded for later analysis and coding. Transcripts will be made, and entry and rejection strategies coded using coding schemes that will be described below.

### 1.3 Naturalistic Observation

Observations will also be made of children's interactions with peers in the preschool playground. Packer will spend several weeks in the

preschool before beginning formal observations, in order to become familiar to the children. He will not initiate interchange with the children, and will discourage being regarded as an adult authority, or source of assistance. However, he will respond in a friendly and uncritical manner when approached by the children.

Each day, a randomly-selected target child will be the focus of observation, and will be observed for approximately 90 minutes. The climate in the San Francisco Bay Area is such that inclement weather is relatively infrequent. Most preschools take advantage of this by providing a large and well-equipped playground, and allowing children to move freely between the school building and the playground for much of their time at school. Consequently, it will be relatively easy to obtain at least 90 minutes of observation each day.

The target child will wear a small wireless microphone, which will transmit to a small radio receiver, located on the playground. In addition, a video-camera with zoom lens will be situated in one corner of the playground, to film the target child's interactions. The use of the wireless microphone enables conversation between the target and other children to be recorded directly onto the sound channel of the video-recording, permitting much greater clarity and comprehensibility of dialogue than the camera's microphone would provide. The researcher will be able to operate the camera while located at sufficient distance not to be obvious to the children. The wireless microphone has been used successfully by Packer with preschoolers in a previous study. Children wearing the microphone quickly become accustomed to it, and do not appear inhibited in their behavior. If the researcher takes the time to develop rapport with the children, they find being overheard amusing rather than inhibiting. All children who were approached in the previous study (described briefly in section C.) expressed willingness to wear the wireless microphone, which was sewn into a small vest. Several children spontaneously returned on later days and requested a second or third "turn" with the vest.

Each child will be target child on two non-adjacent days, and data will be analyzed for day differences before data is collapsed. Contact episodes will be identified (using criteria described below), and the target child's conversations during the entry portions of these episodes will be transcribed, and coded and analyzed in a manner described in the following major section.

#### 1.4 Behavioral Problems, and Family Structure

At the end of each semester, parents of the children participating in the study will be asked to fill out a Child Behavior Checklist (Achenbach & Edelbrock, 1981). This questionnaire lists 112 behavior disorders, such as "Cries a lot," "Showing off or clowning," "Temper tantrums or hot temper". Parents will be asked to consider for each item whether it describes their child "now or in the last 12 months," and indicate on a 3-point scale whether it is "very true or often true" (2), "somewhat or sometimes true" (1), or "not true." (A copy of the Checklist will be found in the appendix.)

In addition, parents will be asked to supply information on the number, gender and age of siblings, the number, gender and age of the child's friends, and whether any of the other children at the preschool have out-of-school friendships with their child.

## 2. Design, Hypotheses, Analyses

Table 3 shows a timeline for the study. The preschool year is generally divided into two 15-week semesters, beginning in the Fall and Spring. Two sociometric assessments will be conducted each semester. The first will be 4 weeks into the children's first semester at the preschool. Subsequent sociometrics will be conducted at the start and end of each semester. Analogue tasks will be conducted once each semester, and playground observations will be conducted on two days each semester for each target child. Information on behavioral problems will be collected from parents at the end of each semester.

The following section describes the main questions that will be addressed, and the procedures of data reduction and analysis that will be carried out. Additional analysis will be conducted as their need becomes apparent.

### 2.1 The Development of Consistent Sociometric Status

The first question concerns the manner in which sociometric status develops over the course of the year. Stable, consistent status may develop within the group of children as a whole, or popularity status may be relative to the context of specific social cliques. The first analyses will concern the identification of children's popularity types on the basis of sociometric nominations and ratings, and the identification of cliques in this data.

2.1.1 Sociometric types. Sociometric data will be analysed by computing total same-sex positive and total same-sex negative

nominations. In addition, total same-sex positive and negative ratings will be calculated. No weighting of ratings or nominations will be carried out. Although weightings were used in the early sociometric studies, there is no evidence that order of nomination reflects importance of nominee (Asher & Hymel, 1981). Each child will be identified as being of popular, rejected, or isolated type.

2.1.2 Change over time. Sociometric status is to be expected to change over time. Sociometric measures generally show instability when used with preschoolers, as assessed by test-retest reliability. One reason for this is that friendships among young children are especially labile and fluctuating. This lability is usually considered a source of measurement problems, but it has greater significance than this. It suggests that preschoolers do not reject or neglect in as rigid a way as do older children, and consequently that fixed negative reputations may not become established at this age. This is encouraging; it suggests that intervention might be especially effective at this age, and it also leads to the expectation (in agreement with Corsaro's findings) that processes of rejection and of friendship formation will occur with more frequency among preschoolers, thus facilitating their observation.

It is of interest, then, to see what systematic changes in children's popularity and unpopularity occur in repeated sociometric assessments. Hallinan (1981) describes time-series analysis techniques whereby repeated sociometric data can be analyzed to determine the stability and instability of popularity and unpopularity judgments. Wasserman (1979) and Alba (1972) propose related forms of analysis, for the identification of subgroups or cliques; Alba's technique involves identifying maximal complete subgroups, then merging subgraphs that have 2/3rds of members in common. A final selection of analysis technique from among these alternatives has not been made at this point.

2.1.3 Distribution of contact attempts across sociometric status of target child, and across sociometric status of group members. Strayer (1980) describes how the distribution of preschool children's social behaviors such as dispersive and cohesive activities can be used to develop sociographic representations of their affiliative groupings. Viewed this way, the observation of contact episodes in the playground is another source of information on the existence of cliques and membership groups. It can provide validation, and perhaps correction, for the sociometric classification and clique analysis mentioned above.

Gottman's membership group account predicts that both popular and unpopular children will make more efforts to join groups of popular children than groups of unpopular children. Each contact episode will be classified in terms of the popularity status of the entering child, and the popularity status of the group entered (assessed in terms of the mean and range in sociometric status of its members). Tests of the frequency of entry attempts of different types will be made to assess the membership group hypothesis. This analysis will be conducted separately for adult-prompted contact attempts and self-initiated contact episodes. Playground interactions are often subtly monitored by preschool staff, who may intervene if conflict develops, or if they feel a child is unfairly treated by peers. One consequence of this is that isolated and rejected children are likely to be encouraged by staff members to attempt to enter groups of children. This kind of encouragement works to facilitate the current study, since it increases the frequency of contact episodes for unpopular children, but it does mean that contact bids that are spontaneously initiated by the child must be distinguished from, and tallied separately from, those that are suggested by adults. It also means that simple frequency of interaction will not be a valid measure, but this potential index of popularity is now rarely used, since it has proved to have little predictive value.

## 2.2. Entry Strategies in Playground Observation and in Analogue Tasks.

The second set of questions concern the entry strategies which popular and unpopular children employ in entry attempts, both in analogue tasks and in playground contact episodes. Several analyses will be conducted in a similar manner for the contact episodes observed on the playground and for interactions in the analogue entry tasks. These analyses will be conducted on coded transcripts. The criteria for identifying playground contact episodes and the coding scheme used for entry strategies are described first.

2.2.1 Identification of playground contact episodes. Corsaro's (1979) definition of "interactive episodes" will be used to identify contact episodes. "Interactive episodes were defined as those sequences of behavior which begin with the acknowledged presence of two or more interactants in an ecological area and the overt attempt(s) to arrive at a shared meaning of ongoing or merging activity. Episodes end with physical movement of interactants from the area which results in the termination of the originally-initiated activity".

2.2.2 Coding of entry strategies. Transcripts of the entry portions of the contact episodes observed in the playground, and the entry portions of the analogue tasks, will be coded using a 16-item coding scheme developed by Gottman (Gottman & Parkhurst, 1980). This scheme was used by Puttuzaz and Gottman in the study described above. The categories of child utterances are the following: Demand, Me, Feelings, Mindreading, Infers Feeling, Sympathy and Comfort, Offers, Asks Help, You and Me, Rule, Information Exchange, Information About Other, Clarifies Message, Failure to Clarify Message, Agreement, Disagreement. In addition, each utterance is also double-coded as Fantasy, Question, Joke, or Squabble. Definitions of these codes are provided in Table 1.

2.2.3 Reliability. A subset of transcripts will be coded by a second coder, and reliability estimates made using the methods described in Puttalaz and Gottman (1981), and in Gottman (1983).

2.2.4 Use of entry strategies. Several analyses will be conducted on the coded entry strategies employed by the entering child, in both the analogue tasks and in playground contact episodes. First, the range of entry strategies will be examined. It is hypothesized that popular and unpopular children will not differ in the extent of their repertoire of entry strategies: i.e., that any strategy codes which show very low frequency of use for one popularity type will also be used with low frequency by both the other types.

Second, the success of the various strategies will be examined, using the procedure described by Puttalaz and Gottman (1981, 1981b). A cost/benefit score will be calculated for each entry strategy as used by popular and unpopular children, by calculating the probability of the strategy leading to acceptance of the user by the group minus the probability of the strategy leading to nonacceptance. Then the correlation between the probability of each entry strategy and its cost/benefit score will be calculated. It is hypothesized that rejected children will show a greater incidence of use of strategies which are generally responded to with rejection. It is further hypothesized that isolated children, in contrast, will not differ significantly from popular children.

## 2.3 Comparison of Analogue Task Interactions with Playground Contact Episodes

The third question is whether the pattern of use of entry strategies will differ for the analogue tasks and the playground contact episodes. Some difference is to be expected as a consequence of the fact that in the analogue tasks children will be attempting entry into a group of two children who are strangers to them. The results of Coie and Kupersmidt's (1983) study would lead one to predict that isolated children will show more successful entry strategies with the strange children in the analogue task. If popular children behave with strangers as they do in situations of cross-group entry, they will employ entry strategies likely to maximize the probability of their acceptance and, secondarily, the probability of their ignoral. Unpopular children will be expected to behave in a way likely to maximize the probability of their rejection (Puttala & Gottman, 1981). These hypothesized predictions will be tested, by comparing the results of the 'cost/benefit' analysis described above for the two different settings of data collection.

## 2.4 Rejection Strategies

The fourth question to be addressed is whether the rejection strategies used by groups of children to maintain their ecological territory on the playground vary with the sociometric status of the child attempting entry. Early in the school year, children who later become consistently unpopular may be rejected differently from the way their unpopular peers are treated. Alternatively, unpopular children may be rejected no differently from popular children, but respond differently to their rejection (reducing their frequency of entry attempts, for example). These two scenarios would have very different implications for an account of the genesis of unpopularity.

2.4.1 Rejection coding. The rejection strategies identified by Corsaro (1979; 1981) will be coded; they are the following (c.f. Table 2): Verbal resistance with no justification; Reference to arbitrary rules; Specific claims of ownership; Justification with reference ecological constraints; Denial of friendship. Additional categories will be added to this list if they prove necessary to fully characterize the range of behaviors observed.

2.4.2 Rejection of popular and unpopular children. The relative use of the different rejection strategies will be compared for contact episodes where popular children are attempting access, and those where unpopular children are making the attempt. The mean sociometric status of the group will also be examined as a predictor of rejection strategy.

## 2.5 Predicting Behavioral Problems

The fifth question to be addressed concerns the predictability of behavioral problems from sociometric status, and entry behavior. Since social rejection and neglect in early childhood have been linked with an array of behavioral and physical problems in later childhood and adulthood, it seems likely that children of different sociometric status will already be showing differences in the frequency of manifest behavioral problems.

Scores will be derived from the Child Behavior Checklist, using the procedure described by Achenbach and Edelbrock (1981). Mean scores for children of the different popularity types will be compared, and these scores compared with the normative data Achenbach provides. Separate analyses will be conducted for the Fall and Winter semesters, to determine whether the associations between reported behavior problems and nomination and behavioral aspects of unpopularity become stronger over time.

## 2.6 Hermeneutic or Interpretive Analysis

The sixth question to be raised is that of the concerns and goals which are responsible for any behavioral differences between children of different popularity type. One approach to answering this question is a quantitative one such as that described earlier, used by Putallaz and Gottman (1981). Another approach is to identify in a qualitative manner the concerns and issues apparent in a social interchange. Both the playground contact episodes and the analogue task interactions will be subject to a hermeneutic or interpretive analysis, in addition to the quantitative analyses described above. The aim of this hermeneutic analysis will be to identify in a qualitative manner the concerns which motivate children's actions in these exchanges. Hermeneutic analysis is a more contextually-sensitive method of investigation than is the coding of individual utterances. It is a powerful technique for searching out and assessing inconsistencies and ambiguities in behavior, such as might be expected in the case of unpopular children: they wish to join in with their peers, but they behave in ways which generally lead to their rejection. The theoretical basis for hermeneutic analysis has been described elsewhere (Packer, 1985c, included in Appendix). Its use is demonstrated in a study of moral conflicts (Packer, 1985b, a copy of which accompanies this proposal).

## E. Human Subjects Information

1. Characteristics of Participants. Permission has been given for this study to be conducted at the University of California, Berkeley's Harold Jones Child Study Center. The Child Study Center is part of the Institute of Human Development at U. C. Berkeley. It is comprised of two separate preschool centers; one is university staffed, the other is a parent cooperative. On previous occasions Packer has worked in both these centers, and is on good terms with the staff. Approximately 22 4-year-old children are enrolled each year in the preschool program in the university center, and it is planned to recruit as many of these children as possible, over 2 years of data collection. Total sample will thus be approximately 44. Both genders will be represented, approximately equally. School enrollment includes a mix of ethnic and racial backgrounds, although the majority of children are usually caucasian.

In addition, children from the parent cooperative preschool will be recruited to be "strangers" in the analogue tasks. If permission is granted by parents and staff, each child will take part in an analogue task twice in each of the two semesters.

2. Sources of Data. Audio- and video-recordings will be made of childrens' interactions on the preschool playground. Children will be individually interviewed, and asked to name, in confidence, those of their peers they do and do not like to play with. Video-recordings will be made of small group (3-person) analogue tasks. In addition, information will be requested from the families: the number, age and gender of peers; the identity of the child's friends inside and outside school; and a survey concerning any behavioral problems their child manifests.

3. Recruitment and Consent Procedures. Permission will be requested from parents to include their child in the study. A letter describing the study, the forms of data collection involved, and the nature of participation will be sent to parents in Summer 1986. Parents will be requested to sign and return an attached consent form if they agree that their child participate. Any child whose parents do not give permission will be excluded from the sample in this study. A child who expresses a desire not to participate in the small group tasks, the sociometric interview, or to wear the wireless microphone for playground observations, will be dropped from that occasion of data-collection. Parents will be asked to give their permission for the occasional showing of video-recordings made during the study, but only for the purposes of research, teaching, and dissemination of research results to professional audiences.

Consent will also be sought from the parents of children in the parent cooperative preschool. For these children, participation will involve only taking part a total of four times in a short, three-person analogue task. Parents will be asked only for permission for their child to participate in these tasks, and for the showing of the video-recordings made during the tasks.

4. Potential Risks, and Procedures to Minimize them. Small group tasks such as the ones employed in this study are generally enjoyed by young children. In the event that a child becomes distressed, the researcher will talk with and counsel that child at the end of the session, or will remove the child from the task if necessary. The task is designed to raise social issues, and consequently could lead to a certain amount of dissension among the children. However, the degree of conflict the task involves is comparable to or less than the conflicts children face in the playground. No physical or medical risks are involved.

With the exception of occasional showing of video-recordings for dissemination and teaching purposes, all data will be confidential; no information concerning specific individuals will be released to parents, teachers or children. Many analyses will concern group mean scores on measures, rather than individuals' scores. Where portions of transcripts are reported, with the speech of individual children, actual names will not be used, and code names substituted.

5. Risks versus Benefits. The potential stresses in the project's data-collection procedures are quite minimal in comparison with the daily stresses of preschool life, and children may in fact benefit from their participation in the small-group tasks: training-study research has shown that involvement in tasks such as these can help enhance a child's social development. Furthermore, the knowledge gained in conducting this research is intended to facilitate future intervention efforts, and thereby benefit other children.