CORRELATES OF THE FRIENDSHIP PROCESS AMONG ISOLATED CHILDREN: AN EXPLORATORY STUDY

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A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Psychology

1984

ABSTRACT

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Isolates, children who are virtually overlooked by their peers, represent one group of children who are at risk for exhibiting future maladaptive outcomes due to their limited social exposure. This study examined the friendship-relationships of first-, third-, and fifth-grade boys and girls of isolated and average social standing, (N=132). The results support the notion that the isolate subjects are functioning at a lower stage of the friendship process, a stage which relies more heavily on mere contact and global similarity. This finding does not appear to be due to a cognitive deficit, since isolates did not differ from averages in social comprehension. Thus, the existence of a behavioral/implementation deficit is posited. Finally, the two groups did not differ in terms of their perceived self competency, suggesting that participation in one mutual friendship may be sufficient to ameliorate the negative effects of social isolation. The implications of these findings are discussed.

ACKNOWLEDGEMENTS

I would like to extend my sincere appreciation to my committee members--Dr. Zucker, Dr. Schmitt, and Dr. Bogat--whose guidance and support throughout this project was invaluable. The combination of their empirical expertise and substantive knowledge greatly enhanced the quality of this study. Moreover, I would like to thank Bob Zucker, John McKinney, and my friends and fellow graduate students for their moral support and timely words of encouragement. Finally, I am deeply grateful to my husband, Larry, and my parents, Janet and Haskell Weathers, whose seemingly unending patience and loving support provided me with the strength I needed to accomplish this important goal.

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INTRODUCTION

The time period between the 1920's and World War II marked the beginning of major theoretical interest and systematic investigations in the area of peer relations. The basic methodologies that were developed during this period laid the foundation for today's current research endeavors--observational methodology, sociometry, and experimental interventions. For example, Moreno (1934) in his book, Who Shall Survive, launched the field of sociometry. Thrasher (1927) conducted the first systematic study, as a participant observer, on peer group interactions--his subjects consisted of adolescent gangs in Chicago. In the late 1920's, child welfare institutions received an infusion of funds which allowed for the funding of several experimental nursery schools and for the funding of various research projects aimed at evaluating children's social, cognitive, and physiological development (Sears, 1975).

In the past decade, a revived interest in the area of peer relations has caused an expansion on and refinement of the methodologies established in the last 50 years. However, several areas appear to need further examination. One of these areas consists of the need to systematically study children's friendships either cognitively (Bigelow, 1977; Gamer, 1977; Bigelow & La Gaipa, 1978; Berndt, 1979) or behaviorally (Maudry & Nekula, 1939; Lee, 1973; Dodge, 1981); few studies

have utilized both perspectives in evaluating the interactions of the same group of children (Newcomb, Juenemann, Meister, Note 1; Newcomb & Meister, Note 2). Clearly, future investigations need to continue to examine both the behavioral and cognitive processes involved in the formation and maintenance of friendship relations among isolated children and their peers.

The importance of such a line of research is apparent when one considers the significant contribution children's interactions with their peers makes to future social and emotional development (Hartup, 1970; Hartup, 1976). For example, research has shown that friends promote social-skills development by providing children with regular access to play groups (Corsaro, 1981), facilitating complex forms of play (Gottman & Parkhurst, 1980), and giving direct instructions on such important issues as the management of aggression and of sexual relationships (Hartup, 1978; Fine, 1981). Conversely, studies have demonstrated that negative peer status is predictive of various maladaptive outcomes in later life (Roff, Sells, & Golden, 1972; Cowen, Pederson, Babijian, Izzo, & Trost, 1973). Isolates represent one group of children who are in danger of manifesting such maladapative outcomes. Thus, in order to design effective social-skills programs, there exists a need to further understand the cognitive and behavioral components of isolated children's relationships with their peers. The following study has been designed to contribute to an understanding of this former component.

The design for the study consisted of examining six isolated and six average social standing children, of both sexes, at each of three grade levels--first-, third-, and fifth-grade. These children were

paired with their best friends (N=144 subjects and friends), as determined from various sociometric nomination and rating scales. An interview session was conducted for each child--subject and friend--individually. During this interview, several cognitive elements thought to be involved in the friendship process were assessed. The study analyzed for differences in perceived competency--cognitive, social, physical, and general competency--among isolated and average social standing children. Since competency is related to effective, healthy functioning, this examination begins to address, albeit in a correlational way, the question of the consequences of belonging to various social groups. In addition, script theory was utilized to examine the children's knowledge of developing and maintaining peer relations. Finally, the possible relationship of exposure and similarity to the friendship selection and development processes among isolated children and their friends were examined.

Prior to the presentation of the actual study, a review of the existing research dealing with isolated children and their peers is made. Since there is a surprising paucity of research with this group of children, various aspects of the acquaintanceship and friendship processes--exposure, information exchange, and similarity--are suggested as possibilities which might yield alternative avenues to theory building. Finally, script theory, as one possible and promising methodological tool for investigating the above area, is discussed.

Towards a Definition of Social Isolation

In reviewing the literature, many studies have centered their focus on popular versus unpopular children (Coons, 1957; Hartup, et al., 1976;

Gottman, 1977). Such categorizations were generally made on the basis of social preferences--either social acceptance and/or social rejection or social acceptance minus social rejection via peer nominations. The term "unpopular," when used generically, would appear to be an attractive adjective for describing isolates since this group of children has been found to be relatively disliked and/or ignored by their peers (Northway, 1944; Gronlund, 1957; Gottman, 1977). However, extreme caution should be applied when attempting to generalize the findings from studies conducted on unpopular children to isolates. This is due to the fact that most studies which focus on unpopular children fail to consider social impact--social preference plus social rejection--and as a result, findings from these studies cannot be applied to isolated children. In order to overcome this dilemma, several investigators have presented distinct ways of defining and identifying isolated children; moreover, a few recent studies have focused their investigations on this subgroup. The following section will a) discuss the definitions of social isolation found in the literature, b) present several studies which investigate the peer relation process among isolated children, and c) attempt to present a new definition of social isolation.

Northway (1944) followed 80 fifth- and sixth-grade children over a two year period, looking at their acquaintanceship process. Specifically, she identified children falling into the lowest quartile, "outsiders," based upon school records, psychological evaluations, behavioral observations in the classroom and on the playground, and sociometric testing. Within this group of children, Northway distinguished between three subgroups. The first group was defined as

socially recessive. These children were described as listless, lacked vitality, under par physically, and in general, lacked any energy for living. The second group, uninterested children, differed from recessive children in that they did have interests, but these interests were personal--e.g., art, music--rather than social. They either seemed uninterested or anxious when around peers. Northway felt that with gradual training, these children could be taught to interact with their peers. Finally, the last group identified was ineffective children. These children were characterized as full of energy; however, they engaged their peers negatively, were loud, boisterous, and rebellious.

In 1957, Gronlund studied 158 seventh- and eighth-graders. He used three positive peer nomination scales, one negative scale, and a Guess Who measure in order to classify the children into three social standing groups; isolates--smallest number of negative and positive choices--, rejects--many negative nominations--, and accepted children--many positive nominations. The isolated children in his study were characterized as quiet, shy, not talkative, and virtually over looked. On the other hand, rejects were described as not good looking, untidy, not likable, restless, and talkative. They engaged their peers negatively.

Gottman (1977) examined the literature on intervention programs and discovered that isolation was defined in one of two ways. For example, O'Connor (1972) focused his modeling interventions on children who had a low frequency of peer interactions. Other studies (e.g., Oden & Asher, 1975) defined isolates as low in sociometric preference, that is, receiving few friendship nominations. In order to determine the most appropriate definition, Gottman looked at frequency of interaction,

hovering behaviors, and positive and negative peer nominations in preschool-aged children. He discovered that frequency of interaction was not related to sociometric standing. Thus, Gottman defined five types of children--stars, rejects, mixers, teacher negative, and tuned out. The last two groups--teacher negative and tuned out--represent neglected children. They were relatively disliked by peers and exhibited the greatest amount of hovering behaviors.

Again, focusing on preschoolers, Peery (1979) recommended the use of two dimensions for determining social standing, social preference--the number of positive nominations minus the number of negative nomination--and social impact--the total number of positive and negative nominations. After analyzing various sociometric measures along these two dimensions, Peery came up with four social standing groups: rejects--low social preference and high social impact, stars--high preference and impact, isolates--low social impact and negative preference, and amiables--low social impact and positive preference. The isolates were found to be high in social comprehension. Thus, Peery concluded that they either lacked the behavioral skills to get them involved with their peers, or they used their skills inappropriately, pushing other kids away from them. This tendency to maximize social rejection was also found by Putallaz and Gottman (1981) although they made no distinction between isolated and rejected children. Several studies have, however, separated isolated and rejected children.

Coie and Kupersmidt (Note 4) observed ten groups of black fourth-grade boys; each four member group consisted of a popular, a rejected, an average and an isolated boy. The groups were equally divided between familiar and unacquainted boys. Although within the unacquainted group,

previously isolated boys were viewed as no more shy than the popular boys, within the familiar group, isolates retained their social standing. This suggests a stigmatizing effect of labeling a child as isolated. In an attempt to investigate the process of the development of social standings in a group of initially unacquainted children, Dodge (Note 5) studies six-member play groups consisting of unfamiliar seven-year-old boys over a two week period. Although no conclusions can be made concerning change in social standing over this period--they reported no pre-experimental social standings--, Dodge reported that those children who emerged as isolated at the end of the two week session engaged others inappropriately; however, in contrast to the rejected children, the isolates refrained from fights and hostile statements.

In an attempt to clarify the factors involved in the differential outcome patterns for isolated children, and to more fully understand the interactions between dyads--instead of the group situations utilized in the studies above--Newcomb and his colleagues have conducted a series of experiments with isolated children. The first study observed homogeneous social standing pairings of same-age, same-sex star, average, rejected, and isolated children (Newcomb et al., Note 1). Among isolated children, a pattern of extremely limited social interaction emerged. In contrast, average and star social standing children quickly engaged in reciprocated social exchange that followed a logical sequence of greeting, information exchange, activity initiation, and activity maintenance. In the second study, Newcomb and Meister (Note 2) examined whether the problematic social behaviors of low social status children would be attenuated if these children were paired with unfamiliar high social standing children. Although the

low social standing group consisted of primarily rejected children, the findings from this study may suggest some trends for future investigations. In this mixed pairs design, the popular pair quickly engaged in the logically sequenced behaviors mentioned in the first study; on the other hand, in the heterogeneous pair, the popular child initially attempted to begin a logical sequence of social exchange, but his/her low status partner did not consistently respond to these overtures. Finally, the low pairing group evidenced significantly less logically sequenced interactions. When applied to isolated children, these results suggest that isolates might appear to exhibit greater social competence when interacting with average and star social standing children as opposed to other isolated and rejected children. The final study (Newcomb & Rogosch, Note 3) attempted to investigate the relationship between children's social reputations and their friendship choices and expected behaviors. In this investigation, five boys and five girls in first-, third-, and fifth-grade were identified as belonging to one of four social standing groups--stars, averages, rejects, and isolates. Among the isolated children, the percentage who had reciprocal friendships was significantly age related--twenty, eighty, and ninety percent respectively. In every one of these reciprocal friendships, isolated children were paired with a child of either star or average social standing; never was an isolated child paired with another isolated or rejected child. When examining social reputations, isolates were characterized as afraid, rejects as mean and bossy, and stars as leaders, helpful, and quiet and shy. In addition, stars and isolates were equally often described as "nice." Finally, the most consistent behaviors were expected from rejects, whereas isolates evidence more

uncertainty. This finding is probably due to the low social visibility of isolates.

This finding that, developmentally, isolates are acquiring friends, may lead us to a new definition of social isolation. Moreover, such a definition might provide a framework with which to understand some of the seemingly contradictory findings which appear in the literature on the social relations of isolated children. It is this author's contention that isolates who have a reciprocal friendship may be very different from isolates who do not have such a friendship. Thus, although the social preference and social impact dimensions (Peery, 1979) are important in defining isolation, perhaps a third dimension is needed, that is, the participation in a reciprocal friendship. Those children who are low on preference and impact and who do not have any friends would probably be the group in most need of a social-skills intervention program. In the aforementioned research, "friendless" individuals are not distinguished from "low frequency" individuals with minimal social relationships, i.e., children who are not very social, visible, or preferred, but who do manage to maintain at least one mutual friendship. With this distinction in mind, some of the apparent discrepancies may be reconciled. For example, it may be that children without any friends would exhibit cognitive or behavioral deficits, whereas children with at least one mutual friend may not be significantly different from their average counterparts. This study will in part focus on defining the characteristics which separate isolates who have at least one mutual friend from averages who have several mutual friendships. Thus, the question of whether or not participation in a mutual friendship can ameliorate some of the negative aspects associated with an "isolate" classification will be addressed.

Explanations of the Friendship Process Among Isolated Children

One possible explanation for the process involved in selecting and developing friendships among isolated children might be that isolates, due to their limited social experience, choose the children who are physically closest to them to be their friends. This theory is not new. Zajonc (1968; Moreland & Zajonc, 1979) has proposed the idea that simple repeated exposure might account for increased attraction among friends. Research has shown that increased opportunities for interaction lead to increased liking (Newcomb, 1961; Saegert, Swap, & Zajonc, 1973; Swap, 1977). However, if the initial reaction is negative, repeated exposure may in fact lead to increased rejection (Brockner & Swap, 1976).

Infant studies suggest the positive effects of repeated social exposure between an individual and his/her peer group. Becker (1975) arranged for 16 pairs of 9-month-old infants to meet for 10 play sessions, followed by a meeting with a new partner. Control pairs met twice--at the first session, and at the last session. Peer-oriented behaviors increased in quantity, complexity, and degree of social engagement among the experimental subjects, but not among the controls. The positive interactions with the new peers suggests that social learning had occurred rather than specific learning--learning to interact with one specific child--since the infants were able to utilize their newly learned social behaviors with novel, unfamiliar peers. Lewis et al. (1975) observed 8 pairs of year-old infants at weekly intervals. The results indicated a heightening of intimacy in social relations with increased familiarity.

With older children, the effects of familiarity and attraction are inconsistent--sometimes attraction is positively associated with familiarity (Schatz & Ellis, 1975) and sometimes they are negatively

related (Cantor, 1972). These differential findings may be accounted for by positing that at lower levels of cognitive functioning--e.g., with younger children--proximity may play an important role in the acquaintanceship process (Corsaro, 1981); however, at the higher levels of cognitive functioning, propinquity may not be such a salient feature of the process (Selman, 1981). If varied social experience is a prerequisite for the advancement to such higher social/cognitive levels, then isolated children, because they lack such social exposure, may be operating at the lower cognitive levels. Hence, proximity may be a more salient feature for their friendship processes than for average or star social standing children. With increased social experience, we would expect the number of friends of isolates to increase since factors other than simple propinquity would be operating. Indeed, this trend of an increase in the number of mutual friendships among isolated children with age was found in a recent study (Newcomb & Rogosch, Note 3).

Although such exposure theories might account for some aspects of the acquaintanceship process, simple proximity is insufficient at accounting for the total process. In order to obtain a whole picture of the process, perhaps we need a theory of information exchange which emphasizes the role of verbal communication. Such theories are scarce and relatively undeveloped in the peer literature; consequently, one possible alternative source of information might be social psychological theories of the friendship process with adults. To this end, four prominent theories will be summarized--Newcomb (1961); Altman and Taylor (1973); Duck and Craig (1977); Adams (1979)--and their implications for isolated children will be discussed.

Newcomb's theory (1961) stresses the importance of interpersonal communication in the development of friendships. The more frequent the opportunity for interaction, the more likely attraction will develop and increase in intensity. Through information exchange, people learn more about each other; moreover, this obtained information goes through a filtering process. If the information is not too discrepant from the values and attitudes held by a person, attraction will increase; however, there is another factor which interacts with similarity in predicting attraction. In addition to information exchange, the context in which the interaction takes place is important. Only those communications which are appropriate to the current level of intimacy will lead to increased attraction. Newcomb supported his theory through empirical examination. A group of unacquainted college males, living in a house provided by the experimenters, were administered a series of questionnaires aimed at measuring attraction to and perceived similarity with the other group members. Newcomb concluded that attraction between members intensified with increased opportunity for communication; moreover, the greater the degree of attraction between two people, the more similar they perceive themselves.

Altman and Taylor (1973)--Social Penetration Theory--also stress the importance of interpersonal communication in the development of relationships. Furthermore, they emphasize the role of a filtering process. These authors believe that the filtering process is used to evaluate information obtained about others. If the information is positively valued, the relationship will continue; if the information is negatively valued, the relationship will either be terminated or cease

to develop any further. Hence, a stage-wise progression of friendship formation and increased intimacy is stressed.

The view of the friendship process from a stage theory perspective was also supported by Duck and Craig (1977). They examined the attraction choices of several college students to another confederate student, based upon his responses to an attitude scale. If the confederate's answers were appropriate to the level of acquaintanceship, and if they were similar to the subject's own attitudes, he was rated more positively.

A very similar theory of mate selection was proposed by Adams (1979) and is applicable to the present discussion in that it is a stage theory which stresses interpersonal communication; moreover, at different stages, different types of information are important. In the early phases of attraction, physical appearance, valued behaviors, and similar interests are most important; however, as the relationship develops, similar values and attitudes, salient categorical homogeneity--race, religion, sex--, and empathy become important. When applied to children, all four theories suggest several promising avenues of investigation.

These theories suggest several reasons why isolates have problems with interpersonal relationships. The first possibility is that isolates simply fail to engage their peers. The lack of communication and information exchange would account for their unattractiveness to their peers (Newcomb, 1961). Although some investigators have put forth this suggestion (Northway, 1944; Gronlund, 1957), others feel that isolates do engage their peers, however, the children do so inappropriately (Putallaz & Gottman, 1981; Dodge, Note 5). This leads to a second possibility. It may be that, through a filtering process, these

inappropriate behaviors are negatively valued (Altman & Taylor, 1973). Because the information extracted from the interaction is evaluated negatively, children may not view isolates as similar to themselves. Since similarity and valued behaviors are important during the initial phases of attraction (Duck & Craig, 1977; Adams, 1979), positive, reciprocal bonds may not develop between isolates and their peers. Finally, isolates may be engaging their peers, and they may be utilizing acceptable behaviors, but they may be operating on a level which is inappropriate to the current stage of acquaintanceship (Duck & Craig, 1977). For example, they may approach their peers with statements that are only suitable when made in a context of greater intimacy between the two parties. On the other hand, isolates may continue interacting on a superficial level, hindering the relationship from developing any further.

In the present study, we will be able to determine a) whether isolates are cognizant of proper social skills, b) whether they perceive themselves as applying these skills when interacting with their friends, and c) whether or not socially appropriate behaviors are executed in logical sequences, along an intimacy hierarchy. This knowledge will enable us to sort through the possibilities presented by adult theories in order to begin to build a theory which can account for the friendship process among isolated children.

In the above discussion on adult theories of friendship formation, it was hypothesized that increased similarity leads to increased attraction. In turn, increased attraction leads to the development of greater levels of intimacy between friends. The role of similarity/ complementarity in the friendship process has become a major focus of much adult research but has had only limited impact on child research.

Izard (1960) found that with adolescents, friends were similar rather than complementary. Since several of our theories about the acquaintanceship process among isolated children and their friends propose similarity issues, it is important to understand how this variable effects the relationships of children.

Perceived similarity in attitudes and values has been found to be related to social attraction among individuals ranging from the fourth-grade through college (Byrne & Griffitt, 1966). In a study conducted by Davitz (1955), preferences for camp activities were observed to be similar between children and their sociometric nominees; however, perceived similarity was far greater than actual similarity. In fact, the actual similarity between a child and his liked and disliked peers was not markedly different; however, the differences in perceived similarity between the two friendship choices were significant. The importance of perceived similarity has been noted in other studies (Newcomb, 1956). With isolated children, the discrepancy between actual and perceived similarity may be even greater than the discrepancy found between the average children and their friends. The current study will investigate this possibility. If such an exaggerated discrepancy is found, it may be accounted for by the fact that isolated children have limited positive social experiences. Thus, it is possible that the isolates would tend to choose their friends from among the other children who view them positively. After having made such an choice, they should perceive these children as similar to themselves, whether they are or not. In short, a lack of social experience may cause isolates to be less discriminant in their friendship choices. Clearly, the confirmation of such a hypothesis would require a longitudinal investigation since

it posits a causal, on-going process. The correlative, cross-sectional nature of this study precludes such interpretations; however, it suggests promising avenues for future research.

Script Theory as a Tool for Investigating the Friendship Process Among Isolates

In order to investigate the area of peer relationships, we need a conceptual technique which can be applied to the friendship process. Script theory provides us with such a methodological tool with which to begin our investigations. Hence, the following section will discuss the concept of script theory and suggest ways in which it can be applied to investigating the friendship process among isolated children and their friends.

An understanding of social relationships within a participatory framework requires a model of event representation. Abelson (1981) developed such a model in his theory of scripts. In Abelson's theory, a script is defined as a basic level of knowledge representation in a hierarchy of goals and themes (Nelson, 1981). Scripts are concrete, well specified event representations derived from and applied to social contexts. They are ordered sequences of actions appropriate to a particular spatial-temporal context, organized around a goal. This event representation is general in that it is not tied to any specific situation. According to Nelson (1981), script knowledge enables people to interact in a relatively automatic fashion. Each person in the interaction knows what to expect of the other person. Thus, the participants are free to focus their attention on resolving potential problems in the interaction. Conflict arises when individuals hold

opposing script information, or when an individual enters a situation for which he has no preconceived script--e.g., entering school for the first time.

According to Nelson, script information can be assessed via behavioral inferences or through the responses given to hypothetical situations. The advantage of the hypothetical situation methodology is that it can assess children's responses in more varied situational contexts than are practically possible in direct behavioral assessment. We have already seen that isolated children exhibit less appropriate and more negative behaviors than their popular peers (Newcomb et al., Note 1; Dodge, Note 5). Perhaps their interactions are guided by fewer scripted behaviors. The question of how the two groups differ in their responses to hypothetical situations remains to be examined. Unfortunately, researchers who are interested in isolated children have not yet addressed this question. Consequently, a discussion of the results of the hypothetical situation tasks given to popular versus unpopular children will be made. It is anticipated that such an analysis will provide a model for investigating the process among isolated children.

Gottman and his colleagues (1975) asked third- and fourth-grade children to complete a role playing task in which they pretended to be making friends. High-social status children were more successful at this task than low-social status children. Ladd and Oden (1979) reported similar findings with the addition that low-social status children gave more unique options for a protagonist confronted with various hypothetical situations. Among preschoolers (Asher & Renshaw, 1981), unpopular children's responses were more often inappropriately negative, aggressive, and vague. One area of concern to researchers planning intervention

programs is the issue of whether they have the skills, but fail to apply them properly to specific situational demands. Assessing script knowledge through hypothetical situation methodologies provides a promising tool for answering this question. Asher and Renshaw (1981) concluded, on the basis of their study of kindergarten children and previous research (Gottman et al., 1975; Ladd & Oden, 1979), that unsuccessful children differ from their popular peers in that they exhibit less skillful social interaction strategies. Newcomb et al. (Note 1) supported a conclusion based upon a combination of lack of social skills and lack of appropriate application. In their study, isolated children exhibited an overall lower frequency of interaction strategies; however, proportionally, the options given were equally effective between the two groups of children.

Many studies which utilize either cognitive or behavioral strategies can be interpreted from a script theory perspective; however, linkages between children's conceptualizations of friendship and their social standing has received only limited support (Newcomb & Brady, in press). Consequently, further research in this area is needed. Moreover, any differences between social standing groups using cognitive or behavioral measures needs to be investigated developmentally. The proposed study incorporates both of these facets into its methodological design in an attempt to understand several cognitive components in the friendships of isolated children and their peers.

Significance of This Investigation

In determining the relative significance of any investigation, the contribution of the findings to three areas needs to be assessed:

a) methodological significance, b) theoretical significance, and c) practical significance. This study has important implications for all three areas because it encompasses several factors thought to be involved in the process of peer interactions that previous investigations have only partially assessed. That is, it concurrently examines multiple stages in the friendship process among isolated and average social standing children; furthermore, it addresses its inquiry to both sexes, a factor that several studies have neglected to consider (Coie & Kupersmidt, Note 4; Dodge, Note 5). The study also focuses on an age group in which there is a surprising paucity of data.

Previous research has examined the area of peer relations using a cognitive approach (Bigelow, 1977, Davitz, 1955; Izard, 1968). However, these studies tend to focus on a single aspect of the friendship process. The study described herein addresses itself to a cross-sectional investigation of several stages of the process--friendship selection, acquaintanceship, maintenance, conflict resolution, and social standing outcomes. Another advantage of this methodology is that it looks at the friendships of isolates from a developmental perspective with an age group that is highly influenced by peer interactions (Hartup, 1978; Hartup, 1976). Furthermore, the use of multivariate statistical analyses techniques allows for a detailed description of a complex area--i.e., examining the relationships between many variables in a manner which reduces the chances of obtaining sporadic, chance findings.

Although several detailed theories of adult friendship have been developed (Duck, 1977; Zajonc, 1968; Adams, 1979), few of these theories have been generalized to children. The present study, as it examines several areas of friendship--similarity, exposure, script knowledge--has

the potential of yielding results which lend themselves readily to theory building. Although no one study can result in an adequate theory of children's peer relations, a culmination of several such studies and existing adult theory may provide a solid foundation for such an endeavor.

In terms of practical significance, this study makes a significant contribution to the pre-existing body of knowledge on the normative interactions of isolated peers. In addition, by comparing these interactions to those of average social standing children and locating specific cognitive differences between these two groups, clinical psychologists will have a better idea of what to focus on with intervention programs. The results of this study may give clinicians a better idea of exactly what social skills, if any, isolated children are lacking in. By using a multi-dimensional, developmental methodology, we will be able to determine if isolates lack knowledge about general social skills, or whether their knowledge varies as a function of the stage of the friendship process--initiation to maintenance. Such prior empirical knowledge has been absent in many intervention programs (Oden & Asher, 1977; Hymel & Asher, 1977) perhaps accounting for the inability to bring about significant changes.

Hypotheses of this Investigation

The following hypotheses will address six issues in the process of isolated children's friendship development: a) similarity between friends, b) exposure between friends, c) social cognitions of friendship scripts, d) conflict resolution, e) the relationship between group status and self competence, and f) correlates of group status.

Similarity between friends. In accordance with Davitz's (1955) findings, it is anticipated that friends will perceive themselves as more similar than they actually are. This difference will be greater for the isolated children and their friends, since isolates are posited to be less discriminant in their friendship choices. The magnitude of the differences will remain constant developmentally since I do not believe that social experience would have much of an effect on this phenomenon.

Testing the Zajonc exposure hypothesis. According to Zajonc (1968; Moreland & Zajonc, 1979), simple repeated exposure accounts for adults becoming more attractive and desirable to one another. It is hypothesized that this phenomena will hold for children as well. In fact, this finding may be even more salient for describing the friendship choices of isolated children. It is hypothesized that because isolated children suffer from a lack of social experience, they will tend to make friends with those children who are physically closest to them. Specifically, it is believed that the friends of isolates will live closer to them, sit closer to them in the classroom, play in the same areas on the playground, and/or be involved in similar extracurricular activities. Although these same conditions are expected to hold for average children, it will be a better determinant of friendship for the isolated children than the average children. This factor will be less salient with age.

Social cognitions of friendship scripts. The work of Newcomb, Juenemann, and Meister (Note 1) revealed that isolated children suggest fewer strategies in response to the hypothetical situation tasks; however, the effectiveness of the responses given between the two groups

was proportionally equal. Thus, it is expected that this same pattern of results will be found in the proposed study and again, this difference between isolates and averages will decrease with age.

Conflict resolution. It is anticipated that the average social standing child will offer appropriate solutions for resolving a hypothetical conflict situation and will perceive himself/herself as more reliable than his/her friend. However, among the isolates, the "friend" will be perceived as the more effective problem-solver--i.e., offering more independent, action-oriented solutions. Furthermore, the average child's behavior will be more appropriate to the demands of the situation than the isolate child. This trend will decrease with age.

Perceived competence. One would expect that perceived competence would be effected by group membership; children who do not have many friends will receive less positive consensual validation of self from their peers, resulting in a less positive view of their competency in general, and particularly in social situations. To the extent that one's peers also contribute to the development of one's cognitive and physical identity, these areas will also be effected, with isolates appearing less competent--as measured by perceived self competency--than their average counterparts.

Predicting group status. Adult theories of friendship formation would suggest that exposure and similarity are two factors which are relevant to the development of friendships (Duck, 1977; Zajonc, 1968). In the initial stages, propinquity may be more salient than similarity; however, if increased intimacy is to result, other factors may become more dominant. One of these factors may be similarity. It has been suggested that isolates may, for whatever reasons, fail to engage their

peers. Along the same line, they may also fail, once they have a mutual friendship, to develop an increasingly intimate relationship. Hence, exposure would remain a more salient variable in their friendships than in the friendships of average children.

Among the four perceived self competency variables, it is posited that social competency would be the area which is most effected by group status. One would expect that poor peer relationships would result in a negative view of one's social abilities. The other three areas may also be effected in some less direct manner--i.e., a third variable is contributing to both the lack of peer involvement and the development of an inadequate self image.

METHOD

The proposed investigation is one phase of a larger, more encompassing study of isolated children's peer relations (Newcomb, 1981). The entire project consists of three phases. During the first phase, three sociometric measures, described below, were administered to a large pool of first-, third-, and fifth-grade children (N=934). By using several different measures, a more complete description of the research sample may be formulated as well as assuring greater homogeneity between experimental groups. Each child's sociometric standing was determined and the most prototypically average and isolate children, who could be paired with a mutual friend, were asked to participate in phase 2 and phase 3 of the study. Where there were more subjects than were needed, random selection procedures were employed. Phase 2 assessed these children in an initial encounter situation with another same-age, same-sex child of either similar or different social standing. Phase 3 assessed a subset of the children who participated in phase 2 along with their best friends. Taken as a whole, this study allows for the assessment of peer relationships in three different social contexts: a) initial greeting and information exchange with a potential acquaintance, b) initiation and maintenance of activities with the acquaintance, and c) reacquainting with and maintaining mutual interactions with a friend as well as resolution of a possible conflict situation. The study described herein will focus on the cognitive

variables which were examined during phase 3--mutual friendship pairs with one member of either average or isolate social standing.

Subjects

Both male and female children in first-, third-, and fifth-grade at seven public elementary schools and three parochial schools in a suburban midwestern community were the initial participants in this study. The total subject pool yielded 934 students. Parental permission was obtained for children completing the sociometric phase of this research (see Appendix A).

Sociometric/peer assessment. In order to assess each child's current social standing with his contemporaries, three measures of sociometric standing were administered in a group/classroom setting. In the case of first-grade children, a 3 to 1: child-to-experimenter ratio was maintained. This ratio was increased--5 to 1--for the third-, and fifth-grade children. The test booklets for all children were uniform, using a different colored paper for each sociometric measure.

The first instrument, a best friend/least favorite playmate sociometric, requires each child to select from among the same-sex members of his/her class "the three boys (girls) who are your best friends" and "the three boys (girls) with whom you would least want to play with." The children were asked to circle the names on a class roster, putting a 1, 2, or 3 by the "best friend" choices to indicate a hierarchical preference. These instructions were written in the booklet, as well as presented verbally. Next, the children were asked to complete a rating scale sociometric previously used by Hymel and Asher (1977). The goal of this instrument is to provide an index of how each child feels about the other same-sex children in his/her

class. Each child's name was listed alphabetically, followed by a 1-5 point Likert scale. Anchored at the extremes of the scale were either "smiley" faces, or "unhappy, faces. In response to the question, "How much do you like to play with each of these children?," each child was asked to rate their same-sex peers. Prior to completing this sociometric, the children were given instructions in the use of the scale using a favorite/least favorite food example.

The final instrument, the classplay sociometric, is an adaptation of Bower's original classplay procedure (Bower, 1960). Each child was asked to pretend that their class is going to put on a play, and they have been asked to be the person in charge. They will be told that it is their job to select from among the other boys (girls) in their class the boy (girl) who most of the other kids in the class think would best fit the part. The eight reputational types are leader, helpful, nice and follows directions, quiet and shy, afraid, angry and complaining, fights, and mean and bossy.

Presentation of these items was randomized across classrooms. These traits fall along the interpersonal dimensions of dominance/submission and acceptance/rejection suggested by Freedham, Leary, Ossorio, and Coffey (1951). See Appendix B for sample sociometric protocols. For the purposes of this study--phase 3--only the results from the best friend/least favorite playmate scale and the like-rating scale were utilized.

The best friend/least favorite playmate sociometric was analyzed according to the following procedures. The number of positive and negative choices each child received was used in a two-dimensional scheme to assess individual differences in social standing. The two

dimensions are social preference and social impact (Peery, 1979). The former of these two dimensions is assessed by finding the difference between the number of positive and negative choices received; the latter is determined by adding the number of negative choices to the number of positive choices. Due to the variability in class size and composition, the children's raw scores for positive and negative nominations were transformed to z scores before any calculations were made. Further, the products of the calculations were, again, standardized. As shown in Figure 1, cluster analysis of the two dimensions (Newcomb & Rogosch, Note 3) produces four social standing groups--stars, averages, rejects, and isolates.

The two groups of interest in this investigation are averages and isolates. Children will be considered to have average social standing if they have social impact and social preference scores equal to or between plus and minus one standard deviation from the mean. On the other hand, isolates are defined as having an impact score less than minus one standard deviation and a preference score between plus and minus one standard deviation.

The second sociometric measure, the like-rating scale was used to pair "best friends" for the phase 3 investigation.

Selection of subjects in phase 3. The design of this phase can best be understood by consulting Figure 2. Of the isolated and average social standing children who participated in phase 2, 72 children were recruited for participation in this study. Where there were more subjects than were needed, random selection procedures were utilized. After re-examining the sociometric measures, each of these 72 children were paired with another child on the basis of an on-going, reciprocal

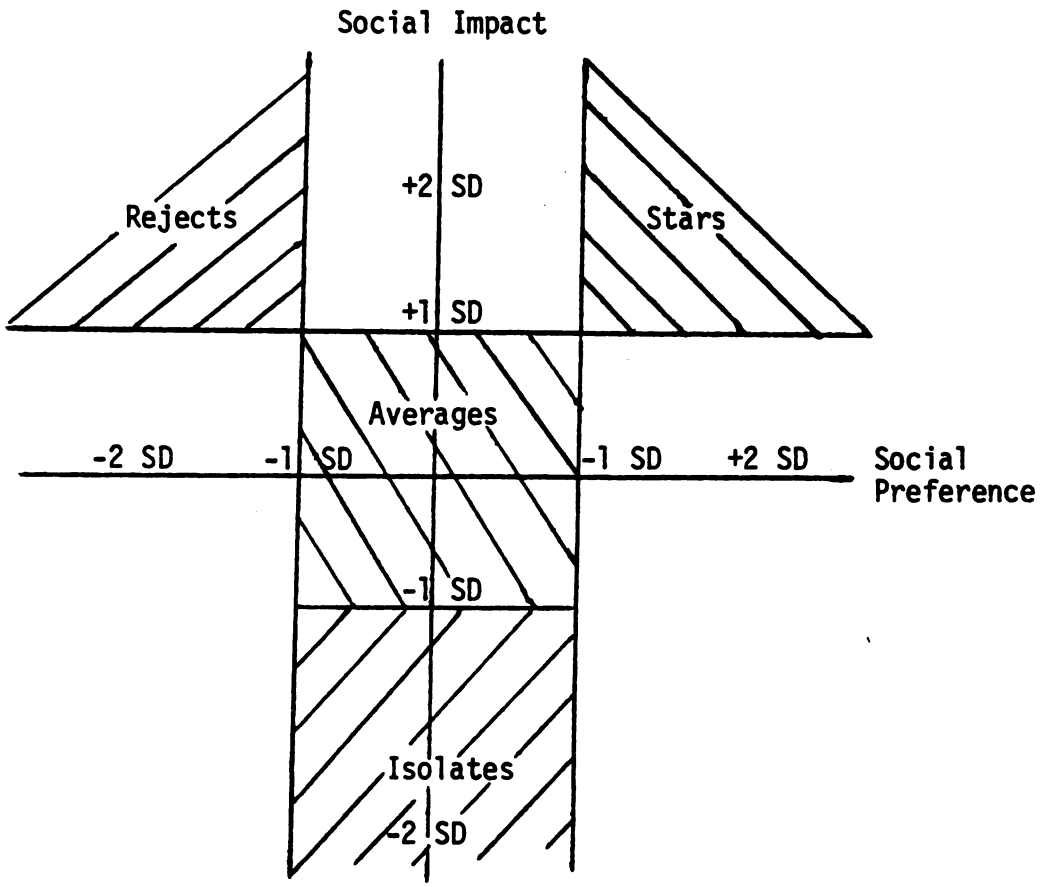


Figure 1. Results of cluster analysis of social preference and social impact dimensions

Sociometric Status

	Isolates			Averages		
	Grade Level			Grade Level		
	first	third	fifth	first	third	fifth
Female	6	6	6	6	6	6
Male	6	6	6	6	6	6

Figure 2. Complete crossing of sex, grade level, and sociometric status: Original design (6 pairs per cell)

relationship. This matching procedure involved several steps. First, the three "best friend" choices of each isolate and average child were examined. A reciprocal friendship was indicated if the other child also selected the isolate or average as one of his/her three best friends. Where more than one child had a reciprocal friendship with the target child, the pair with the highest sum of ranking was chosen to participate in this study. Utilizing this criteria, 61 of the subjects were matched with a best friend.

Previous research by Newcomb and Rogosch (Note 3) suggests that approximately 80% of the first-graders and 10 to 20% of the third-, and fifth-graders identified as isolated will need to be placed in "best possible positive relationship pairs." This pairing is determined by examining the isolate's three friendship choices. First, the responses of each child who the target subject chose as his/her #1 best friend are examined. An index of this child's "positive" regard for the target subject is determined using not only the peer nomination scale, but also the peer rating measure. Next, this same procedure is followed for the target subject's #2 and #3 best friend choice. Finally, the child who regarded the target subject most positively is selected for the pairing. In this study, it was necessary to match nine isolate and one average pair based upon this criteria.

Finally, it was necessary to match one isolate with a friend based strictly upon the results of the like-rating scale. For this subject, a mutual, reciprocal friend was selected, but this child was not able to participate in the study. Hence, the next best match was a reciprocated "5" ranking on the like-rating scale.

At the conclusion of the data gathering phase, it was discovered that an error had been made in computing the target subjects' preference and impact scores. When this error was corrected, it was necessary to drop eight pairs--two first-grade, female average pairs, two third-grade, female isolate pairs, two fifth-grade, male isolate pairs, and two fifth-grade, female isolate pairs--from the study, as the target subjects' standardized preference and impact scores no longer met the aforementioned criteria. Among the averages, two subjects' standard impact and preference scores exceeded the $1.0 \geq z \geq -1.0$ criteria; however, the deviations were so small--$z=1.008$ and $z=1.078$, respectively--that it was decided to retain these subjects' data for the analyses. Figure 3 displays the design after the misclassified subjects' data was dropped.

The resulting unequal cell design would have posed a problem for the analyses of variance statistical procedure: the problem of non-orthogonal effects. To circumvent this dilemma, it was decided to rearrange the design in order to achieve proportionality. Hence, within three cells, a randomly selected dyad was dropped from the study and within four cells, a total of five dyads were "created" by inserting the mean response within a given cell for each variable.

Figure 4 displays the resulting design with proportional cell frequencies. ANOVA procedures can be utilized without complication; however, the error degrees of freedom will be reduced from 54 to 49 in order to accommodate for the five cases of data which were created from cell means. Further, the ANOVA computational formulas will use $s=6$ as the within cell frequency, instead of the harmonic mean, $s=5.5$. The .5 difference in means should have a minimal effect on the ultimate statistics.

	Sociometric Status					
	Isolates			Averages		
	Grade Level			Grade Level		
	first	third	fifth	first	third	fifth
Female	6	4	4	4	6	6
Male	6	6	4	6	6	6

Figure 3. Complete crossing of sex, grade level, and sociometric status: Unequal cell frequencies (4-6 pairs per cell)

	Sociometric Status					
	Isolates			Averages		
	Grade Level			Grade Level		
	first	third	fifth	first	third	fifth
Female	5 (*)	5 (**)	5 (**)	5 (**)	5 (*)	5 (*)
Male	6	6 (**) (**)	6	6	6	6

Figure 4. Complete crossing of sex, grade level, and sociometric status: Proportional cell frequencies (5-6 pairs per cell)

* = 1 subject's data was dropped

** = 1 subject's data was created from cell means on each variable, except open-ended questions where modes were used.

Procedure

The experimental phase consisted of two parts: a 30 minute interactive play session followed by an individual interview session. The play session allowed the children to become acquainted with the surroundings which reduced their initial apprehensiveness. The interview sessions were conducted independently by interviewers who were blind to the social standing/target vs. subject status of the child. Each interview lasted approximately 30 minutes. At the conclusion of the interview, the child was encouraged to ask questions which were carefully answered so that no negative feelings were retained.

Interview measures. The questions which were asked fall into four general categories. First, there were several hypothetical situations designed to assess the child's script information for the following situations: meeting another child, initiating social interaction with another child, playing with a friend, and resolving a conflict with a friend. These situations cover the range of initiation, maintenance, and conflict resolution stages in the development of friendships. The nature of the responses were scored by two independent coders for specific behaviors, assertiveness, relationship enhancement, and effectiveness dimensions. The second measure is used to assess actual and perceived similarity between friends. The set of 20 questions was presented in a Likert-scale format. Each question represented a different reputational type. The first time through these questions, each child was instructed to indicate his/her own preferences. The second time through, the child was asked to fill it out as he/she thinks his/her friend would. Based upon these two sets of responses, measures of perceived and actual similarity between the friends were derived. Next, 10 questions aimed at assessing the degree of exposure

of the friendship pair to each other were asked (Zajonc, 1968). Four social environments of the child were addressed: the neighborhood, classroom, playground, and other social activities. Finally, Susan Harter's Perceived Competency Scale for Children was administered. For each question, the child is presented with a situation in which two alternative ways of responding are possible. The child is encouraged to indicate which response is more characteristic of themselves (see Appendix C for the interview protocol).

RESULTS

Because this study is exploratory in nature, it seemd more appropriate to increase type I error--the probability of finding differences where none occur--than to risk overlooking findings which might hold promise for future research (Keppel, 1982). Hence, the conditional probability which will be accepted as indicating a significant group difference will be $p \leq .100$. Findings based upon this criteria should be considered tentative and interpreted with caution. The certainty with which they can be accepted depends upon their confirmation by future investigative efforts.

Hypothesis #1 (similarity). Two types of similarity are of interest in this study: actual similarity and perceived similarity. In order to derive indices of these concepts from the 20 reputational items, the following procedures were employed. Actual similarity is the average of the absolute value of the difference between the subject's self rating and their friend's self rating on each of the 20 items:

$$A = \sum_{20}^{1} \frac{|SS - FS|}{20}$$

where $\overline{A}$ represents the average, actual similarity score; SS represents the subject's self rating on each of the 20 items; and FS represents the friend's self rating on each of the 20 items. As $\overline{A}$ increases, actual similarity decreases. That is, if a subject and his/her friend believed that they were both equally good leaders, for example,

SS-FS would be 0--i.e., 5-5=0=$\overline{A}$. On the other hand, if one member of the dyad believed himself/herself to be a good leader--endorsing a "5"--and his/her friend believed that he/she was not a good leader--endorsing a "2"--then the two members of the pair would be less similar--5-2=3=$\overline{A}$.

Because we are interested in differences in perceived similarity between isolates and averages, the index of perceived similarity was derived for subjects' data only. Perceived similarity is the average of the absolute value of the difference between the subject's self rating and their rating of their friend on each of the 20 items:

$$\overline{P} = \sum_{20}^{1} \frac{|SS - SF|}{20}$$

where $\overline{P}$ represents the average, perceived similarity score; SS represents the subject's rating of himself/herself on each of the 20 items; and SF represents the subject's rating of his/her friend on each of the 20 items.

Finally, in order to test hypotheses regarding the relationship between perceived and actual similarity, a measure of the difference between the two scores was derived:

$$\overline{D} = \sum_{20}^{1} \frac{|\overline{A} - \overline{P}|}{20}$$

where $\overline{D}$ is the average difference score; $\overline{A}$ is the absolute value of the difference between a subject's self rating and his/her friend's self rating; and $\overline{P}$ is the absolute value of the difference between a subject's self rating and his/her rating of his/her friend. When $\overline{D}$ is a positive value, subjects perceive themselves to be more similar to their friends than they actually are; when $\overline{D}$ is a negative value,

subjects are actually more similar to their friends than they perceive themselves to be.

Since $\overline{A}$, $\overline{P}$, and $\overline{D}$ are composite scale scores, the internal consistency of each scale was computed. The results of this analysis are presented in Table 1, and indicate that each of these three concepts are measured with adequate reliability.

If friends, in general, perceive themselves to be more similar than they actually are, then the value of $\overline{D}$ should be positive more than it is negative, or 0. A chi-square analysis of this hypothesis yielded a x^2 of 45.36. With two degrees of freedom, this value is significant ($p \leq .0001$). An examination of the cell frequencies ($\overline{D}$-=15, $\overline{D}\phi$=4, $\overline{D}$+=47) reveals that the hypothesis was supported.

Although $\overline{A}$ and $\overline{P}$ are not significantly correlated ($p \leq .1$), $\overline{D}$ is significantly correlated with both measures of similarity ($p \leq .01$). Thus, a 3-way MANOVA--group x grade x sex--was conducted. All effects, with the exception of two main effects--grade and group--were significant. In order to further examine these findings, a 3-way analysis of variance was conducted for $\overline{A}$, $\overline{P}$, and $\overline{D}$ separately. The results of these analyses are presented in Table 2. Table 3 presents the cell means for each variable; however, the analyses--both MANOVA and ANOVA--and means for $\overline{D}$ are based upon transformed scores. A test of the homogeneity of variance of each variable--Table 4--revealed that $\overline{D}$ was heterogeneous. Several types of transformations were examined--sine, cosine, square root, natural log, arctangent, arcsine--and the arctangent transformation seemed to fit the data the best--i.e., maximized variance reduction while at the same time preserving the original ranking among the cell means--even though the Bartlett test of

Table 1

Intercorrelations and Internal Consistency Scores for the Three, 20-Item Similarity Measures

	$\overline{A}$	$\overline{P}$	$\overline{D}$
$\overline{A}$	.61214		
$\overline{P}$	.1389	.66040	
	($p \geq .1$)		
$\overline{D}$*	.6552	-.6517	
	($p \leq .01$)	($p \leq .01$)	.64028

*Coefficients computed on an arctangent transformation of the data

**Internal consistency scores are on the diagonal

Table 2

3-Way Analysis of Variance--Group x Grade x Sex--for the Three Similarity Measures

Effect	DF	F ($\overline{A}$)	Sig.	F ($\overline{P}$)	Sig.	F ($\overline{D}$)+	Sig.
Within	49	MS=.08758		MS=.08778		MS=.09323	
Constant	1	654.4510	---	339.3149	---	37.2407	---
Group	1	.1108	---	1.1556	---	1.4983	---
Grade	2	3.8705	**	.7086	---	.9486	---
Sex	1	1.2632	---	4.8554	**	6.7715	***
Group x grade	2	3.1845	**	.0968	---	2.3377	---
Group x sex	1	.2007	---	4.9394	**	2.1648	---
Grade x sex	2	5.0241	***	1.9368	---	7.4065	****
Group x grade x sex	2	.1247	___	5.3477	***	2.6748	*

* = $p \leq .1$

** = $p \leq .05$

*** = $p \leq .025$

**** = $p \leq .01$

\+ = Analyses conducted on an arctangent transformation of the data

Table 3

Means and Standard Deviations of the Three Similarity Measures

Var.	Level		Mean	Std. Dev.	N
$\overline{A}$:					
	Group	A			
	Grade	1			
	Sex	M	.817	.442	6
	Sex	F	1.140	.261	5
	Grade	3			
	Sex	M	.867	.133	6
	Sex	F	.820	.172	5
	Grade	5			
	Sex	M	1.008	.282	6
	Sex	F	.880	.353	5
	Group	I			
	Grade	1			
	Sex	M	.958	.256	6
	Sex	F	1.450	.298	5
	Grade	3			
	Sex	M	.942	.299	6
	Sex	F	.900	.302	5
	Grade	5			
	Sex	M	.775	.211	6
	Sex	F	.670	.236	5
For Entire Sample			.931	.318	66
$\overline{P}$:					
	Group	A			
	Grade	1			
	Sex	M	1.142	.360	6
	Sex	F	.343	.257	5
	Grade	3			
	Sex	M	.783	.181	6
	Sex	F	.490	.222	5
	Grade	5			
	Sex	M	.650	.141	6
	Sex	F	.770	.220	5
	Group	I			
	Grade	1			
	Sex	M	.608	.271	6
	Sex	F	.780	.406	5
	Grade	3			
	Sex	M	.667	.393	6
	Sex	F	.555	.283	5
	Grade	5			
	Sex	M	.621	.273	6
	Sex	F	.565	.247	5
For Entire Sample			.672	.321	66

(table continues)

Table 3

Means and Standard Deviations of the Three Similarity Measures

Var.	Level		Mean	Std. Dev.	N
$\overline{D}$ arctan:					
	Group	A			
	Grade	1			
	Sex	M	-.268	.524	6
	Sex	F	.647	.208	5
	Grade	3			
	Sex	M	.081	.194	6
	Sex	F	.302	.217	5
	Grade	5			
	Sex	M	.318	.302	6
	Sex	F	.104	.220	5
	Group	I			
	Grade	1			
	Sex	M	.327	.238	6
	Sex	F	.574	.194	5
	Grade	3			
	Sex	M	.257	.256	6
	Sex	F	.294	.361	5
	Grade	5			
	Sex	M	.126	.324	6
	Sex	F	.098	.217	5
For Entire Sample			.229	.352	66

Table 4

Tests of Homogeneity of Variance for the Three Similarity Measures

Variable	Sig. of Bartlett	Sig. of Cochran
Actual Sim. ($\overline{A}$)	.255	.641
Perceived Sim. ($\overline{P}$)	.638	.671
Difference ($\overline{D}$)	.019	.374
Arctangent ($\overline{D}$)	.027	.506

homogeneity of variance remained significant. Fortunately, F is a robust statistic and is relatively uneffected by violations of the normality and heterogeneity of variance assumptions (Keppel, 1982).

Posthoc analyses of the significant univariate effects--see Table 5--indicate that females become more similar with age ($p \leq .01$); however, males remain constant across the three grade levels, approximating the actual similarity of third-grade females. Between averages and isolates, the former group is more similar to their friends in first-grade ($p \leq .1$), but less similar in fifth-grade ($p \leq .1$) as compared to the latter group. There are no group differences for third-graders.

With regard to perceived similarity, male isolates perceive themselves to be more similar to their friends than do their average counterparts ($p \leq .025$). Among the female subjects, this finding is reversed for first-graders. There are no significant group differences for third- and fifth-graders.

The relationship between actual and perceived similarity varies as a function of grade level and sex. The discrepancy between actual and perceived similarity is greater for male isolates than for male averages in the first-grade. Males show no significant differences in the third- and fifth-grades. Among the females, there is little difference between averages and isolates with age.

Hypothesis #2 (exposure). Of the 10 items which measure exposure, five items pertain to the school environment and five items pertain to the home environment and extracurricular activities. On each item, a child could obtain a score of 0, 1, or 2 with the larger numbers indicating a higher degree of exposure. The scoring criteria appears on the interview protocol in Appendix C. In order to test the

Table 5

Posthoc Analyses of the Significant Effects for the Three Similarity Variables

Var.	Effect	DF	F	Sig. of F
$\overline{A}$:				
	Within	49	MS=.0876	----
	Constant	1	654.1874	----
	Grade(1) within Sex(M)*	1	.0099	----
	Grade(2) within Sex(M)*	1	.0107	----
	Grade(1) within Sex(F)*	1	17.3521	****
	Grade(2) within Sex(F)*	1	.4123	----
	Group within Grade(1)	1	2.9888	*
	Group within Grade(3)	1	.3749	----
	Group within Grade(5)	1	3.1146	*
	*(contrast 1=grade 1 vs grades 3+5/2; Contrast 2=grade 3 vs grade 5)			
$\overline{P}$:				
	Within	49	MS=.0878	----
	Constant	1	329.1863	----
	Group within Sex(F) by Grade(1)	1	5.4511	***
	Group within Sex(F) by Grade(3)	1	.1203	----
	Group within Sex(F) by Grade(5)	1	1.1968	----
	Group within Sex(M) by Grade(1)	1	9.7208	****
	Group within Sex(M) by Grade(3)	1	.4650	----
	Group within Sex(M) by Grade(5)	1	.0290	----
	Sex	1	4.8552	**

(table continued)

Posthoc Analyses of the Significant Effects for the Three Similarity Variables

Var.	Effect	DF	F	Sig. of F
$\overline{D}$ arctangent:				
	Within	49	MS=.0932	----
	Constant	1	39.8642	----
	Group within Sex(M) by Grade(1)	1	11.3666	****
	Group within Sex(M) by Grade(3)	1	.9960	----
	Group within Sex(M) by Grade(5)	1	1.1783	----
	Group within Sex(F) by Grade(1)	1	.1443	----
	Group within Sex(F) by Grade(3)	1	.0016	----
	Group within Sex(F) by Grade(5)	1	.0011	----
	Sex	1	6.7716	****
	Grade by Sex	2	6.8777	****

* = $p \leq .1$

** = $p \leq .05$

*** = $p \leq .025$

**** = $p \leq .01$

exposure hypotheses, two measures of exposure were calculated by summing the scores on the "School" and "Outside School" items separately. The internal consistency scores for these two factors indicate that these scales were measured with moderate reliability. They are presented in Table 6.

Before conducting the 3-way ANOVA--Group x Grade x Sex--the correlation between the two dependent measures was obtained in order to determine whether the first step in the analyses should be a multivariate analysis of variance. The R coefficient was .164 which is not significant. Thus, only the univariate statistics were calculated and the results appear in Table 7. The assumption of homogeneity of variance was met for both variables. The individual cell means appear in Table 8. The results of these analyses reveal that, although school exposure increases with age ($p \leq .025$), there is no difference between isolates and averages at any grade level. On the other hand, there was a significant ($p \leq .05$) group difference between isolates and averages in the amount of exposure that they had outside of school. An examination of the means indicates that isolates have more exposure with their friends in this area than do the average children. Taking these findings into consideration, it is not surprising to discover that "Outside School" exposure is significantly related to group status ($R^2 = .05331$, $p \leq .1$) and that "School" exposure does not contribute much additional information (r^2 $p = .1001$, $p \geq .1$).

Hypothesis #3 (scripts). In order to determine whether isolated children differ from their average counterparts in terms of the quantity and/or quality of social information that they have acquired, vignettes which cover a series of friendship stages--initiation, acquaintanceship,

Table 6

Internal Consistency Scores for the Two,
5-Item Exposure Measures

Variable	Alpha
School	.50261
Outside School	.61511

Correlation between the two measures:

R^2	Sig. of R^2
.02693	$p \geq .1$

Table 7

Tests of Homogeneity of Variance and 3-Way Analysis of Variance--Group x Grade x Sex-- for the Exposure Measures

Homogeneity of Variance

Variable	Sig. of Vartlett	Sig. of Cochran
School	.462	.266
Outside School	.304	.525

Analysis of Variance

Effect	DF	F (School)	Sig.	F (Outside)	Sig.
Within	49	MS=4.0612	---	MS=5.7323	---
Constant	1	565.9974	---	216.202	---
Group	1	.134	---	3.238	*
Grade	2	3.841	**	.127	---
Sex	1	.091	---	.003	---
Group x Grade	2	.064	---	1.990	---
Group x Sex	1	.161	---	.002	---
Grade x Sex	2	.214	---	.167	---
Group x Grade x Sex	2	.915	---	1.963	---

* = $p \leq .1$
** = $p \leq .05$
*** = $p \leq .025$
**** = $p \leq .01$

Table 8

Means and Standard Deviations of the Two Exposure Measures

Var.	Level		Mean	Std. Dev.	N
School:					
	Group	A			
	Grade	1			
	Sex	M	5.167	1.941	6
	Sex	F	4.750	2.487	5
	Grade	3			
	Sex	M	6.667	1.506	6
	Sex	F	6.000	1.871	5
	Grade	5			
	Sex	M	5.667	3.011	6
	Sex	F	6.600	1.517	5
	Group	I			
	Grade	1			
	Sex	M	5.000	.894	6
	Sex	F	4.800	1.924	5
	Grade	3			
	Sex	M	6.000	2.191	6
	Sex	F	7.500	1.500	5
	Grade	5			
	Sex	M	6.500	1.000	6
	Sex	F	6.250	2.165	5
For Entire Sample			5.902	1.928	66
Outside School:					
	Group	A			
	Grade	1			
	Sex	M	4.33	3.33	6
	Sex	F	4.50	2.50	5
	Grade	3			
	Sex	M	3.33	1.75	6
	Sex	F	2.20	.84	5
	Grade	5			
	Sex	M	3.67	1.37	6
	Sex	F	4.80	3.11	5
	Group	I			
	Grade	1			
	Sex	M	4.00	2.45	6
	Sex	F	4.60	2.51	5
	Grade	3			
	Sex	M	4.83	2.04	6
	Sex	F	6.25	1.48	5
	Grade	5			
	Sex	M	5.75	2.92	6
	Sex	F	3.75	1.30	5
For Entire Sample			4.33	2.31	66

maintenance, decision-making, conflict resolution, and termination--were constructed. In this section the results of the chi-square analyses are presented for all but the conflict resolution situations, which are presented separately. The interview questions appear in Appendix C. Appendix D presents the scoring criteria for each question. Each question was coded by two independent raters and three measures of rater reliability were calculated: (1) the percent agreement reliability statistic including agreement on uncodable/absent responses ($\bar{x}$=.873, range=.975 - .705), and (2) the percent agreement reliability statistic excluding agreement on uncodable/absent responses ($\bar{x}$=.868, range=.975 - .676), and (3) the kappa statistic ($\bar{x}$=.754, range=.959 - .599). The statistics appear in parentheses following each question in Appendix D. In parentheses, following each code, is the number of subjects endorsing that code. Initially, when the responses were coded, each subject was allowed up to three codable responses--although no more than one response was directly elicited during the interview. However, because only 40.81% of the subjects offered a second response, and only 14.52% of the subjects offered a third response, chi-square analyses were performed on first responses only. These results are presented in Tables 9-13.

The first questions deal with friendship initiation. The results indicate that although the majority of subjects report meeting their friends at school, the proportion of isolates that endorsed this response is higher than the proportion of averages. Moreover, a higher proportion of averages meet their best friends in "other activities" (Group, $p \leq .1$). In response to the question, "Why is _____your friend?", the majority of the children responded by giving a general personality

Key to Tables 9-13

I = friendship introduction

II = friendship selection

III = friendship establishment

III. a. = response category

III. b. = assertiveness

III. c. = relationship and enhancement

IV = friendship maintenance

IV. a. = response category

IV. b. = assertiveness

IV. c. = relationship and enhancement

V = conflict resolution-self

V. a. = type of solution

V. b. = effectiveness of solution

V = conflict resolution-friend

V. c. = type of solution

V. d. = effectiveness of solution

VI = decision-making

VI. a. = process

VI. b. = outcome

VII = friendship termination-friend

VIII = friendship termination-self

Table 9

Chi-Square Analyses for the Eight Open-Ended Questions: Group

Item	x^2	DF	Sig. of x^2
I	4.899	2	.086
II	7.042	5	.218
III a	8.319	6	.216
b	.001	1	.981
c	.316	1	.574
IV a	2.764	4	.598
b	.29	1	.590
b	2.272	1	.132
V a	8.492	5	.131
b	.168	2	.919
V c	14.906	6	.021
d	2.099	3	.552
VI a	1.168	2	.558
b	1.642	3	.650
VII	8.982	6	.175
VIII	2.777	4	.596

Table 10

Chi-Square Analyses for the Eight Open-Ended Questions: Group By Sex

Item	Males			Females		
	χ^2	DF	Sig. of χ^2	χ^2	DF	Sig. of χ^2
I	3.139	2	.208	1.670	2	.434
II	8.229	5	.144	1.111	3	.775
III a	6.889	6	.331	1.832	2	.400
b	0	1	1.000	----	-	----
c	.369	1	.544	----	-	----
IV a	2.183	3	.535	2.647	3	.449
b	.002	1	.967	.453	1	.501
c	1.090	1	.297	1.197	1	.274
V a	7.536	5	.184	3.149	3	.369
b	3.640	2	.162	8.246	2	.016
V c	12.495	6	.052	4.257	4	.372
d	5.00	2	.082	3.543	3	.315
VI a	2.274	2	.321	.154	2	.926
b	2.259	3	.521	1.927	3	.588
VII	2.843	3	.416	9.777	6	.134
VIII	1.340	3	.720	2.135	2	.344

Table 11

Chi-Square Analyses or Fisher Exact Tests for the Eight Open-Ended Questions: Group By Grade

Item	First			Third			Fifth		
	χ^2	DF	Sig. of χ^2	χ^2	DF	Sig. of χ^2	χ^2	DF	Sig. of χ^2
I	Fisher		.500	3.091	2	.213	4.544	2	.103
II	4.159	4	.385	.920	2	.613	5.818	4	.213
III a	4.854	4	.303	4.091	3	.252	1.145	2	.564
b	.005	1	.944	-----	-	----	-----	-	----
c	.005	1	.944	Fisher	-	.500	-----	-	----
IV a	2.100	3	.552	2.043	2	.360	1.351	2	.509
b	1.156	1	.283	1.156	1	.283	.386	1	.534
c	1.156	1	.283	-----	-	----	1.048	1	.306
V a	4.333	4	.363	3.077	3	.380	2.702	3	.440
b	2.961	2	.228	2.574	2	.277	2.800	2	.247
V c	5.730	6	.454	7.091	4	.131	5.002	3	.172
d	2.265	3	.519	1.061	2	.589	.286	2	.867
VI a	.153	2	.927	2.048	2	.359	1.933	2	.380
b	3.000	3	.392	3.242	3	.356	4.400	2	.111
VII	6.033	4	.197	3.667	5	.599	4.143	3	.246
VIII	0	1	1.000	1.818	4	.769	3.474	2	.176

Table 12

Chi-Square Analyses or Fisher Exact Tests for the Eight Open-Ended Questions: Group By Grade By Sex: Males

Item	First			Third			Fifth		
	χ^2	DF	Sig. of χ^2	χ^2	DF	Sig. of χ^2	χ^2	DF	Sig. of χ^2
I	Fisher		.667	2.037	2	.361	2.500	2	.287
II	2.222	3	.528	1.397	2	.497	9.333	4	.053
III a	3.942	4	.414	4.000	3	.262	.917	2	.632
b	Fisher		.727	-----	-	----	-----	-	----
c	Fisher		.727	Fisher		.500	-----	-	----
IV a	1.143	2	.565	Fisher		.545	.917	2	.632
b	Fisher		.500	-----	-	----	Fisher		.500
c	Fisher		.500	-----	-	----	-----	-	----
V a	3.619	3	.306	2.000	3	.572	3.467	2	.177
b	5.667	2	.059	2.925	2	.232	1.333	2	.513
V c	4.143	5	.529	5.333	4	.255	5.757	2	.056
d	.782	2	.676	4.950	2	.084	1.333	2	.513
VI a	.244	2	.885	1.320	2	.517	2.400	2	.301
b	2.070	3	.558	2.000	3	.572	2.549	2	.280
VII	4.000	3	.262	1.143	2	.565	2.500	3	.475
VIII	Fisher		.500	2.069	3	.558	Fisher		.500

Table 13

Chi-Square Analyses or Fisher Exact Tests for the Eight Open-Ended Questions: Group By Grade by Sex: Females

Item	First			Third			Fifth		
	χ^2	DF	Sig. of χ^2	χ^2	DF	Sig. of χ^2	χ^2	DF	Sig. of χ^2
I	Fisher		.357	Fisher		.667	Fisher		.286
II	2.115	3	.549	Fisher		.595	Fisher		.778
III a	Fisher		.083	1.200	2	.549	Fisher		.556
b	-----	-	----	-----	-	----	------		----
c	-----	-	----	-----	-	----	------		----
IV a	1.440	2	.487	Fisher		.444	Fisher		.625
b	-----	-	----	Fisher		.500	Fisher		.778
c	-----	-	----	-----	--	----	Fisher		.500
V a	1.200	2	.549	Fisher		.500	Fisher		.444
b	Fisher		.500	2.500	2	.287	6.667	2	.036
V c	2.100	2	.350	2.000	2	.368	.900	2	.638
d	2.000	3	.572	1.143	2	.565	3.000	2	.223
VI a	0	2	1.000	Fisher		.262	.533	2	.766
b	4.140	3	.247	3.263	3	.353	2.057	2	.358
VII	2.057	2	.358	6.800	5	.236	2.000	2	.368
VIII	Fisher		.500	Fisher		.833	Fisher		.222

characteristic of their friend which they found desirable. The only group difference which emerged was among fifth-grade males ($p \leq .1$); averages tended to respond with the modal response, while isolates gave responses indicating mutual compatibility between themselves and their friends, a process which requires a higher degree of cognitive reflection than the modal response.

The third question, "What did you do to become friends with_____?", measures one aspect of the acquaintanceship process: establishing a relationship. In addition to categorizing each response, responses were coded for their degree of assertiveness and relationship enhancement. As a whole, subjects tended to give assertive, relationship enhancing responses, with the modal response being 'participation in a mutual activity or interest.' Among first-grade females, all of the isolates endorsed the modal response, while the averages were split between the modal response and 'helping behavior or positive social behavior' ($p < .1$).

On the relationship maintenance item, "What can you do to stay friends with _____?", there were no group differences. The modal response was 'helping behavior' which is a more intimate response than 'participate in a mutual activity or interest,' the modal response given to the acquaintanceship item. Hence, as a relationship develops, both isolates and averages tend to become involved in more intimate activities.

As an indication of the decision-making process, children were presented with the following vignette: "Pretend it's Saturday morning and you and _____have the whole day to be together." They were asked to decide what they would do and to explain how they came to that

decision. In general, most children reported that they would choose an outdoor, cooperative activity and that this choice would be the result of a mutual decision-making process. Again, there were no significant group differences on this item.

Finally, the friendship termination stage was measured by the following questions: "Why would _____decide not to be your friend?" and "What could _____do so you wouldn't want to be friends?" The modal responses were 'self-action' and 'other-action', respectively; no significant group differences emerged.

The second part of the script hypothesis deals with not the quality of the response to the various vignettes, but the quantity of the responses. It is hypothesized that children who have a greater repertiore of appropriate responses will be more effective in a variety of social situations. If social effectiveness is a function social experience, then older children and averages should produce a greater number of responses.

The total number of scorable responses across the eight questions was computed for each subject. The intercorrelations of the number of responses to the eight questions appear in Table 14. The fact that the majority of these correlations are significant lends support to the notion that the concept of "quantity of information" may be more related to friendships in general, than to specific developmental acquaintanceship/friendship stages. That is, children who demonstrate that they possess a greater amount of knowledge about one situation are likely to be more knowledgeable in the other situations as well. Consequently, it was decided to sum the number of responses to each question in order to form a single measure of "quantity of information."

Table 14

Intercorrelations for the Eight Open-Ended Questions

	QI	QII	QIII	QIV	QVA	QVB	QVIA	QVIB	QVII
QI									
QII	.079								
QIII	-.005	.391 ****							
QIV	.208 **	.422	.512 ****						
QVA	-.067	.214 **	.327 ****	.238 **					
QVB	-.083	.184 *	.225 **	.202 *	.552 ****				
QVIA	.115	.146	-.076	-.099	-.124	.160 *			
QVIB	-.119	.246 ***	.245 ***	.336 ****	.225 **	.362 ****	-.065		
QVII	.180 *	.237 **	.372 ****	.213 **	.245 ***	.174 *	-.138	.316 ****	
QVIII	-.097	.306 ****	.423 ****	.396 ****	.353 ****	.131	.007	.189 *	.403 ****

* = $p \leq .1$ ** = $p \leq .05$ *** = $p \leq .025$ **** = $p \leq .01$

The internal consistency of this composite measure is adequate--alpha= .7391. The results of the 3-way ANOVA--group x grade x sex--are presented in Table 15. The assumption of homogeneity of variance was met.

Although the effect of grade was significant ($p \leq .025$), there were no significant group effects. Orthogonal, independent contrasts of the means for the three grade levels--Table 16--reveal that first- and fifth-graders give a higher frequency of responses per question than do third-graders ($p \leq .01$). However, first-graders are not significantly different from fifth-graders ($p \geq .10$). Hence the aforementioned hypotheses were not supported.

Hypothesis #4 (conflict resolution). In order to test the conflict resolution hypothesis, each child was presented with the following vignette: "Let's pretend that you and _____are playing ball and one of you throws the ball too far and a window breaks." The two areas of interest were (1) what the subject believes that he/she would do, and (2) what the subject believes his/her friend would do. Within these two areas, each child's response was scored for the type of solutions he/she generated--including 'no solution'--and the quality of the solution: independent/active, dependent, inappropriate, or no solution. The results are presented in Tables 9-13--questions 5A and 5B.

When considering their own behaviors, subjects did not differ in terms of the type of action they felt they would take; however, there were three significant group differences in the quality of their solutions. First, among the females, isolates believed that they would confess to the act, but not offer a solution for dealing with the broken window. On the other hand, averages were divided between merely confessing to the act and offering an independent/active solution

Table 15

Tests for Homogeneity of Variance and 3-Way Analysis of Variance--Group x Grade x Sex---of the Total Number of Responses to the Open-Ended Questions

Homogeneity of Variance

Variable	Sig. of Bartlett	Sig. of Cochran
Total Responses	p = .200	p = .493

Analysis of Variance

Effect	DF	F (Total Resp.)	Sig. of F
Within	49	MS=15.986	----
Constant	1	724.001	----
Group	1	1.672	----
Grade	2	3.643	**
Sex	1	.028	----
Group x Grade	2	.148	----
Group x Sex	1	.092	----
Grade x Sex	2	1.260	----
Group x Grade x Sex	2	.083	----

Table 16

Means and Standard Deviations for the Total Number of Responses to the Eight Open-ended Questions

	Mean	SD	N
Group A			
Grade 1			
Sex M	12.17	3.49	6
Sex F	14.20	5.63	5
Grade 3			
Sex M	11.00	3.63	6
Sex F	9.80	1.64	5
Grade 5			
Sex M	14.83	3.49	6
Sex F	13.60	2.79	5
Group I			
Grade 1			
Sex M	13.00	4.38	6
Sex F	15.60	5.59	5
Grade 3			
Sex M	13.17	5.19	6
Sex F	11.60	1.67	5
Grade 5			
Sex M	14.83	1.83	6
Sex F	15.20	3.27	5
For Entire Sample	13.24	3.88	66

($p \leq .025$). Second, most first-grade, male averages offered no solution, while their isolate counterparts were divided between an independent/active solution and a dependent solution ($p \leq .1$). Finally, among the fifth-grade females, all of the isolates failed to offer a solution; however, the averages were divided between offering an independent/active solution and a dependent solution ($p \leq .05$).

When considering their friends' behavior, subjects voiced group differences in both the type and quality of action they believed their friends would take. Three differences emerged in the type of behavior. Overall, the majority of isolates and averages, like themselves, believed that their friends would merely confess to the broken window and offer no other solution. However, a higher proportion of the isolates felt their friend would pay for the window while the averages felt their friend would run away ($p < .025$). This latter trend was particularly true of the male subjects ($p \leq .1$). Most of the isolates who felt that their friend would pay for the window were fifth-grade males ($p \leq .1$) while the averages who believed that their friends would run away were spread out among the different grade levels.

Two differences emerged in the quality of solutions offered. Among males, a higher proportion of the isolates believed their friends would offer an independent/active solution, while the majority of the averages believed their friends would not offer a solution ($p \leq .1$). This trend appears to be particularly true of third-grade males ($p \leq .1$).

Hypothesis #5 (perceived self competency). Perceived self competency was measured by Susan Harter's 28-item scale--Perceived Competency in Children. Because the hypotheses in this area are restricted to differences between isolate and average social standing

children, the friends' data was excluded from the analyses. The internal consistency scores for each subscale--cognitive, social, physical, and general--indicate that the scale had adequate reliability with this sample. The results of this analysis are presented in Table 17.

In order to determine whether a MANOVA should be conducted as the first step of the analysis, the intercorrelations of the four subscales were obtained. This matrix is presented in Table 17, along with the corresponding probabilities of each correlation. As all of the correlations achieved significance, a MANOVA was conducted. This analysis was conducted on transformed scores--sine transformation--in order to homogenize the within cell variance. Table 18 presents the Bartlett and Cochran tests of homogeneity of variance for the four subscales both before and after the transformation.

Table 19 presents the results of the MANOVA based on transformed scores. Since no significant differences emerged, univariate ANOVAs were not conducted.

Hypothesis #6 (predicting group membership). A step-wise regression analysis was performed in order to determine which variables--school exposure, outside-school exposure, actual similarity, perceived similarity, cognitive competency, social competency, physical competency, and general competency--are the best predictors of group membership. The intercorrelation matrix for these nine variables is presented in Table 20. To remain in the equation, the squared partial correlations between each variable and group membership had to be equal to or greater than .01. Four variables met this criteria--outside school exposure, general self competency, cognitive self competency, and

Table 17

Means, Standard Deviations, and Correlation Matrix for the Four Perceived Self Competency Scales

	X	SD				
Cog.	-.089	.627	.77928			
Soc.	-.043	.732	.69713 ($p \leq .01$)	.80524		
Phy.	.031	.660	.54206 ($p \leq .01$)	.65915 ($p \leq .01$)	.77504	
Gen.	.043	.628	.78622 ($p \leq .01$)	.68958 ($p \leq .01$)	.55062 ($p \leq .01$)	.77320
			Cog.	Soc.	Phy.	Gen.

*The diagonal contains internal consistency scores for the four Perceived Self Competency Scales.

**All statistics reflect a sine transformation of the data.

Table 18

Tests of Homogeneity of Variance for the Four Perceived Self Competency Scales

Variable	Sig. of Bartlett	Sig. of Cochran
Cognitive	.035	.004
Cognitive (Sine)	.141	.783
Social	.057	.001
Social (Sine)	.972	1.000
Physical	.173	.007
Physical (Sine)	.877	.965
General	.044	.001
General (Sine)	.696	.935

Table 19

3-Way Multivariate Analysis of Variance--Group x Grade x Sex for the Four Perceived Self Competency Scales

Effect	Test	Value	Approx. F	Hyp. DF	Error DF	Sig. of F
Group x Grade x Sex:						
	Pillais (A)	.0843	.57209	8.00	104.00	----
	Hotelling (B)	.08887	.55546	8.00	100.00	----
	Wilks (C)	.91709	.56383	8.00	102.00	----
Group x Grade:						
	A	.05275	.35217	8.00	104.00	----
	B	.05456	.34102	8.00	100.00	----
	C	.94777	.34662	8.00	102.00	----
Group x Sex:						
	A	.02412	.31515	4.00	51.00	----
	B	.02472	.31515	4.00	51.00	----
	C	.97588	.31515	4.00	51.00	----
Grade x Sex:						
	A	.09085	.61866	8.00	104.00	----
	B	.09781	.61132	8.00	100.00	----
	C	.91007	.61515	8.00	102.00	----
Group:						
	A	.12900	1.88837	4.00	51.00	----
	B	.14811	1.88837	4.00	51.00	----
	C	.87100	1.88837	4.00	51.00	----
Grade:						
	A	.11002	.75674	8.00	104.00	----
	B	.12265	.76656	8.00	100.00	----
	C	.89039	.76203	8.00	102.00	----
Sex:						
	A	.02914	.38265	4.00	51.00	----
	B	.03001	.38265	4.00	51.00	----
	C	.97086	.38265	4.00	51.00	----

*All analyses were conducted on a sine transformation of the data.

Table 20

Correlation Matrix for the Similarity, Exposure, Perceived Self Competency, and Group Variables

	Group	Outside School	School	Cognitive	Social	Physical	General	Actual
Outside School Exp.	.23089							
School Exp.	.04750	.16409						
Cognitive	-.04176	.04061	.09761					
Social	-.00387	.11559	.19708	.69713				
Physical	-.00764	.25481	.11611	.54206	.65915			
General	.13204	.11755	.07859	.78622	.68958	.55062		
Actual Sim.	.03843	.04444	-.04720	-.04134	-.05899	-.05275	-.00023	
Perceived Sim.	-.12320	-.12396	-.20726	-.22697	-.33117	-.15912	-.27056	.13886

physical self competency. Table 21 presents the results of the entire analysis, including the variables which contributed less than one percent of the variance in accounting for group membership.

Outside school exposure proved to be a better predictor of group membership than either one of the similarity variables, partially supporting the hypothesis that exposure is more related to the friendship choices of isolates than is similarity--I say "partially supported" since school exposure is not significantly related to group membership.

Among the self competency variables, social competency is the only scale which is not significantly related to group membership. Moreover, although physical and cognitive competency are related to group membership in the expected direction, general competency has the opposite relationship. That is, it was hypothesized that isolates would exhibit less competency than their average counterparts in all four areas, particularly social competency. However, on general competency, isolates scored higher than averages. Thus, this latter hypothesis was, for the most part, not supported.

Table 21

Results of a Stepwise Regression Analysis of the Similarity, Exposure, and Perceived Self Competency Variables on Group Membership

Step	Variable	Multiple R	R Square	Adjusted R^2	R^2 Change	Simple R	DF	Overall F	Significance
1	Outside Sch.	.23089	.05331	.03852	.05331	.23089	1/64	3.60393	.062
2	General	.25390	.06447	.03477	.01116	.13204	2/63	2.17064	.123
3	Cognitive	.33467	.11201	.06904	.04754	-.04176	3/62	2.60679	.060
4	Physical	.34957	.12220	.06464	.01019	-.00764	4/61	2.12292	.089
---------- Insignificant Variables ----------									
5	Perc. Sim.	.35764	.12791	.05524	.00571	-.12320	5/60	1.76005	.135
6	Social	.36098	.13031	.04186	.00240	-.00387	6/59	1.47335	.203
7	Actual Sim.	.36153	.13070	.02579	.00039	.03843	7/58	1.24577	.293
8	School	.36193	.13100	.00903	.00030	.04750	8/57	1.07404	.394

DISCUSSION

The results from this study, although by no means conclusive, provide some interesting information with which to begin building a theory of the friendship process among isolated and average social standing children. As was mentioned previously, several adult theories of friendship formation have highlighted the roles of exposure and similarity in the development of increased attraction among individuals (Newcomb, 1956; Altman & Taylor, 1973; Duck & Craig, 1978; Adams, 1979); however, the relationship between these two variables has not been examined with children. The findings from this study suggest that such an endeavor may yield some valuable information.

Many of the adult theories of information exchange suggest that, in order to make the transition from an acquaintanceship relationship to a more intimate friendship, individuals require an opportunity to interact. Thus, at least early on in the friendship process, exposure is posited to play an important role. However, if a friendship is to increase in intimacy, to become more consolidated, other variables must assume a key function. One of these variables is posited to be similarity. Information about an individual is gathered and compared with one's own personality structure. If this comparison results in a positive evaluation, attraction increase; if not, attraction either decreases or remains constant. Finally, at the highest stages of friendship development, complex phenomena begin appearing--i.e.,

empathy, unconditional loyalty, etc. If there is a breakdown at any one of these stages, an acquaintanceship/friendship may be threatened by dissolution.

It was hypothesized that isolates, due to their limited social experience, may be functioning at a lower level in the aforementioned friendship process than their average social standing counterparts. If this hypothesis is true, then exposure should be a more salient factor in their friendships than in the friendships of averages. Indeed, the data seem to support this notion; "outside school" exposure was the best predictor of group status. Two explanations of this finding are plausible. First, it may be that isolates are choosing their best friends based upon propinquity: the children who they have the most exposure to become the most likely friendship candidates. On the other hand, it is possible that isolates choose their best friends based upon some other criterion, and then make more of an effort to spend time together. At any rate, what seems clear is that isolates are in closer proximity to and spend more time with their friends than do averages, supporting the notion that they may be operating at a less sophisticated level in the friendship process.

At first glance, the results from the analyses of actual and perceived similarity seem ambiguous and even contradictory. Clearly, the original hypothesis--that the discrepancy between actual and perceived similarity will be greater for isolates and their friends than for the average social standing dyad--was not unequivocally supported, since it was only significant for first-grade males. Further, the finding that actual similarity was greater for the fifth-grade isolate pairs than it was for the average pairs appears to contradict what would

be expected. However, a study by Duck and Craig may explain these findings. These authors found that similarity is not a unidimensional phenomenon; it changes as a function of the stage of friendship development. During the early stages of a friendship, similarity in terms of global personality traits is important. Later, agreement on valued attitudes and beliefs assumes a significant role. At the highest levels of friendship, individuals appear to share similar interpersonal constructs, information which is more intimately related to the concept of the self than is information on either one's expressed attitudes and beliefs or one's generalized personality assessment.

The 20 questions which were used in this study to measure similarity require an individual to make global personality assessments regarding their own and their friend's personality traits. Thus, it is not surprising to find that, after completing this task, first-grade isolates are less similar to their friends than are their average counterparts. One would expect that, with age, increased social experience and cognitive sophistication would allow children to proceed to more intimate stages of friendship; these stages require sophisticated cognitive operations--i.e., categorical comparisons--and utilize complex types of information--i.e., information on attitudes, beliefs, personal constructs, etc. By the fifth-grade children may be able to exhibit the kinds of sequential similarity differences in their friendship relations that Duck and Craig found in an adult population. However, due to their limited social experience, isolates may still be operating at a more superficial level than averages. If this is true, one would expect that similarity on global personality measures would be more related to their friendships than to the friendships of the average social standing children. Thus,

in our study, fifth-grade isolates should be more similar to their friends than averages are to their friends. Indeed, this difference proved to be significant. For the fifth-grade averages, agreement on attitudes and values may be a more accurate measure of similarity than the measure which was used in this study.

Future investigations need to be conducted in order to confirm these hypotheses and to further investigate the relationship between exposure and similarity, and the friendship process. However, the results from this study provide at least tentative support for the notion that isolated children may be functioning at a more superficial social level than their average counterparts. It may be that these children simply proceed at a slower pace, supporting a "slow to warm up" model. However, it is also possible that they fail to develop increasingly intimate relationships with their friends, suggesting a friendship maintenance deficit model. The implications of the latter hypothesis are, of course, much more serious. In either case, it is important to locate the factors which may be contributing to the observed differences in the friendship relations of average and isolate social standing children.

The study discussed herein can address itself to the question of a possible cognitive deficit. An important current focus in the friendship literature is separating out cognitive versus behavioral deficits. The relevance of this endeavor becomes clear when one considers the need for and design of social skills training programs. The two popular hypotheses regarding isolated children are: (1) they exhibit a cognitive deficit in terms of the quality--appropriateness of information about how to interact at each of the various stages of the

friendship process--and/or quantity--adequate repertoire of scripted information--of their social knowledge; and (2) they have the appropriate cognitive skills, but fail to implement the skills effectively, leading to either errors of commission--engaging peers inappropriately--or omission--failing to engage peers. This study can speak to the first of these two hypotheses.

The most remarkable finding about the manner in which the isolates responded to the wide range of social vignettes was that there were so few differences between the quality of their responses and the average children's responses. The differences that did emerge do not support the notion that isolates possess less effective, non-scripted information than averages. Furthermore, the extent or depth of knowledge appeared to be equal between the two social standing groups. The findings from this study support Peery's (1979) conclusion that isolates are high in social comprehension. Consequently, if there is a social skills deficit, it is likely to be in the behavioral/implementation realm. There is some literature to support this idea (Gottman, 1977; Dodge, Note 5). Again, these results should be considered tentative in that a more intensive measure of social information might have produced larger group differences. In this study, the lack of significance on the chi-square analyses of the social vignettes may have been due to the limited distribution of responses per item. The majority of the responses tended to fall within two or three scoring categories, rather than being spread out among all the possible categories. An alternate explanation is that the lack of differences was attributable to the moderate reliability with which the information was measured--as reflected by Kappa.

The last area which was examined in this study is related to the consequences of belonging to various social standing groups. Specifically, it has always been assumed that children who are unpopular, who exhibit social skills deficits, are at risk for following a maladaptive course of development. Indeed, there is an abundance of child clinical and retrospective adult clinical literature to support this assumption. What remains to be clarified is whether or not isolated children, by virtue of the fact that they are not actively involved in a large social network, are experiencing the kinds of difficulties that would put them at risk for exhibiting future pathology. In this study, it was hypothesized that perceived self competency might be effected by social isolation, with isolated children expressing a more negative view of their competency, particularly social competency. Thus, it was surprising to find that social competency was not significantly related to group status. Although the other three variables--general, cognitive, and physical competency--contributed at least one percent of the variance in explaining group membership, the relationship between competency and group membership was minimal.

These findings suggest two possibilities. First, it may be that perceived self competency is not an appropriate measure of social standing outcome. That is, there is no direct relationship between the extent of and quality of one's friendships and their perceived self competency. On the other hand, it is also possible that isolates are simply not as "at risk" as they have been assumed to be (Gottman, 1977; Northway, 1944; Gronlund, 1957). In evaluating these two hypotheses, it may be useful to consider the difference between having at least one mutual friend and having no friends.

By virtue of the subject selection criterion, only isolates who could be matched with a mutual friend were included in this study; there was a small group of isolates for whom no mutual friend could be found. This group of children may be qualitatively different from the children who were examined in this study; moreover, they may be the group who would appear most "at risk" on various measures of adjustment--such as the perceived self competency measure. If future research confirms such differences, then there would be support for the need to include 'participation in at least one mutual friendship' as a criterion for measuring social standing--in addition to social impact and social preference. Ultimately, two groups of isolates may emerge: those children who have a friend, and those children who are truly overlooked and neglected.

Clearly, there exists a need to continue examining the acquaintanceship/friendship process among isolated children and their peers. This study has suggested several areas which might prove fruitful: (1) distinguishing between a developmental delay and a dysfunction; (2) examining the relationship between social comprehension and behavioral applications of this knowledge; (3) exploring the effects of social standing on other areas of functioning; and (4) distinguishing between limited social exposure and true social isolation. In addition, there exists a need to conduct longitudinal studies in order to assess the stability of the various sociometric groups and to establish the long range consequences of social isolation.

APPENDICES

APPENDIX A

PARENTAL PERMISSION FORM

Dear Parents,

My colleagues and I in the Psychology Department at Michigan State University have been studying how children become friends and the importance of children's friendships for intellectual and social development. Mr. (School Principal), Principal of _____Elementary School, has kindly agreed to work with us, and we would like to request permission for your first-, third-, and/or fifth-grade child to join our project.

The first part of the study will involve a fifteen minute session, conducted at the school and supervised by researchers from the University. During the school session the participating children in your child's classroom will be asked to individually complete a questionnaire. In particular, we will be asking the children to tell us who are their best friends and to give their perceptions about which of their classmates would be best to play different roles in a hypothetical class play. The children will be instructed not to share any of their responses with their classmates and all their responses will be completely anonymous. This information is helpful to us in assuring us that we have a heterogeneous group of children for the second part of our project. After we have gathered this information, we would like to have your permission to contact you about possibly bringing your child to the University so that he/she might have an opportunity to play with another child whom he/she has identified as his/her best friend. We are especially interested in learning about the friendship process among children. We hope that this information will enable us to develop more effective ways to help children make and maintain friendships.

It is anticipated that the information collected in this study will be useful to educators in planning group learning experiences and to professionals in helping children play more successfully with other children. In our experience, the children find the questionnaires fun to complete, and their teachers have suggested that learning to complete forms like these is a good learning experience.

The purpose of this letter is to inform you of the study and to request permission for your child to participate. All information collected in this study will be treated with complete anonymity and confidentiality, and all written reports of the results will be identified only by a numbered code, and at the conclusion of the study all questionnaire information will be destroyed. You are of course free to request additional explanation of the study at any time, both before and after your child participates. Also, both you and your child are free to terminate your participation in the study at any time, if you desire to do so. Furthermore, your agreeing to allow your child to participate in the first part of this project leaves you in no obligation to participate in the second part of the study. All sessions at the University will be at your convenience; if necessary we will provide direct transportation to and from the University.

We hope that you will agree to your child's participation in this project. Please fill out and sign the attached form if you are freely willing to give consent for your child to participate, and have your child return the form to school tomorrow. If you agree to your child's

participation, the general nature of the project will be explained to him/her, and he/she will also be asked to participate.

If you have any questions, please call me at 355-1832, and I will try to answer them directly. At the conclusion of the study you will receive a summary of our findings.

Sincerely,

Andrew F. Newcomb, Ph.D.
Assistant Professor
Department of Psychology

PERMISSION SLIP

This study has been explained to me, and I understand the explanation that has been given, and what my child's participation will involve. I do _____ or do not _____agree to let_____ _____participate in the study of children's friendships.

Date_____ Parent's signature_____

Please have your son/daughter return this slip tomorrow. Thank you.

APPENDIX B

SOCIOMETRIC PROTOCOLS

Start here.

The first thing we would like to know is who are your friends. Below is a list of all the girls in your class. The first thing you will do is circle your three best friends. Then put a #1 by your first best friends, a #2 by your second best friend, and a #3 by your third best friend.

Tammy Byrd

Christine Calhoun

Terry Clover

Susy Curt

Alyson Demerick

Jenny Valasquez

Toni Watson

Kerry Westley

Trina Worth

Kimberely Zebrowsky

Now we would like to know who you would least want to play with. Below is the same list of girls in your class as on the first page. Circle the three girls who you would least want to play with.

Tammy Byrd

Christine Calhoun

Terry Clover

Susy Curt

Alyson Demerick

Jenny Velasquez

Toni Watson

Kerry Westley

Trina Worth

Kimberely Zebrowsky

The next thing we would like you to do is to pretend that your class is going to have a class play, and that you have been chosen as the director.

As the director, you must think of the girl in your class who can best play each of the following parts.

On each of the following pages, read the part and circle the name of the girl in your class who could best play the part.

Someone who is a good leader.

Tammy Byrd

Christine Calhoun

Terry Clover

Susy Curt

Alyson Demerick

Jenny Velasquez

Toni Watson

Kerry Westley

Trina Worth

Kimberely Zebrowsky

Each of the remaining eight pages will contain a similar statement, followed by a class list of same-sex peers. The eight parts are:

1. Someone who is helpful.
2. Someone who is nice and follows directions.
3. Someone who is quiet and shy.
4. Someone who is afraid.
5. Someone who is angry and complaining.
6. Someone who fights alot.
7. Someone who is mean and bossy.

Now we would like to know how much you like the other girls in your class. Each girl's name is listed, followed by a scale with the numbers 1, 2, 3, 4, and 5. Here is an example of how you would decide which number to select for each girl:

How much do you like hotdogs?

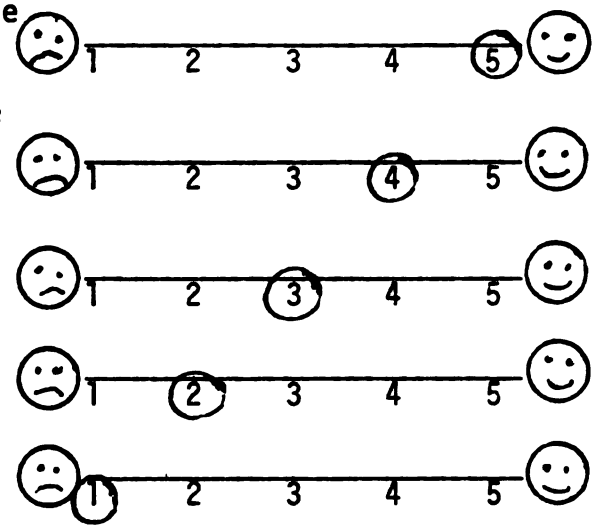
If you really like hotdogs, circle the #5.

If you like hotdogs, but they are not your favorite food, circle #4.

If you have no opinion, circle #3.

If you don't really like hotdogs, circle #2.

If hotdogs are your least favorite food, circle #1.



Tammy Byrd

Christine Calhoun

Terry Clover

Susy Curt

Alyson Demerick

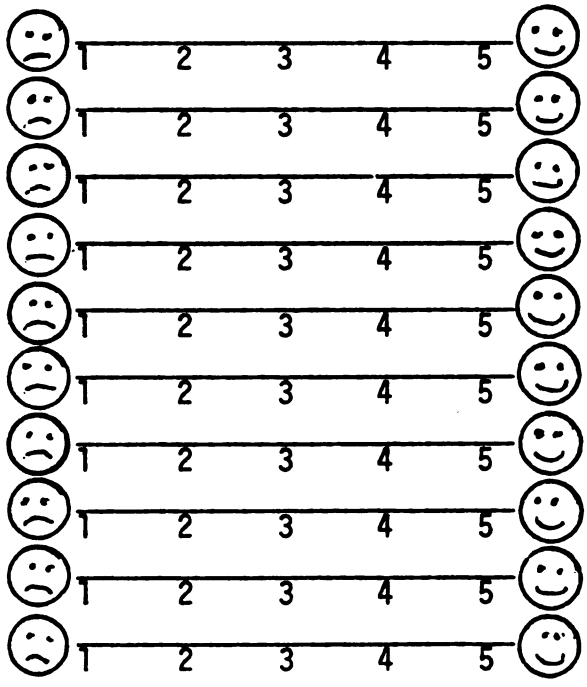
Jenny Velasquez

Toni Watson

Kerry Westley

Trina Worth

Kimberely Zebrowsky



APPENDIX C

INTERVIEW PROTOCOL

Part III: Friendship

INSTRUCTIONS TO CHILD:

The first thing I want to do is thank you for coming to the University to help me with my project.

I asked you to come here today because I am interested in finding out how _____graders like yourself get to know one another.

I would like for you to help me by answering some questions about the boy/girl you just played with, your friend.

There are no right or wrong answers to my questions, and no one but myself and a few other people here at the University will see your answers.

Would you like to help me?

I agree to help you by answering your questions about the boy/girl I just met.

Child signs the answer sheet.

INSTRUCTIONS TO EXPERIMENTER:

Write all answers on answer sheet!!

OK. Let's get started.

I. I'm going to ask you some questions about yourself. I'd like to find out what kind of person you think you are. Remember, there are no right or wrong answers.

Look at this scale. This is how you use it.

Let's pretend the question is: How happy are you?

If you think you are always a happy person, point to #5.

If you think you are sometimes a happy person, point to #4.

If you are sometimes happy and sometimes not happy, point to #3.

If you are usually not happy, point to #2.

If you are never happy, point to #1.

OK, let's go.

1. How helpful are you?
2. How much of a leader are you?
3. How much do you fight?
4. Are you mean and bossy?
5. Are you afraid?
6. How quiet and shy are you?
7. How angry and complaining are you?
8. Do you follow directions?
9. How smart are you?
10. Do you have good and interesting ideas?
11. Do you cheat?
12. Are you funny - good sense of humor?
13. Do you share?
14. Are you happy?
15. Do you act your age?
16. How nervous (jumpy or uneasy inside) are you?
17. Are you honest?
18. Are you restless?
19. Can you keep a secret?
20. Do you help your friends when they have problems?

II. Now I'd like to know what kind of person you think __(friend)__ is. This is only your opinion. OK! Again, use this scale to point to the #.

1. How helpful is _____?
2. How much of a leader is _____?
3. How much does _____fight?
4. Is _____mean and bossy?
5. Is _____afraid?
6. How quiet and shy is _____?
7. How angry and complaining is _____?
8. Does _____follow directions?
9. How smart is _____?
10. Does _____have good and interest ideas?
11. Does _____cheat?
12. Is _____funny - good sense of humor?
13. Does _____share?
14. Is _____happy?
15. Does _____act his/her age?
16. How nervous is _____?
17. Is _____honest?
18. Is _____restless?
19. Can _____keep a secret?
20. Does _____help his/her friends when they have problems?

IV. Now I'd like to find out how well you know _____, how much you play together and do things together.

SCALE

1. How close does he/she live to you? (in blocks) — Outside School

   2 = within 1-2 blocks on same or adjacent streets.
   1 = within 3-4 blocks
   0 = over 5 blocks away

2. How often do you play at his/her house? (after school and weekends) — Outside School

   2 = nearly every day
   1 = about once a week
   0 = about once every two weeks

3. How often does he/she play at your house? (school and weekends) — Outside School

   2 = nearly every day
   1 = about once a week
   0 = about once every two weeks

4. How often do you play with _____ at recess (when you were at school)? — School

   2 = all the time
   1 = sometimes, but not all the time
   0 = rarely

5. How often do you eat lunch with _____? — School

   2 = all the time
   1 = sometimes, but not all the time
   0 = rarely

6. What clubs, teams, church groups do you and _____ belong to? — Outside School

   2 = 2 or more outside activities
   1 = 1 outside activity
   0 = none

SCALE

7. How many years have you and _____ been friends? — Outside School

   2 = were friends before this year

   1 = became friends at the beginning of the school year

   0 = just became friends

8. How many years have you been in the same classroom? — School

   2 = 3 or more

   1 = 2 years

   0 = first year

9. In your class, where is _____ desk in relation to your desk? How many desks away? — School

   2 = adjacent or 1 desk away

   1 = 2-4 desks away

   0 = on the other side of room

10. Can you talk to _____ without getting out of your seat and without yelling? — School

    1 = yes

    0 = no

V. OK - I'm going to give you some situations and I'd like you to tell me what you think.

1. How did you meet _____?

2. Why is _____your friend? How is he/she different from other kids who aren't your friends?

3. What kinds of things did you do to become friends with _____?

4. What can you do to make sure_____stays your friend?

5. Let's pretend that you and _____are playing ball and one of you throws the ball too far and a window breaks.

   a) What would you do?

   b) What would _____do?

6. Let pretend it's Saturday morning and you and _____have the whole day to be together.

   a) Who will decide what to do?

   b) What are you going to do?

7. Let's pretend _____decides not to be your friend anymore. Why would that happen?

8. What could_____do so you wouldn't want to be his/her friend anymore?

APPENDIX D

OPEN-ENDED QUESTIONS CODING INSTRUCTIONS

(The values in parentheses represent: (1) percent agreement, (2) percent agreement excluding uncodable responses, and (3) Kappa. Beside each code is the frequency of endorsement for that code.

I. Where did you meet? (.852, .829, .747)

1 = at school (38) 0 = Uncodable

2 = at home, in the neighborhood (9)

3 = at an activity outside of school (4)

II. Why is _____your friend? (.738, .729, .625)

0 = uncodable

1 = mere contact (6)

Subject responds with an answer indicating friendship based upon contact or availability, i.e., "He's my friend because we can play alot." OR "We are in the same class."

2 = materialistic possessions of other (0)

Subject responds by naming material objects that the other person possesses, i.e., "He has alot of toys for us to play with."

3 = instrumental characteristics of other (2)

Subject responds by naming activities the other person does that he is attracted to, i.e., "He's good at sports, he likes riding bikes..."

4 = personal characteristics of other--general (31)

Subject responds with personal attributes of other. That is, responses are given which are vague, general personality descriptors, i.e., "He is nice, he is kind...."

5 = personality characteristics of other--intimate (4)

Same as #4, only the descriptors are more intimate or show more thought, i.e., "He is intelligent, honest, loyal, sensitive...."

6 = mutual compatability (17)

Subject suggests traits of both people which are compatible, i.e., "We get along well." "We're both good at sports."

7 = only available choice (1)

Subject indicates friendship as a result of acceptance by the other child and rejection by other children.

III. What did you do to become friends with _____?

First Digit of Code (.869, .855, .773)

1 = approach, greeting, meeting (4)

Answers such as, "I went up to him and said hi and asked his name." This category should include initial, superficial greeting behaviors.

2 = giving information about self (0)

Voluntary giving of personal information about the self, i.e., "age, school...."

3 = asking for information about other (1)

Request for personal information about the "friend-to-be."

4 = helping behavior or positive social behavior (12)

Offered to provide some helping behavior for the other child, i.e., "I introduced him to others." "I helped him with homework."

5 = participation in mutual activity or interest (38)

An answer indicating involvement and exchange through mutual activities, i.e., "We played ball" or "We were both friends with Joe."

6 = invite to participate in activity (1)

Offer to have the other child engage in some activity with the subject, i.e., "I asked him to sleep over at my house."

7 = Passivity/hesitancy with initiations (2)

An answer which indicates a reluctance with initiating exchanges, i.e., "I let him talk to me."

8 = negative behaviors (1)

Any negative behaviors such as hitting, name calling, exclusion.

Second Digit of Code (.967, .964, .841)

0 = not codable

1 = assertive (57)

The behavior in digit one constituted an assertive, action oriented response. The subject performed some behavior towards the other child.

2 = non-assertive (2)

The subject did not perform any active behavior. He/she remained passive and allowed the other child to make all the moves.

Third Digit of Code (.967, .964, .850)

0 = uncodable

1 = relationship enhancing (56)

The subject's actions towards the other child were such as to increase the probability of the two children becoming friends. The subject created a tone of positive feelings and affect. Passive acts and negative behaviors would not fall into this category.

2 = relationship limiting (3)

The subject's actions towards the other child were such as to decrease the probability of the two children becoming friends. Negative behaviors and neutral, passive acts fall under this category.

IV. What can you do to stay friends with _____?

(Definitions of the following categories are presented above.)

First Digit Code (.918, .909, .850)

0 = uncodable

1 = approach, greeting, meeting (0)

2 = giving information about self (1)

3 = asking for information about other (0)

4 = helping behavior or positive social behavior (45)

5 = participation in mutual activity or interest (11)

6 = invite to participate in activity (2)

7 = passivity/hesitancy with initiation (1)

8 = negative behaviors (0)

Second Digit of Code (.918, .914, .622)

0 = uncodable

1 = assertive (59)

2 = non-assertive (5)

Third Digit of Code (.918, .913, .620)

0 = uncodable

1 = relationship enhancing (61)

2 = relationship limiting (2)

V.A. What would you do if you and _____broke a window?

First Digit of Code (.705, .676, .599)

0 = uncodable

1 = seek help from an adult

2 = confess to the act (38)

3 = clean up the glass (0)

4 = pay for the window; get a new one (5)

5 = run away (3)

6 = deny the act (0)

7 = blame the act on someone else (2)

8 = take action only if caught (0)

9 = do nothing--let someone else take responsibility for the act, (7)
i.e., "Just stay there."

Second Digit of Code (.877, .867, .804)

0 = uncodable

1 = independent, active solution (15)

Subject's response indicates that he/she would rectify the situation, i.e., "Clean up the glass. Pay for the new window."

2 = dependent solution (0)

Subject indicates that he would confess to the act, but let someone else solve it, or would confess but offers no active solution to the problem, i.e., "Tell the owner or have him fix it."

3 = inappropriate solution (12)

Subject responds with an inappropriate solution or response, i.e., "I'd run."

4 = no solution (34)

Subject admits to the act, but offers no solution, i.e., "I'd tell someone." "I'd get Mom."

V.B. What would _____do?

(Definition of the following categories is defined above.)

First Digit of Code (.779, .743, .702)

0 = uncodable

1 = seek help from an adult (2)

2 = confess to the act (32)

3 = clean up the glass (1)

4 = pay for the window; get a new one (8)
5 = run away (6)
6 = deny the act (0)
7 = blame the act on someone else (1)
8 = take action only if caught (0)
9 = do nothing--let someone else take responsibility for the act (6)

Second Digit of Code (.885, .873, .825)
0 = uncodable
1 = independent, active solution (17)
2 = dependent solution (1)
3 = inappropriate solution (17)
4 = no solution (25)

VI. A. Who decides what to do on Saturday? (.975, .975, .959)
0 = uncodable
1 = self (9)
2 = friend (23)
3 = mutual decision (32)

VI. B. What will you do? (.860, .833, .816)
0 = uncodable
1 = outdoor cooperative activity--i.e., play ball, build a fort (24)
2 = indoor cooperative activity--board games, Barbie dolls (11)
3 = outdoor independent activity--bike riding (19)
4 = indoor independent activity--watch TV, coloring separately (5)

VII. Why would _____decide not to be your friend? (.844, .836, .752)
0 = uncodable
1 = self characteristics (4)
Subject responds with an answer which indicates some personal quality of himself/herself, i.e., "I'm mean."
2 = self action (41)
Subject responds with an answer which indicates that he/she did something to make the other child not want to be friends, i.e., "I hit her."

3 = other characteristic (1)

Subject indicates that his/her friends has some quality which makes them not want to be friends any longer, such as, "He's stuck up."

4 = other action

Subject indicates that his/her friend performed some action which interfered with the friendship, i.e., "He found a new friend."

5 = extraneous reason (1)

A reason which has nothing to do with the two kids, or a third party, such as an unforeseen problem, i.e., "He moved away." OR, "He had a cold for 10 years."

6 = mutual incompatibility (5)

Subject indicates that the departing of friends was due to qualities of both parties, such that one person is not shouldering the blame, i.e., "We are just too different to be friends."

7 = interference from a third party (1)

Subject indicates that a third person did something to cause the breakup, i.e., "Someone told him something that wasn't true about me."

8 = deny situation (0)

Subject refuses to believe that a break-up would occur, i.e., "That would never happen." OR, "He'd think about it and change his mind."

VIII. What could_____do so that you woild no longer want to be friends? (.893, .887, .674)

(Definitions for the following codes are listed above.)

0 = uncodable

1 = self characteristic (0)

2 = self action (3)

3 = other characteristic (4)

4 = other action (53)

5 = extraneous reason (0)

6 = mutual incompatibility (1)

7 = interference from a third party (0)

8 = deny solution (3)

On most of the open-ended questions, the subjects will give more than one answer or alternative to the situation presented to him/her. Thus, you must allow for this in your coding. Questions 2-8--excluding 6a--will have room for three different codes. If the subject only gives one or two answers, put in 0's in the third slot. If a subject gave more than three answers, use your best judgment in selecting only three. A good rule of thumb is to take the first three answers given, dropping the latter answers. This shouldn't hold true though if one of the first three answers is uncodable. In such a case, you would pick from among the later items.

Record all of your answers on the 80 column fortran sheet, making sure that the subject's number is on the line preceeding his/her data.

For example:
4058
2 321 320322241 432132400 213400 210000 2 430 500 600
4059
2 432 321253234 432000000 253000 321532 1 200 430 200

Check to make sure that all of your columns are lined up properly. If you have any questions, ask me.

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