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IN PRE-ADOLESCENT MALES.

The Ohio State University, Ph.D., 1975
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FRIENDSHIP PATTERNS AND ALTRUISTIC BEHAVIOR
IN PRE-ADOLESCENT MALES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Anthony Peter Mannarino, B.A., M.A.

* * * * *

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1975

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INTRODUCTION

The development of peer relations has been discussed widely in the psychological literature over the past fifty years. Despite the abundance of empirical data, much of this research has been fragmented and not tied to any theoretical network. In addition, some areas such as social acceptance have been over-emphasized while others have been almost totally neglected. The purpose of the present investigation was to examine pre-adolescent peer relations within the framework of Harry Stack Sullivan's social-development theory. More specifically, the study focused upon pre-adolescent friendships and their relation to the development of altruistic behavior.

Although many experts on adolescence suggest that it is not until this age period that the peer group becomes the primary socializing agent, some new research points to the critical nature of pre-adolescent peer relations. In a review by Kohlberg et al(1972) of the childhood predictors of adult mental health, it was clearly documented that good peer relations is highly predictive of adult adjustment while inadequate peer relations results in such varied adult outcomes as criminality and psychosis. In particular, the

studies cited by these authors focused primarily upon pre-adolescent social relationships. Other research by Roff (1961) also verifies the predictive nature of peer relations in the age period ten to thirteen.

An interesting finding by Emmerich et al(1971) further supports the conclusions suggested by the life-span research cited above. In an investigation of the differentiation and development of social norms, these authors found that although peer norms were adequately understood by age seven, not until age ten or eleven did children begin to divorce themselves from adult norms and align themselves with peers. Hence, it has been demonstrated that pre-adolescent peer relations are quite significant and worthy of closer scrutiny.

I. Pre-adolescent Peer Relations.

The most frequently studied variable in pre-adolescent social development has been social acceptance, as measured by sociometric techniques originally devised by Moreno (1941). With this method, a child usually is asked to name three children with whom he likes to play, do a group project with, go with to another classroom, etc. The number of nominations a child receives is then referred to as his social status, social acceptance, or level of popularity within the group. As Thompson(1960) has pointed out, one of the deficiencies of this approach is that it is based upon an ordinal scale and thus, it is difficult to compare the social status of individuals who are members of non-overlapping groups(e.g. does three nominations in one group give the person equal status as three nominations in a second group?). Despite this statistical problem, research on the correlates of social acceptance has flourished in the past twenty years.

To illustrate the nature of this research, a brief and select review of the studies in this area will be presented. The research discussed will focus on the correlates of social acceptance in pre-adolescents. In an early study of nine

and ten year olds, Bonney(1943) found that children high in social acceptance were rated by their teachers as being friendlier, more enthusiastic, more active, and better leaders than those low in social acceptance. In a similar study, Roff et al(1972) noted that teacher's behavioral ratings on perseverance, compliance, orderliness, flexibility, and sociability correlated highly with peer status in pre-adolescents of both sexes. On a somewhat different note, Campbell and Yarrow(1961) discovered that although the content of social perceptions was not related to popularity in a group of campers ages eight to twelve, the quality of the child's perceptions in terms of cognitive complexity and integration was associated significantly with peer status. Other research has documented the positive association between social acceptance and personal and social adjustment(Livesay, 1972; Phillips and DeVault, 1955; Gooch and Pringle, 1968) and self-esteem(Roff et al, 1972) and its negative relation to disruptive classroom behavior(Lorber, 1966), overly aggressive behavior(Northway et al, 1947), and delinquency(Roff et al, 1972). In fact, in a thorough review of the literature, Hartup(1970) has found peer acceptance to be related to all of the following characteristics: friendliness, sociability, cooperation, self-esteem, socioempathy, low anxiety, intelligence, academic achievement, birth order, children's names, sex,

and ethnicity.

As one can see from the preceding discussion, the social acceptance of a child within his peer group is a crucial index of his psychological and social well-being. A child high in peer status also ranks high on other traits and behaviors that will contribute to his success in school and overall personal competence. Unfortunately, the research cited leaves one with the unsettling feeling that acceptance within one's peer group is the only major social determinant of mental health in the pre-adolescent period. Research has focused so heavily upon this variable that other important areas like friendship relations have been grossly neglected.

There are other flaws in the past research on social acceptance. For one thing, most investigators have neglected to include a measure of social rejection in their studies, partly out of a fear of arousing negative feelings that might continue to linger beyond the termination of the study. Consequently, the criterion of rejection has often been low social acceptance. However, as Raminez and Castaneda(1967) have demonstrated, the two are not necessarily identical. In their study, these researchers found that there were two types of children who were ranked low sociometrically: those who were well-known by their peers but whose behaviors were unacceptable in terms of the norms and

values of the group and those relatively unknown to the group. Thus, low peer status does not necessarily imply social rejection. Moreover, for those children not intimately involved with the general peer group, it may be that there are other social variables such as one-to-one friendships that serve as critical socializing agents.

One further point is relevant to the present discussion. Although social acceptance is correlated with so many socially desirable characteristics, it is conceivable that highly accepted youngsters have merely learned to play those roles that are rewarding within the peer group. In no way does a child's status suggest anything about his personal intimacy with other children his age or his willingness to engage in altruistic acts predicated upon a concern and interest in the welfare of others. Thus, the child high in social acceptance may also be lonely and longing for a more personal relationship.

Unfortunately, there has been only a limited amount of research concerned with the development of friendships. In addition, most studies have dealt with friendship relations during the adolescent period. With regard to pre-adolescent friendships, a major portion of the research has examined the bases upon which children select their friends. In a study that included pre-adolescents of both sexes, Austin and Thompson(1948) reported that frequent association and similarity of interests and tastes plus kindness and

cooperativeness accounted for most of the reasons given for selecting best friends. Furthermore, lack of recent contact was a primary reason for a change in the status of one's best friends. Bryne and Griffitt(1966), studying the law of attraction in students from grades four to sixteen, noted that both children and adolescents chose as friends those who had attitudes similar to their own. Hence, it seems that similarity of attitudes and interests play a critical role in the establishment of pre-adolescent friendships. In one other investigation in this area, Krieger and Wells(1969) discovered that in males, perceived athletic skills also underlied pre-adolescent friendship patterns.

Despite these attempts to understand the nature of pre-adolescent friendships, there has been some question with regard to the stability of these relationships and also whether or not children of this age can achieve the intimacy often noted in adolescent friendship patterns. In a review of this problem, Douvan and Gold(1966) concluded that between ages eleven to fourteen, children's friendships undergo dramatic changes. They suggested that there is a progression from a parallel partnership based on common activity toward an interactive relationship based upon mutuality; from a relationship in which conflict is not tolerated toward one in which conflict can be handled and resolved; and from a relationship involving comparatively

little emotional interaction toward one characterized by intense emotional exchange.

Studies by Horrocks and Buker(1951) and Thompson and Horrocks(1947) have focused upon friendship fluctuations from ages five to eighteen. Combining the results of both of these investigations, it was demonstrated that there is a trend toward greater stability in friendships with increasing chronological age. Despite this developmental trend, the authors of both studies concluded that there are many individual differences to these patterns, with some children achieving stability at an early age while others still fluctuating a great deal even during late adolescence. One other finding from the Horrocks and Buker (1951) study is worth noting. A correlation of 0.065 was computed between the friendship fluctuation index and a sociometric measure of social acceptance. Thus, children high in popularity fluctuated in their friendships as much as those low in social status.

In one other relevant investigation by Davids and Parenti(1958) of emotionally disturbed youngsters ages seven to thirteen and a control group matched for race, socio-economic status, and intelligence, it was noted that the disturbed children experienced greater fluctuations in their friendships than the controls. This finding suggests that an inability to maintain a stable friendship

may play some role in the onset of emotional disturbance.

As one can see, the research in the area of pre-adolescent friendships has been quite meager when compared with the abundant data on social acceptance. Nevertheless, past investigations do give some hint as to which directions future studies in this area may go. For one thing, the fact that there are wide variations in friendship stability during pre-adolescence suggests that perhaps this variable may be an important dimension of individual differences during this era. Individuals who can maintain a close interpersonal friendship may differ in systematic ways from those that cannot. The previously cited study by Davids and Parenti(1958) on the relationship between friendship fluctuations and emotional disturbance makes this hypothesis seem feasible. Furthermore, a stable friendship during pre-adolescence may be a critical socializing factor whose effects have not been fully explored.

A theoretical orientation that could fill some of the gaps in this area of friendship patterns would be most welcome. In this regard, the frequently overlooked social-development theory of Harry Stack Sullivan appears to be most useful. Sullivan was one of many theorists who broke partially with the orthodox psychoanalytic tradition because of Freud's lack of emphasis upon social relations. In fact, in some ways, his ideas bear a closer resemblance

to those of Adler who was the first theorist to propose the notion of an innate social interest. In his theoretical discussions, Sullivan(1952) postulated that throughout the different stages of development, an individual has a need for interpersonal relationships that vary from one period to the next. During childhood, which he suggested occurs between ages two and four, the child is not quite ready to enter into peer relationships and is content to interact only with his parents or siblings. The young child is primarily concerned with building his "self-dynamism" which evolves out of experiences of approbation and/or disapproval from the parents. Thus, the self comes to resemble evaluations made of the child by significant others in his life. Sullivan proposed the term "reflected appraisal" to describe this self-developing process.

From ages four to nine or ten, Sullivan(1965) theorized that the child is in the juvenile era which is uniquely characterized by a need for playmates. As Mullahy (1970) pointed out, during this period the child's social interest is quite general and oriented toward the self. In other words, the child is still egocentric and maintains peer relations not out of a sincere concern for others, but due to a desire to build his own status and popularity. Accordingly, the juvenile era is marked by high levels of competition. The conformity and cooperation

that does exist is self-motivated as the child attempts to achieve status for the self.

Despite the self-oriented nature of the juvenile era, Sullivan did propose that one of the positive aspects of this period is social accommodation. By this term, he meant that the child learns to grasp how many slight differences in living there are. Thus, his egocentrism is somewhat reduced through peer interaction. Nevertheless, Sullivan emphatically stated that the child during the juvenile era is still insensitive to the personal worth of others and is not truly interested in their welfare or happiness.

A comparison of Sullivan's ideas with those of Piaget (1965) perhaps can demonstrate what exactly the former writer perceived as crucial during the juvenile era. Piaget has posited that during the age period seven to ten, the child's egocentric orientation is reduced through peer interaction. The child learns that others can have viewpoints different from his own and in the process, mutual respect and cooperation become focal points in his social relations. To this extent, Sullivan would not have strongly disagreed with Piaget. The key point that Sullivan contributed, however, is that although the child is cognitively aware of the different perspectives of his peers, he is more concerned with promoting his own self-interests

than in building their welfare and happiness. Thus, for Sullivan, the juvenile's cooperation and conformity are merely other instances of building on the self-dynamism that originally was created through interaction with the parents.

With pre-adolescence, intimate interpersonal adjustment becomes the great problem of life. Sullivan(1953) proposed that a need for interpersonal intimacy develops through maturation and experience. Specifically, a new type of interest evolves in which a particular member of the same sex becomes a "chum" or close friend. Through this relationship, the pre-adolescent can develop a real sensitivity to what matters to another person; not a self-centered sensitivity, but a sincere interest in the welfare of the other human being.

Sullivan(1953) noted that there are two worthwhile developments associated with a chumship. First of all, the intimacy of this close relationship permits a validation of all components of one's self-worth. In Sullivan's own words, ". . . through mutual interaction, the necessity for thinking of the other fellow as right and for being thought of as right by the other leads to a resolution of the uncertainty as to the real worth of the personality."(pg. 52, 1953). In other words, the pre-adolescent is able to look at his self-system in a more realistic way by viewing it through the chum's eyes. Hence,

sincere communication with a chum gives the pre-adolescent the opportunity to realize that his ideas and thoughts are similar to those of someone else. Sullivan referred to this process as consensual validation of the self.

One further point with regard to the above discussion is relevant. Failure to develop a chumship will result in a lowering of one's self-concepts. As Sullivan suggested, a pre-adolescent without a close friend does not have the chance to communicate intimately with a peer and accordingly, his ideational symbols and thoughts are not validated. He will develop doubts as to the real worth of his personality and possess a lower self-esteem than a pre-adolescent who has formed a chumship.

The most important consequence of a chumship relationship is that the pre-adolescent will gain a "sense of humanity" as the interests of another become as important as one's own. Although Sullivan is not entirely clear with regard to this matter, he seemed to suggest that the specific sensitivity and "other" orientation that develops toward the chum will somehow eventually transcend this relationship and become a general altruistic perspective. Thus, becoming sensitive to the needs of one person results in greater social insight and also a greater probability that the individual will remain sensitive in subsequent interpersonal situations. In this regard, the study to be

described below explicitly examined the effects of having a chumship relationship upon altruistic behavior.

The lack of a chumship also has quite definite repercussions with respect to social feelings (Sullivan, 1965). There will be a lowering of social sensitivity and interest in the welfare of others. In addition, the child who fails to develop a chumship will be hampered in his adolescent and adult interpersonal relations. Since a sense of interpersonal intimacy has not been established, the ability to achieve a mature love relationship with a member of the opposite sex will be greatly impaired. The predictive nature of a chumship was, in fact, demonstrated in a study of adults of both sexes as part of the Berkeley Guidance Study (Maas, 1968). In this investigation, adults were classified as "warm" or "aloof" based on their capacity for intimate relationships as measured by test protocols and a Q-sort after an interview. It was reported that the warm group had more enduring and mutually gratifying chumships during pre-adolescence than the aloof group. These data were collected earlier as part of the longitudinal research strategy. Thus although the follow-back design employed in this study is not as adequate for predictive purposes as a follow-up design (Ricks, 1970), it was clearly born-out that pre-adolescent peer relations can have specific implications for adult intimacy.

One other finding of the Maas(1968) study is worth considering. Maas stated that warmth and aloofness among the adult females seemed to have fewer differentiating pre-adolescent antecedents than among the adult males. Hence, pre-adolescent peer relations were considerably less predictive of interpersonal orientation for the female group. This finding fits in nicely with Sullivan's ideas. He believed that the notion of a chumship was critical in the development of a male, but he was less certain as to its importance in the female. Moreover, since Sullivan had many more clinical contacts with males than females, he was unwilling to generalize his findings to the opposite sex whose development he believed was much more complex. For this reason, the present research included only pre-adolescent males.

Besides the Maas(1968) study, the author was unable to locate any other empirical investigation that was specifically designed from a Sullivanian theoretical perspective. Nevertheless, a few studies are of indirect importance for Sullivan's social development concepts. Blinn and Jacobson(1973) noted that pre-adolescents improved their performance significantly more on a cognitive task when the "information feedback" agent was a liked-sex peer than either an adult or opposite-sex peer. In addition, in a study of third, fourth, and fifth graders(Torrance, 1971), it was determined that in the fourth grade, a distinct

change occurred in which there was a decrease in reliance upon adults and an increase in dependence upon peers with regard to the sources children use in checking their solutions on a problem-solving task. The findings of these two studies, in line with Sullivan's theory, suggest that during pre-adolescence, children become increasingly concerned about the consensual validation of their ideas from peers, especially those of the same sex. Furthermore, in a developmental study by Byrne and Griffitt(1966), it was noted that beginning at ages nine or ten, children choose as friends other children whose attitudes are similar to theirs. It thus appears that pre-adolescent friendships evolve largely out of a need for choosing people who can reinforce one's attitudes and ideas. In Sullivanian terms, one seeks to consensually validate one's ideational symbols.

Unfortunately, no one has yet attempted to relate pre-adolescent friendship relations to altruistic orientation and behaviors. A review of the studies focusing on the development of altruism will be next in order.

II. The Development of Altruism.

Altruism can be defined as a concern and interest in the welfare of others. It is manifested behaviorally in those helpful actions that incur some cost to the individual but bring very little or nothing by way of gain to him (Midlarsky, 1968). Despite the obvious benefits resulting from altruistic acts, research in this area, until recently, has been quite limited. There are a number of reasons for the hesitancy of researchers to explore actively this area. For one thing, the influence of Darwinistic concepts like aggression, competitiveness, and survival of the fittest has reduced the legitimacy of prosocial behavior. Many who espouse Darwinistic notions perceive altruistic acts as self-motivated to further one's survival.

The supremacy of the psychoanalytic perspective also has engendered skepticism with regard to the existence of altruism. As Ekstein(1972) has pointed out, early Freudian analysts frequently conceived of charitable behavior as condescending pity, secret hostility, tragic guilt, or self-advertisement instead of an expression of genuine affection. An altruistic act was often viewed as just another instance of reaction formation, turning an unconscious impulse into

its opposite overt counterpart. Perhaps with the present day influence of ego psychology and its focus upon conflict free spheres of the personality, an altruistic act will no longer take on the negative connotations previously attributed to it by orthodox psychoanalysts.

Learning theory has played a role, too, in limiting research on altruism. Rosehan(1972) called the relationship between reinforcement and altruism the "altruistic paradox." "If organisms seek to maximize reward and minimize pain, how shall we account for altruistic phenomena that take their very definition from the willingness and ability of organisms to forego obvious and often significant rewards, even to give them up entirely to others?" (pg. 152). Thus, despite new trends in learning theory that do include cognitive components, its adherence to a pleasure-pain principle has made the likelihood of altruistic acts seem small to its followers.

Finally, notions of altruism do not fit well with specific theories of moral development. For instance, Piaget's highest stage of moral development, moral autonomy, is based upon mutual respect and an acceptance of the norm of reciprocity(1965). Although reciprocity does imply mutual understanding, which in turn can generate higher levels of moral judgment, it also involves mutual exchange, equal return, or expectation of repayment for one's moral actions. Such behavior does not meet the criterion of an altruistic

act since the latter involves no expectation of exchange, but simply a desire to aid the other individual. Furthermore, in Kohlberg's cognitive-developmental theory of moral judgment(1963), the highest stage, morality of individual principles of conscience, does not directly focus upon altruistic responses. Instead, both Piaget and Kohlberg seem to be discussing advanced levels of moral decision-making that are heavily influenced by the maturation of intellectual reasoning abilities.

It thus does appear that dominant theoretical perspectives have helped to persuade psychologists to restrain from studying altruistic acts and to instead focus upon the negative behaviors in man (e.g. competitiveness, aggression, anxiety, etc.). Nevertheless, the input of new psychological theories like Maslow's(1969), in which man's nature is conceived as good or at least neutral, will perhaps help in re-orienting researchers toward the study of altruism. As Campbell(1965) clearly stated in a review of research demonstrating in-group solidarity and sacrifice in the face of out-group threat, ". . . the tremendous survival value of being social makes innate social motives as likely on a priori grounds as self-centered ones"(pg. 301, 1965). Accordingly, there may be somewhat of a new thrust in psychology, aided by older social concepts like those espoused by Adler and Sullivan, in which man is perceived as

a social being whose very survival is dependent upon a willingness to be concerned about the welfare of others.

One of the difficulties in this area is operationalizing the concept of altruism. As the psychoanalysts have warned us, the intent behind an act is not easily determined. Thus, one can never be certain that an apparently altruistic behavior is motivated by a concern for others (Krebs, 1970). In addition, there seem to be two types of altruistic acts that may not correlate with each other. One type involves rescue activity in which an individual incurs some danger to relieve the distress of another person. The bulk of the research, however, has focused on donation responses in which one shares something, usually money, with someone else (Bryan, 1972). A major flaw of the investigations in this latter area, though, is that sharing money that one has just won (which is the case in most studies) may not be such a great hardship. Perhaps a more valid measure would be the sharing of a prized possession, or at least something that has long-standing value to the individual.

One of the early studies of altruism was part of the pioneer work of Hartshorne and May (1923). These investigations of moral character led to the discovery of many instances in which children rendered service to others. Most important for our present purposes, Hartshorne and May

noted that there was little correlation between moral knowledge and moral behavior, the latter being determined by situational factors. Hence, in relation to the theories of Kohlberg and Piaget, a high level of cognitive understanding as to what is morally sound may not lead necessarily to behaviors that are also considered to be highly moral. Since both Kohlberg and Piaget have largely developed their cognitive-moral stage approaches from verbal judgment situations, it is difficult to surmise how their subjects would have fared if placed in realistic, behaviorally-oriented situations.

Contemporary research in the area of altruism has taken many directions, one of the most important of which is its development in the child. In this regard, some investigators have attempted to ascertain if there are any developmental-age trends on this variable. Handlon and Gross(1959) found that sharing behavior increased with increasing chronological age in a group of youngsters in grades two through six. Similar findings were reported by Harris(1967) for children ages seven to eleven. On the other hand, although Wright(1942) noted that the occurrence of fair and generous solutions correlated with age, fairness was more frequent in eleven year-olds while generosity was more characteristic of eight year-olds. Also, in a study of children ages four to sixteen, Ugurel-Semin (1952) discovered that generosity increased up to age eight,

but after this age, with one exception, there was an increasing emphasis upon equalitarian solutions. The exception noted was that children ages twelve to fourteen were more frequently generous than equalitarian. Finally, Green and Schneider(1974) suggested that age differences in altruism may be a function of the measure employed. These authors discovered that helping behavior and donation responses increased with increasing chronological age in a sample of boys ages five to fourteen while there were no age differences in volunteering for a group project to aid poor children.

Thus, the findings with regard to developmental patterns in altruistic behavior are conflicting. There appears to be a definite increase in altruism through age eight, but during late childhood, equalitarian responses may become more important. The latter interpretation is congruent with the ideas of Piaget(1965) who has suggested that reciprocity dominates the social interactions in the age period eight to ten. Accordingly, it would be expected that fairness and equalitarianism would be of overriding importance. In pre-adolescence, however, there may be a return to altruistic behavior. Such a conclusion is supported by the above-cited research of Ugurel-Semin (1952) who found that although fairness predominated after age eight, from age twelve to fourteen, generosity was the most frequent response. Perhaps the formation of a

chumship during pre-adolescence may play some role in the re-generation of altruistic behavior in this era.

Sex differences in the development of altruism also has attracted the attention of many investigators. Theoretically, some have suggested that females should learn to be more altruistic than males since prosocial behavior is more consistent with their sex role. Research in this area, however, has not been favorable with respect to this hypothesis. Although Moore et al(1973) reported greater generosity in pre-adolescent girls than boys, the majority of the studies(Fischer, 1963; White, 1967; Handlon and Gross, 1959; Ugurel-Semin, 1952; Staub, 1968; Schaffer, 1969) have indicated that there are no sex differences in altruistic responses in samples of children ages four to sixteen. In fact, Staub and Sherk(1970), in a study of nine year-olds, discovered that boys shared more candy with their peers than did girls. Based on these findings, it appears that boys and girls are equally reinforced when they display a concern for the interests and welfare of others.

Since many investigators have concluded that parental child-rearing attitudes and practices contribute significantly to moral growth(Hoffman, 1970), research has been extended to explore if there are similar antecedents for altruism. With pre-schoolers, Hoffman(1963) noted that none of the measures of parental child-rearing that he

employed related to the child's consideration for others. On the other hand, Hoffman and Saltzstein(1967), studying pre-adolescents of both sexes, reported that for girls, consideration for others correlated highly with maternal affection and induction (i.e., verbal reasoning techniques) while for boys, consideration related positively to power assertion and affection and was not associated with induction. The findings of Mussen et al(1970), also in an examination of pre-adolescents, adds further confusion to the picture. These investigators reported that for boys, altruism related positively to maternal nurturance whereas honesty was correlated inversely with maternal affection. For girls, the reverse was true. Honesty was associated positively with maternal nurturance but altruism was related to unsatisfactory mother-child relations. Based on this last finding, it appears that the parental antecedents of honesty and altruism are entirely opposite of each other in either sex. Maternal nurturance fosters honesty in girls and altruism in boys. Mussen et al accounted for their findings by suggesting that honesty is a feminine trait due to its relation to compliance while altruism (involving independence of judgment) is a masculine trait in this age group. Accordingly, maternal nurturance encourages sex-appropriate behaviors while inappropriate role-taking (honesty in boys and altruism in girls) is

associated with maternal dissatisfaction and punitiveness.

The conclusions of Mussen et al(1970) are inadequate for a number of reasons. Previously cited research clearly demonstrated that the bulk of the investigations have found no sex differences in altruistic behavior. Thus regardless of parental antecedents, altruism does not seem to be associated with one sex more than the other. Moreover, there seems to be no reason to accept Mussen et al's statement that honesty implies conformity whereas altruism involves independence in decision-making. In fact, many instances may arise in which honesty (especially in pre-adolescents) goes against a group norm and consequently, becomes the more unconventional response.

Probably the most interesting finding of the Mussen et al(1970) study is that honesty and altruism were not correlated with each other and indeed were fostered by entirely different factors. Such data have striking implications for research in the area of moral development. Since most theorists have focused on the internalization of such concepts as honesty, resistance to temptation, guilt after transgressions, etc., their ideas do not have any necessary application to prosocial behavior. What inhibits a person from venting his anti-social impulses appears to have little to do with what encourages him to incur some cost in coming to the aid of another individual. Hence, it is probably not legitimate to suggest that

altruism is simply a higher-level extension of the more traditional concepts of morality. Instead, altruism may be more of an interpersonal concept that is associated with intimate, personal, social relations.

Before the discussion proceeds to the actual hypotheses and procedures of this investigation, it is worthwhile to examine other areas that have been important in the research on the development of altruism. One of these concerns the demographic and personality correlates of altruistic responses. With regard to socio-economic status, Doland and Adelberg(1967) reported that children drawn from a nursery school in an upper middle-class suburb were more willing to share valued pictures than children drawn from a welfare station. Other research(Dreman and Greenbaum, 1973; Berkowitz and Friedman, 1967), however, has indicated that intra-class occupationally-related differences may be the key factor. Specifically, in the Berkowitz and Friedman study of high school students, it was reported that the children of bureaucratic, middle-class fathers were more helpful and less affected by how much help they had previously received than the children of entrepreneurial, middle-class fathers. The latter group were highly oriented toward the norm of reciprocity. This study is a helpful reminder that intra-class variables may be as significant as inter-class variables in determining one's status on various personality characteristics.

A few studies (Handlon and Gross, 1959; Harris, 1967) have examined the effects of birth order upon altruistic responses, but in each case, the findings were non-significant. On the other hand, family size has been related positively to prosocial behavior. Ugurel-Semin (1952) reported that children from small families were more selfish in terms of sharing nuts than children from large families while Schaffer (1969) noted that children with four or five siblings were more altruistic, as measured by performance on a task in which another child received material benefits, than those with fewer siblings. Intuitively, it makes sense that children in large families must learn to be considerate of the needs of others in order that the family may live harmoniously in what may often be overcrowded and congested conditions.

Some writers (Berkowitz and Connor, 1966) have suggested that altruistic behavior arises as a function of one's adherence to the norm of social responsibility. In a study of adolescents, Willis and Goethals (1973) reported that eighty per cent of those high in social responsibility, as assessed by the Allport, Vernon, and Lindzey Scale of Values, but only forty per cent of those low in social responsibility made a donation to needy children. Despite the differences, it is noteworthy that nearly half of those low in social responsibility still made the altruistic response. In addition, Harris (1971) discovered

a significant correlation between donations and her interview measure of social responsibility in a group of fourth and fifth graders. It is significant that in both of these studies, a positive correlation was found between a verbal self-report and behavioral index of altruism.

Few studies have assessed the effect of personality variables on children's altruistic behavior (Bryan and London, 1970). The limited research in this area, nevertheless, has presented somewhat of a consistent picture. Both the previously-cited Mussen et al (1970) work with pre-adolescents and Peterson's (1972) developmental study of females ages five to twelve have demonstrated that altruistic responses, measured behaviorally and sociometrically, are correlated positively with ego strength, the latter defined in terms of dependability, self-confidence, and responsibility. In addition, in an investigation of boys ages nine to sixteen, Turner (1948) discovered that teacher and parental ratings of altruism were associated positively with emotional stability. In a study of pre-schoolers, Rutherford and Mussen (1968) noted that teacher ratings of gregariousness correlated significantly with sharing behavior while a negative relationship between interpersonal competitiveness and generosity was found. Finally, Staub and Sherk (1970) reported a negative correlation between need for social approval and sharing behavior in a group of fourth graders. Integrating these

findings, one can see that children who engage in pro-social behavior are mentally stable, non-competitive toward peers, interpersonally oriented, and have large reservoirs of ego strength. Additionally, their low need for social approval may permit them to deviate from peer norms, if necessary, in order to help another individual.

Despite this focus upon the personality correlates of altruistic responding, it should be noted that situational factors are probably equally important in this area. In fact, Staub(1971) reported that seventh grade girls were more likely to help someone in distress if given explicit permission to enter the room where the victim was situated than when they were prohibited from entering the room or given no information. This study along with the classic work of Hartshorne and May(1929) clearly demonstrate that altruistic behavior may show no evidence of consistency from one situation to the next and that situationally-specific factors may be critical in eliciting it.

The final area to be reviewed concerns the development of altruism within a learning theory perspective. Some research(Fischer, 1963; Hartup and Coates, 1967) has demonstrated that sharing behavior can be evoked through verbal approval or candy reward, but the use of a reinforcement precludes this behavior being judged as altruistic. The work of Aronfreed(1968) has been much

more interesting and helpful. He suggested that two things must occur for altruism to be elicited. First, the child must acquire empathic sensitivity to the cues that serve as indices of another person's experience of positive affect. This sensitivity develops when the child's own positive affect is associated contiguously with another person's happiness. In this manner, the child learns to be happy when he perceives someone else as happy. Secondly, the child must learn overt behavior instrumental in increasing the positive affect of the other individual. Essentially, then, Aronfreed's approach is associationistic in nature and also involves learned instrumental responses.

Much laboratory research has been carried out related to Aronfreed's theoretical notions. To illustrate, Aronfreed and Paskal(1965) reported that children engaged in more self-sacrificing altruistic behavior when they had experienced positive affect in conjunction with the experimenter's expressive cues of happiness. Many other studies, undertaken under Aronfreed's auspices, have further validated his associationistic concepts(Aronfreed, 1968). The theory and empirical data have failed to account, however, for the mechanism by which this specific empathic sensitivity is generated into a broader altruistic orientation. One is left to believe that the child

must learn to be altruistic toward each person in his life, instead of acquiring a more general altruistic perspective. Although stimulus generalization may be the appropriate concept to deal with this issue, Aronfreed himself suggested that he is uncertain that such a simplistic notion can account for the complex nature of a broad altruistic orientation.

Although not from an associationistic theoretical perspective, two other studies have focused on the role of affect in altruistic responding. Lenrow(1965) reported that aiding behavior was correlated positively with a child's ability to express distress within the nursery school situation, as recorded earlier through systematic observations. Furthermore, Moore et al(1973) discovered, in a study of pre-adolescents, that internally generated positive affect resulted in much more sharing behavior than either internally generated neutral or negative affect. Based upon both Aronfreed's research and the findings of the above two studies, it appears that the individual's ability to express affect and his capacity to empathize with the affective responses of another are key in producing altruistic behavior. Perhaps a chumship relationship would be a unique opportunity to learn about the feelings of another individual such that the child can become sensitive to those cues that signal either happiness or distress.

From a social-learning theory point of view, many of the studies on the development of altruism have focused on the effects of modeling. As Krebs(1970) has pointed out, modeling may make altruistic norms more salient, supply information as to what is appropriate in a given situation, or supply information about the consequences of an altruistic action. In a study of fourth and fifth graders, Rosehan and White(1967) reported that half of the subjects who observed an altruistic model contributed a donation in his absence whereas none of the control group who saw no model did so. In a similar experiment, White(1967) discovered that observing a model had beneficial effects upon charitable behavior. In future research in this area, experimental subjects need to be re-tested at some later date after the conclusion of the study to answer the critical question as to whether the modeling effects are more permanent in nature.

Anderson and Perhman(1973) explored the idea that a model's preaching of altruism as opposed to its behavioral manifestation would contribute to the production of altruistic responses. In fact, in a study of pre-adolescents, it was found that those who were exposed to a model who intensively preached that altruistic behavior is worthwhile donated significantly more money to poverty-stricken children than those exposed to a low-intensity preaching model. Conflicting results have been reported by Bryan and his

colleagues in a series of research investigations (Bryan et al, 1971; Bryan and Walbek, 1970; Bryan and Walbek, 1970a). These authors have found consistently in studies that have included models who both preached and behaviorally demonstrated altruism that behavioral example is much stronger in affecting the number of donation responses. Indeed, in their research, the models' exhortations concerning altruism had little or no effect on generosity. Since the work of Bryan has been esteemed by Krebs (1970) for its scientific rigor, it appears that behaviorally-modelled altruistic responses are more effective than preaching in increasing children's altruistic behavior.

III. Integration and Hypotheses.

In the literature on pre-adolescent development, there have not been any attempts to study simultaneously the two variables to be examined in this study, friendship patterns and altruistic behavior. Nevertheless, some investigations have explored the association between social status and altruism-related variables. To illustrate, Rubin(1972) found that popularity among peers was negatively correlated with egocentric communication in second graders but the two variables were unrelated in fourth and sixth graders. This finding indicates that the ability to take another person's point of view may play a causal role in the child's attaining popular status in early childhood, but by age nine, other factors become more important. Such an interpretation somewhat contradicts the theoretical notions of Piaget(1965) who proposed that successful peer interaction and a decline in egocentrism should be closely associated in children ages eight to twelve.

A related variable that has received little attention in children is social sensitivity. In a study of adolescents, Loban(1953) found a significant, positive correlation between social acceptance and sensitivity. Unfortunately, both variables were measured sociometrically and

therefore, the data were not independent. Hence the validity of this study is reduced because a halo effect might have been the key factor in the results reported.

Attempts to relate social acceptance to altruistic behavior have not been successful. Although Mussen et al (1970) reported that maternal nurturance was highly correlated with altruism in pre-adolescent males, altruism was unrelated to satisfying peer group relationships or popularity. In the same vain, Peterson(1972) found that prosocial and social status were independent dimensions in her investigation of females ages five to twelve. Thus, it does appear that altruism can be discovered at all levels of social acceptance and the most popular children are not necessarily the most socially sensitive or concerned about the welfare of other children.

Because of the past research indicating that popularity in one's peer group is not predictive of altruistic behavior, this investigation focused instead upon friendship patterns. Specifically, the theoretical perspective taken was that of Harry Stack Sullivan. As reviewed in an earlier chapter, Sullivan(1965) suggested that a chumship during pre-adolescence allows the child to become sensitive to the needs of another human being. The child gains a sense of compassion as he collaborates in a mutually-trusting manner with his chum. Furthermore, Sullivan proposed that the child develops a more general altruistic

orientation that evolves out of the specific sensitivity manifested in the friendship. Having experienced the chumship relation, the child is more likely to be sensitive to the needs of others in subsequent interpersonal situations. Also, since it was previously reported that altruistic behavior seems to be re-generated in pre-adolescence after a decline in late childhood, perhaps this intimate relationship with a member of one's same sex may be partly responsible for this trend. Thus, based upon the theoretical notions of Sullivan, the following major hypothesis was tested in this study:

1. Pre-adolescent males involved in a chumship relationship will exhibit greater levels of altruistic behavior than those without a chumship.

In addition to this hypothesis, others were explored. It was noted earlier that adherence to an altruism norm and actual altruistic behavior were positively correlated in two studies (Harris, 1971; Willis and Goethals, 1973). Consequently, the second hypothesis of this study was the following:

2. There will be a positive correlation between a self-report measure of altruism and altruistic behavior.

Research has also suggested that family size is a contributing factor to prosocial behavior (Ugurel-Semin, 1952; Schaffer, 1969). Specifically, it has been reported that the more siblings a child has, the more he will

exhibit altruistic responses. Thus, the third hypothesis evaluated:

3. In the sample of pre-adolescent males, there will be a positive correlation between number of siblings and altruistic behavior.

Although not a major part of this investigation, self-concept was examined. Sullivan(1965) postulated that those pre-adolescents who experience a chumship will possess greater feelings of self-worth than those who do not. An intimate relationship with a chum permits consensual validation of one's ideas and thoughts as each child communicates to the other in a free and anxiety-less atmosphere. Accordingly, the next hypothesis of this study was:

4. Pre-adolescent males involved in a chumship will have a higher self-concept than those without a chumship.

Both the work of Mussen et al(1970) and Peterson(1972) has demonstrated that self-confidence and self-esteem are closely related to altruistic behavior. Based on this research, the last hypothesis tested was:

5. There will be a positive correlation between self-concept and altruistic behavior in the sample of pre-adolescent males.

IV. Methodology.

Subjects. The subject population was selected from the sixth grade of one of the elementary schools in an upper middle-class, suburban area of Columbus. Ninety-two boys from five classes participated in the first part of the investigation. From this sample, sixty boys were eventually chosen as subjects for the two experimental groups. The only background information collected was the number of siblings of each child.

Variables controlled. Since all of the subjects were chosen from the same school, it was assumed that there was a fair amount of homogeneity with regard to social class. Accordingly, this variable was not experimentally controlled. Such a strategy has been followed in other studies of peer relations (Ramirez and Castaneda, 1967; Goslin, 1962; Roff, 1961).

In a review of the research on peer acceptance and rejection, Hartup (1970) concluded that there is a positive correlation between intelligence and popularity, although the strength of the relationship is quite variable (ranging from 0.20 to 0.65). Despite the fact that this study did not specifically assess the effects of peer group status,

it seemed worthwhile to make certain that intelligence did not contaminate any significant findings. Thus, intelligence level was controlled. The procedure used was to take the most recent IQ score that the student had on his scholastic records. In every case, testing had occurred within ten months of the time of this study. Individual intelligence testing was not undertaken due to the time required for such a procedure and also because of the skepticism that school administrators and parents often express with respect to this matter.

The other variable controlled in this investigation was level of social acceptance. Although it has been found to be unrelated to altruistic behavior (Peterson, 1972; Mussen et al, 1970), peer group popularity has been positively correlated with level of self-esteem one of the dependent variables examined. Specifically, determination of level of social acceptance was made through the use of a sociometric questionnaire. Each subject was asked to name three children from his class that he would most like to play with after school, go to another classroom with, and participate with in a group project (See Appendix A). Nominations were limited to males. The number of nominations that a child received was his raw score of social acceptance.

Since it is frequently reported that raw scores of social acceptance are positively skewed (Hartup, 1970),

a measure of skewness was obtained for each of the five class distributions, using the formula given in Downie and Heath(1965). It was found that each of the distributions was only very slightly skewed (all in a positive direction) and thus, fairly closely matched a normal curve. Consequently, transformations to normalize the curves did not seem warranted and the original distributions were employed in the subsequent statistical analysis.

Z scores were then computed, with a mean of five and a standard deviation of one, in order to correct for variations in class size. Thus, the scores reflected deviation from class means in units of standard deviations rather than absolute number of votes. The latter could vary markedly on the basis of group size without giving an accurate indication of sociometric status. Also, the use of five as the mean rather than zero eliminated negative scores and simplified computation.

Criteria of chumship. Three means of evaluating this factor were utilized. First of all, a measure of friendship stability was used. This measure has been employed elsewhere(Thompson and Horrocks, 1947; Horrocks and Buker, 1951). All of the children were requested to name their three best friends. Selections were limited to fellow classmates, other children in their school, or children living in their neighborhood. Two weeks later, the same children were asked to name their three best friends in

order of preference. Only those children whose best friend from the initial measure remained as first or second best friend two weeks later were considered to have a stable friendship. If a child's best friend became his third best friend by the time of the second meeting, he was not included in the chumship group.

The second way of determining if a subject had a chum was through the use of the Chumship Check List(See Appendix B). This checklist was developed by the author, in keeping with Sullivan's notions of a chumship, to evaluate whether or not the pre-adolescent shares with his friend, is honest with him, and is sensitive to his interests and needs. A pilot study was undertaken to check the internal consistency of this checklist. The pilot group consisted of seventy-five sixth-grade males chosen from an elementary school in a small, Midwestern town. Using the Kuder-Richardson Formula 20(Downie and Heath, 1965), the author computed a coefficient of 0.85. This level of internal consistency was considered sufficient to warrant further use of the checklist in the main part of the investigation. In this regard, only those subjects who checked at least ten of the seventeen items were considered to have a chumship relationship.

The final criterion of a chumship was based upon the child's preference with regard to spare time. Each subject was asked whether he would rather spend his free time with

his best friend or a group of friends. This preference technique was adopted from Devereux(1970). Only those who demonstrated a preference for spending free time with their best friend satisfactorially met this criterion of a chumship.

In order to be included in the chumship group, therefore, a subject had to demonstrate a stable relationship with his best friend, prefer to be with him during his free time, and check at least ten items on the Chumship Check List. Failure to meet any of these criteria excluded a subject from the chumship group.

In total, thirty of the original ninety-two subjects qualified for the chumship group. The author then selected a second group of thirty boys who did not have this personal friendship. This second group was chosen such that its members were equal to those in the chumship group with regard to level of social acceptance and intelligence.

Dependent variables.

Altruism. Two methods of measuring altruism were employed in this study. The first was the Altruism Scale taken from the Scale of Social Responsibility reported in Harris(1957). While the other scales of this instrument measure reliability, doing an effective job, and honesty, the Altruism Scale consists of fifteen items that assess concern for others(See Appendix C). With each item, the subject is requested to respond "agree" or

"disagree" to the attitude that is expressed. The full scale was originally validated on a group of 500 seventh and eighth graders who were asked to nominate fellow students on the criteria associated with each sub-scale. It was found that the reliability of the Altruism Scale was 0.80 and also that each item significantly differentiated between those high and low on the sociometric criterion of concern for others. Furthermore, Harris(1957) noted that all of the sub-scales correlated highly with each other, with the range extending from 0.77 to 0.82. It is also worth noting that the Altruism Scale correlated 0.83 with the full scale.

Cross-validation of the Altruism Scale took place in the Nobles County studies(Harris, 1957). Re-test reliabilities for the Altruism Scale were again on the order of 0.80. Moreover, Conzemius(1955) discovered that children who participated in service organizations scored significantly higher on the Altruism Scale than those who did not.

The Harris full scale seems to have other worthy attributes. Correlations of scores with socio-economic status are negligible, but the full scale is moderately related to adjustment (r of 0.40 to 0.52). In addition, Harris(1957) presented norms for the age groups ten, twelve, fourteen, and sixteen based on a sample of 747 youngsters. Unfortunately, the norms reported are only for the full scale.

The Social Responsibility Scale has been used infrequently in research on the development of altruism. There appear to be two reasons for this occurrence. One is that most of the research in this area has involved pre-schoolers who would be unable to make judgments on self-report attitude statements. Secondly, the existing studies with older children have focused on the effects of modeling and therefore, have been more concerned with behavioral measures. This author decided to employ the Altruism Scale because of its impressive original validation and also in order to have a second method of assessing altruism. Few studies have ever included more than one measure of altruistic behavior.

The second method of assessing altruism used in this study was a modification of the now standard prisoner's dilemma situation (Mussen et al, 1970). Each child was brought alone into a room and seated before a special apparatus which consisted of three red and three blue lights, switches to control these, a pay-off matrix chart, and counters to record his own and his "partner's" scores.

The subject was told that in another room in the school, a boy from one of the other classes had used a machine just like the one he was using. The other boy's responses were played on a tape recorder. (In actuality, the second boy, or partner, was a confederate whose responses were recorded at an earlier date.) Based upon the responses

of the partner and subject in this decision-making process, each accumulated points that could be used to obtain a prize at a local fast-food restaurant. On each of the 25 trials, the partner "chose" first and announced his choice on the tape recorder. Specific instructions were the following:

Now four things can happen, depending upon which lights are chosen by the other boy and you. You will indicate your choice with these switches. If the other boy chooses red, you can choose either red or blue. If you choose red, you will both get three points. (See Matrix pay-off chart in Figure 1). If you choose blue after he has chosen red, he receives no points and you get five points.

Now, suppose the other boy decided to choose blue. Again you choose either red or blue. If you push red, he will get four points and you will get one point. Or, if you choose blue, the other boy and you will get two points.

So you see, it is up to you. Since you are going second, you will be deciding how many points the other boy and you earn. Remember that the more points you earn, the better the prize you will get at the end. Of course, the other boy would like to earn a nice prize, too. If he chooses red, you can choose red if you want to share the earning with him. Then you would each get three points. Or, you can push blue if you want all the points. Then the other boy would get nothing and you would get five points.

If he picks blue, you can press red and let him earn four points. Or if you press blue, you will each get two points.

After the instructions were given, a couple of practice trials were undertaken with the experimenter present to make certain that each child thoroughly understood the game.

Then, the experimenter left the room to give the child the opportunity to make his choices alone.

On 15 of the trials, the partner chose red, thus giving the subject the opportunity to choose blue and earn five points while the partner earned none, or alternatively, to choose red, granting himself and the partner three points each. The subject's altruism score was the number of red choices, since red was always the altruistic choice.

		Subject	
		<u>Red</u>	<u>Blue</u>
Partner	<u>Red</u>	3,3	0,5
	<u>Blue</u>	4,1	2,2

(In each cell, the first number is the points the partner earns, the second is the subject's points.)

Figure 1
Pay-off Matrix

Self-Concept. Self-concept was measured by the Piers-Harris Children's Self-Concept Scale (Piers and Harris, 1969). This instrument consists of 80 first person declarative statements of the type "I am a happy person" to which the child responds "yes" or "no". About half of the statements are worded to indicate a negative self-concept while the other half indicate positive self-perceptions. In addition, the items are keyed such that the higher one's total score, the higher one's self-concept.

The scale was standardized on 1138 children in grades four to twelve in a Pennsylvania school system. All of the items differentiated between those children high and low in self-esteem based upon both teacher ratings and a personality inventory. In addition, Piers and Harris(1969) reported that the internal consistency of the scale ranged from 0.78 to 0.93 while the retest reliabilities varied between 0.71 and 0.77. The Children's Self-Concept Scale also correlated in the mid-.60's with other instruments that assess self-esteem or self-perceptions.

In the latest edition of the Mental Measurements Yearbook, Bentler(1972) reviewed this instrument. He praised the test designers for developing a scale that correlates insignificantly with social desirability. Moreover, Bentler stated that the Children's Self-Concept Scale is worthwhile for research purposes primarily because of the honesty and straightforwardness of the test manual and the high levels of reliability and validity that were reported. Bentler did caution, however, that when administering the scale twice to the same individual, a ten point raw score differential must be found before the change can be considered reliable.

Procedure. The friendship choice and sociometric questionnaire were given on a class basis. The instructions for the friendship choice were the following:

Please write below the names of your best friends or the children you like best in your classroom, school, or neighborhood. List the one you like best first, second best in second place, and third best in third place.

The sociometric questionnaire was then given to the group of subjects. Both procedures took approximately ten to fifteen minutes.

Two weeks later, the children were again asked to list their three best friends in order of preference. The following instructions were added to the ones noted above:

Your best friends may or may not be the same as your best friends two weeks ago. Write the names of the ones you like best now.

In addition to the friendship choice, on a separate piece of paper, the subjects were asked to fill out the Chumship Check List and also to indicate whether they prefer to spend their spare time with their best friend or a group of friends. With respect to this last item, the following directions were provided:

Some children your age prefer to spend their spare time with their best friend. Others prefer a group of friends. Which do you prefer?

These procedures required approximately fifteen minutes to complete.

An analysis was then made of the above data such that a group of thirty subjects with a chum was selected. As noted earlier, only those children who met all three

criteria of a chumship were included in this group. Then, a second group of thirty youngsters without a chum, equated with the first with regard to intelligence and social acceptance, were chosen. Subjects in both of these groups then participated in the final stage of the experiment.

A day or two later, both groups were administered the Altruism Scale and the Children's Self-Concept Scale. The children were told that these scales are employed to find out how they feel about certain things. For the Altruism Scale, specific directions were the following:

We'd like to know what you think about certain things. Please write A(agree) or D(disagree) in front of each statement. There are no right or wrong answers. We just want to know how you really feel.

Before distributing the Children's Self-Concept Scale, the experimenter talked to the boys about the value of finding how they really feel about themselves and the necessity, therefore, for a completely honest response rather than a socially desirable one. It was stressed that the scale is not a test, that there are no right or wrong answers, and that the results would be kept confidential. In addition, the boys were told that no items were to be omitted.

These two procedures were accomplished on a group basis and required approximately twenty minutes.

Subsequently, each subject participated in the behavioral measure of altruism, the modified version of the

prisoner's dilemma game. This procedure was carried out individually in a separate room. The experimenter made certain that all of the children clearly understood the instructions. Moreover, the number of points earned by the subject and the partner for each combination of red-blue choices was printed on a chart so that the child could consult it at any time during the 25 trials. This last task took about ten to fifteen minutes for each subject.

In total, all of the measures, including the friendship choice and social acceptance procedures and the assessment of the dependent variables required approximately sixty to seventy minutes. Furthermore, it appeared that at least some of the procedures, especially the behavioral measure of altruism, generated sufficient interest such that the children found participation in the experiment to be fun and worthwhile.

After the completion of the study, the experimenter returned to each of the five classes to give the boys the prizes they had won. All the boys received the same prize, regardless of the number of points accumulated on the modified prisoner's dilemma game. In addition, it was explained that the focus of the study was on friendships and how these related to a concern for others.

V. Results.

As noted in an earlier chapter, intelligence quotients were obtained from each boy's scholastic records. Specifically, the California Test of Mental Maturity had been the measuring instrument in all cases. A summary of the IQ findings can be found in Table 1.

Table 1
Summary of Findings: Intelligence

	<u>Chumship Group</u>	<u>Non-chumship Group</u>
Range	93-136	82-140
Stand. Dev.	10.22	10.03
Mean	121.6	120.13

The mean IQ for the chumship group was 121.6 while the mean for the non-chumship group was 120.13.

In order to determine if there were any significant differences between the two groups on this variable, a one-way analysis of variance was performed on the data. Table 2 contains the results of this one-way ANOVA.

Table 2
Summary of 1-Way ANOVA on Intelligence Data

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>Mean Square</u>	<u>F Ratio</u>
bg	32.2	1	32.2	0.268
wg	6948.7	58	119.81	
tot	6980.9	59		

The difference between the two means was quite small, with an F of 0.268 having been computed. This value is not significant at the .05 level of confidence. Accordingly, the difference in intelligence between the two groups was minimal and non-significant and the author's attempt to equate the two groups on intellectual level was successful.

Table 3 contains the results of the social acceptance questionnaire for the two groups. The scores reflect deviation from class means in units of standard deviations rather than absolute number of nominations.

Table 3
Findings of Social Acceptance Variable

	<u>Chumship Group</u>	<u>Non-chumship Group</u>
Range	3.25-6.99	3.60-7.17
Stand. Dev.	0.87	1.02
Mean	5.04	5.042

The mean social acceptance scores for the chumship and non-chumship groups were, respectively, 5.04 and 5.042.

A one-way analysis of variance was computed to determine if these group means were significantly different. A summary of this one-way ANOVA is contained in Table 4.

Table 4
Summary of 1-Way ANOVA on Social Acceptance

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>Mean Square</u>	<u>F Ratio</u>
bg	0.004	1	0.004	0.0044
wg	52.706	58	0.908	
tot	52.710	59		

An F value of 0.0044 was computed. This figure was not significant at the .05 level. Thus, the difference between the chumship and non-chumship groups on level of social acceptance was extremely minimal. Therefore, social acceptance was adequately controlled in this study.

The major hypothesis evaluated was that pre-adolescent males involved in a chumship relationship would exhibit greater levels of altruism than those without a chumship. Table 5 presents the results obtained on the Altruism Scale, the first of two measures of altruism employed.

Table 5
Findings With Altruism Scale

	<u>Chumship Group</u>	<u>Non-chumship Group</u>
Range	9-15	8-15
Stand. Dev.	1.58	1.88
Mean	13.0	11.16

The mean altruism score on this scale for the chumship group was 13.0 while the mean for the non-chumship group was 11.16. To establish if this difference is significant, a one-way analysis of variance was performed on the data. A summary of this one-way ANOVA can be found in Table 6.

An F of 16.62 was obtained. This figure is significant at the .01 level. Accordingly, the chumship group was significantly more altruistic than the non-chumship group on this self-report measure of prosocial behavior. Hence, the experimental hypothesis was strongly supported

with this instrument.

Table 6
Summary of 1-Way ANOVA on Altruism Scale

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>Mean Square</u>	<u>F Ratio</u>
bg	50.02	1	50.02	16.62**
wg	174.57	58	3.01	
tot	224.59	59		

**p < .01

The second measure of altruistic behavior was the modified version of the prisoner's dilemma game. Again, it had been predicted that the chumship group would exhibit greater levels of altruistic behavior than the non-chumship group. A summary of the findings on this behavioral measure is contained in Table 7.

Table 7
Findings With Prisoner's Dilemma Game

	<u>Chumship Group</u>	<u>Non-chumship Group</u>
Range	6-20	0-16
Stand. Dev.	3.53	4.35
Mean	13.57	8.50

The means for the chumship and non-chumship groups were, respectively, 13.57 and 8.50. A one-way analysis of variance was then performed on the data to determine the degree of difference on this measure between the two groups. The results of this one-way ANOVA are included in Table 8.

Table 8
Summary of 1-Way ANOVA on Prisoner's Dilemma Game

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>Mean Square</u>	<u>F Ratio</u>
bg	385.07	1	385.07	24.52**
wg	910.87	58	15.7046	
tot	1295.94	59		

**p < .01

The F computed was 24.52, significant at the .01 level. Thus, the experimental hypothesis was also strongly supported with this measure. Pre-adolescent males involved in a chumship relationship exhibited significantly greater levels of altruistic behavior than those without a chumship.

The second hypothesis of this investigation stated that there would be a positive correlation between a self-report measure of altruism and altruistic behavior. Hence, Pearson correlation coefficients were computed between scores on the Altruism Scale and scores on the modified version of the Prisoner's dilemma game. The results of this analysis can be found in Table 9. For the combined chumship and non-chumship groups, a correlation of +0.482 was found between the self-report and behavioral measures of altruism. This value is significant at the .01 level. Thus, the two measures were significantly related in this sample and the experimental hypothesis was supported. For the chumship group alone, an r of +0.434 was computed between the two measures of altruism while for the

non-chumship group, an r of +0.213 was found. With 28df, an r of 0.361 is needed to reject the null hypothesis at the .05 level. Consequently, the two measures of altruism were significantly correlated in a positive manner in the chumship group, but not in the non-chumship group.

Table 9
Correlations Between Two Measures of Altruism

<u>Group</u>	<u>df</u>	<u>r Value</u>
Combined groups	58	+0.482**
Chumship Group	28	+0.434*
Non-chumship Group	28	+0.213

* $p < .05$; ** $p < .01$

It had been predicted that there would be a positive correlation between number of siblings and altruistic behavior. Accordingly, Pearson correlation coefficients were computed between number of siblings and raw scores on both the Altruism Scale and on the modified Prisoner's dilemma situation. These correlations are contained in Table 10.

Table 10
Correlations Between Number of Siblings and Altruism

<u>Measure</u>	<u>df</u>	<u>r Value</u>
Altruism Scale	58	-0.092
Prisoner's Dilemma	58	-0.069

For the combined chumship and non-chumship groups, an r of -0.092 was computed between number of siblings and scores on the Altruism Scale while an r of -0.069 was found

between number of siblings and scores on the prisoner's dilemma game. These correlations are not significant at the .05 level. Thus, in the entire sample, both the self-report and behavioral measures of altruism were not significantly related to number of siblings. The experimental hypothesis, therefore, was not supported.

Although not the major focus of this investigation, data were collected on self-concept. It had been hypothesized that pre-adolescent males involved in a chumship would possess a higher self-concept than those without a chumship. The results of the Children's Self-Concept Scale are reported in Table 11.

Table 11
Findings with Children's Self-Concept Scale

	<u>Chumship Group</u>	<u>Non-chumship Group</u>
Range	33-76	29-76
Stand. Dev.	8.11	11.05
Mean	61.1	53.3

For the chumship group, the mean self-concept was 61.1 while the mean for the non-chumship group was 53.3. A one-way analysis of variance was then performed to determine the significance of this difference. The results of this one-way ANOVA are summarized in Table 12.

An F value of 9.70, significant at the .01 level, was obtained. Consequently, the experimental hypothesis was supported by the data; pre-adolescent males involved in a

chumship relationship had significantly higher self-concepts than those not involved in a chumship.

Table 12
Summary of 1-Way ANOVA on Self-Concept

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>Mean Square</u>	<u>F Ratio</u>
bg	912.6	1	912.6	9.70**
wg	5457.0	58	94.09	
tot	6369.6	59		

**p < .01

The final hypothesis evaluated was that there would be a positive correlation between self-concept and altruistic behavior in the sample of pre-adolescent males. The results of the Pearson correlations between self-concept and the Altruism Scale can be found in Table 13.

Table 13
Correlations Between Self-Concept and Altruism Scale

<u>Group</u>	<u>df</u>	<u>r Value</u>
Combined groups	58	+0.329**
Chumship Group	28	+0.056
Non-chumship Group	28	+0.263

**p < .01

For the chumship and non-chumship groups combined, a correlation of +0.329 was computed between the two measures. This value is significant at the .01 level. Thus, self-concept and the self-report measure of altruism were significantly related in this sample. For the chumship group alone, however, an r of +0.056 was computed

between the two measures while for the non-chumship group, an r of +0.263 was found. Both of these correlations are not significant since an r of 0.361 is required at the .05 level when there are 28df. Hence, the self-report measure of altruism and self-concept were significantly, positively correlated in the entire sample, but for each group alone, the relationships were not significant.

Scores on the Children's Self-Concept Scale were also correlated with scores on the behavioral measure of altruism, the modified version of the prisoner's dilemma situation. The results of these Pearson correlations are contained in Table 14.

Table 14
Correlations Between Self-Concept
and Prisoner's Dilemma Game

<u>Groups</u>	<u>df</u>	<u>r Value</u>
Combined groups	58	+0.382**
Chumship Group	28	+0.364*
Non-chumship Group	28	+0.146

* $p < .05$; ** $p < .01$

For the chumship and non-chumship groups combined, a correlation of +0.382 was found between the two measures. At the .01 level and 58df, an r of 0.325 is required to reject the null hypothesis. Accordingly, self-concept and the behavioral measure of altruism were significantly, positively correlated in the entire sample. For the chumship group alone, an r of +0.364 was computed between the

two measures while an r of $+0.146$ was found for the non-chumship group. With 28df, an r of 0.361 is required to reject the null hypothesis at the $.05$ level. Hence, the behavioral measure of altruism was positively correlated, although just barely significant, with self-concept in the chumship group, but this relationship was not significant in the non-chumship group.

Although not part of the experimental hypotheses, social acceptance scores were correlated with both measures of altruism and self-concept. The results of these Pearson correlations are presented in Table 15.

Table 15
Correlations Involving Social Acceptance

<u>Other Measure</u>	<u>df</u>	<u>r Value</u>
Altruism Scale	58	$+0.030$
Prisoner's Dilemma	58	-0.024
Self-Concept	58	$+0.280^*$

$*p < .05$

For both groups combined, a correlation of $+0.03$ was computed between social acceptance scores and scores on the Altruism Scale while an r of -0.024 was found between social acceptance scores and scores on the prisoner's dilemma situation. Both of these correlations are minimal and non-significant. Thus, for the entire sample, social acceptance was not significantly related to either the self-report or the behavioral measure of altruism.

Finally, for both groups combined, a correlation of +0.280 was computed between social acceptance and self-concept. With 58df, an r of 0.250 is needed to reject the null hypothesis at the .05 level. Thus, self-concept and social acceptance were significantly correlated in a positive direction in this sample.

VI. Discussion.

The major focus of this investigation concerned personal friendships or chumships during pre-adolescence and their relation to altruistic behavior. It had been predicted that pre-adolescent males involved in a chumship would exhibit greater levels of altruism than those without a chum. The experimental data strongly supported this hypothesis. On both a self-report and behavioral measure of altruism, pre-adolescent males with a close friendship were significantly more altruistic than their counterparts in the non-chumship group.

The above finding represents a confirmation of one aspect of Harry Stack Sullivan's social-development theory. According to Sullivan(1965), the pre-adolescent who maintains an intimate relationship with a peer of the same sex learns a special sensitivity to this individual's needs and interests. As he and his chum communicate in a sincere and honest manner, the former develops a "sense of humanity" as the interests of another become as important as his own. Moreover, Sullivan seemed to suggest that the specific sensitivity developed toward the chum would eventually transcend this relationship and evolve into a general altruistic perspective.

The critical issue that remains is to identify the mechanism by which the specific sensitivity generated within a chumship becomes a more general concern for the welfare of others. Sullivan was not entirely clear with respect to this matter, but his notion of a "sense of humanity" may provide some clues. What he seemed to be suggesting was that the chum represents one instance of humanity for the pre-adolescent. In Sullivan's own words,

In this period, there begins the illumination of a real world community. As soon as one finds that all this vast autistic and somewhat validated structure to which one refers as one's mind, one's thoughts, one's personality, is really open to some comparing of notes, to some checking and counter-checking, one begins to feel human in a sense in which one has not previously felt human. One becomes more fully human in that one begins to appreciate the common humanity of people- there comes a new sympathy for the other fellow, whether he be present to the senses or mediated by rumors in the geography, or the like. In other words, the feeling of humanity is one of the aspects of the expansion of the personality which comes in pre-adolescence. Learning at this stage begins to assume its true aspect of implementing the person in securing satisfactions and maintaining his security in interpersonal relations through the rest of life.
(pp. 20-21, 1952)

Perhaps the key point in the preceding quotation is that the pre-adolescent, through the chumship relationship, is able to comprehend his true humanness such that a compassion for his fellow man is extended not only to friends and acquaintances but to those unknown to him as well. This latter idea takes on added significance in light of the fact that on the modified version of the prisoner's

dilemma game, subjects had the opportunity to donate points to an unfamiliar peer. That pre-adolescent males involved in a chumship were substantially more generous in this situation than those without a chum is a direct corroboration of this aspect of Sullivan's theory.

A further elaboration of Sullivan's ideas would seem appropriate at this point. First of all, his views with respect to pre-adolescence were not detached from the rest of his social-development theory or even his basic conception of human nature. He believed that man is essentially a social being who derives his primary satisfactions through interpersonal relationships. Such a perspective is in complete contrast to the orthodox psychoanalytic viewpoint which postulates that man is an unsocialized animal whose selfish drives must be tamed by society. Furthermore, pre-adolescence is critical in Sullivan's theoretical discussions in that during this period, the basic social nature of the human organism fully blossoms and is manifested as a need for interpersonal intimacy. Thus, the chumship provides the pre-adolescent with the unique opportunity to satisfy this need and in the process discover that another human being is similar to himself. From this relationship evolves his sense of humanity and concern for others because for the first time, he feels truly human.

On the other hand, the lack of a chumship during pre-adolescence has definite ramifications for the personality growth of the individual. In addition to lowering one's concern for others, as was verified by the experimental data, Sullivan(1965) hypothesized that failure to achieve such a relationship would impair subsequent attempts to develop intimate associations, including with a member of the opposite sex. The previously-cited Maas(1968) investigation is relevant to such a prediction. He found that adults classified as "warm" had more enduring and mutually gratifying chumships during pre-adolescence than those classified as "aloof". Thus, it is possible that the lack of a chumship does hamper the individual in his future social interactions. Since he did not develop a sense of humanity during pre-adolescence, he may be less sensitive to the needs and interests of others and accordingly, have a more difficult time maintaining a close interpersonal relationship.

The author does not want to exclude other possible interpretations of the effect of a pre-adolescent chumship upon altruism. For example, Moore et al(1973) discovered, in a sample of pre-adolescents, that those experiencing positive affect shared money more frequently with classmates than those experiencing negative affect. It may well be that a chumship generates much positive affect for the

pre-adolescent and this happiness, in turn, contributes to his general concern for others. Regardless of whether any of the above interpretations prove to be acceptable, the findings reported here on the relationship between pre-adolescent friendships and altruistic behavior certainly warrant further examination in future research studies.

It is also significant that members of the chumship group displayed greater levels of altruism than those in the non-chumship group on both a self-report and behavioral measure. Such consistent findings for two diverse measures of the same construct probably further reduces the likelihood that the group differences on altruism were due to chance. Moreover, past research studies have seldom included more than one measure of altruism in their experimental design. This study suggests that two measures can be used successfully, without making the results so complex that they would be next to impossible to interpret.

In a previous chapter, it was noted that a few researchers (Harris, 1971; Willis and Goethals, 1973) have found a positive correlation between adherence to altruistic norms and actual altruistic behavior. For the chumship and non-chumship groups combined in this study, a significant, positive correlation of 0.482 was computed between the self-report and behavioral measures. Thus, the more one subjectively espoused an altruistic norm,

the greater was the tendency to be generous in the prisoner's dilemma situation. Nonetheless, it should be pointed out that when correlations were computed separately for each group, a significant r of $+0.434$ was found for the chumship group but a non-significant r of $+0.213$ was found for the non-chumship group. Hence, in this latter group, the tendency to support an altruistic norm on a self-report was not significantly related to altruistic behavior.

Why the two measures of altruism would be independent in the non-chumship group but significantly related in the chumship group is not easy to determine. Based on this finding, it appears that those pre-adolescent males with a chum demonstrated a greater consistency between their attitudes and behavior than those without a chum. Perhaps members of the former group learned the value of integrity through their chumships and accordingly, only supported those attitudes they would sincerely act on. Another possibility is that since those in the chumship group had higher self-concepts than those in the non-chumship group, they may have had more faith in their own beliefs and consequently, were more willing to manifest them behaviorally. In either case, the strong relationship found between the two measures of altruism in the chumship group suggests that when these youngsters adhere to an altruistic norm, it is likely to be supported with

behavioral evidence of social responsibility.

Not to discount the ideas generated in the preceding discussion, the author believes that the altruism data can be looked at from an entirely different perspective. Although significant differences were found between the two groups on the Altruism Scale, those in the chumship group, on the average, supported eighty-six per cent of the altruistic norms while those in the non-chumship group supported seventy-four per cent. Hence, these pre-adolescent males, with or without a chum, adhered to a large majority of the altruistic statements. Since a concern for others seems to be a widely held, though perhaps infrequently implemented standard in the mainstream of our society, it is not unexpected that upper middle-class pre-adolescents would have learned this norm by age eleven or twelve. Consequently, perhaps the finding that those pre-adolescents with a chum were more generous behaviorally than those without an intimate friend is more significant.

This line of reasoning is consistent with an earlier discussion criticizing Piaget's emphasis on the cognitive aspects of moral development. Thus, a high level of cognitive understanding as to what acts are altruistic may not necessarily lead to behaviors that demonstrate a concern for others. In this regard, it would appear that society could benefit more if we could increase our

knowledge of what contributes to prosocial behavior as opposed to what enhances the formation of altruistic attitudes that may or may not be enacted.

One of the experimental hypotheses of this study was that there would be a positive correlation between number of siblings and level of altruistic behavior. The data, however, clearly did not support such a prediction. A correlation of -0.092 was computed between number of siblings and scores on the Altruism Scale while an r of -0.069 was found between number of siblings and scores on the modified version of the prisoner's dilemma game. Both of these relationships are minimal and non-significant. Such findings are at odds with past research (Ugurel-Semin, 1952; Schaffer, 1969) that has demonstrated a positive relationship between these two variables. This discrepancy may have occurred for a number of reasons. First of all, since different methods of measuring altruism were employed in all three studies, inconsistent results are not unexpected. In particular, in both the Ugurel-Semin and Schaffer studies, the assessment of altruism involved sharing with a familiar peer while this investigation focused upon generosity to an unknown peer.

A second interpretation of the discrepant findings is that in the present study, a relatively homogeneous group of upper middle-class youngsters were employed, with

the overwhelming majority of these children having two or three siblings. Hence, the statistical range in number of siblings was extremely small and may have reduced the likelihood of obtaining a significant relationship with altruistic behavior. Because only a limited number of studies have explored the relationship between family size and prosocial behavior, additional speculations that attempt to integrate the existing data would seem unwarranted.

Although not the major focus of this research project, an extremely important finding was that the pre-adolescent males in the chumship group had significantly higher self-concepts than those in the non-chumship group. This finding takes on added meaning if one compares the mean scores of these two groups to the norms reported by Piers and Harris(1969) for the Children's Self-Concept Scale. Such a comparison demonstrates that whereas the non-chumship group fell at approximately the fiftieth percentile, the chumship group was at the seventy-first percentile. Hence, the difference between the two groups with respect to self-concept was the result of the elevated scores of the pre-adolescent males in the chumship group.

If in fact the pre-adolescent males without a chum possessed adequate self-concepts, as revealed through the comparison with the standardized norms, the key question concerns what contributed to the higher level of

self-esteem in members of the chumship group. Again, Sullivan's social-development theory directly addressed this issue and may provide the best explanation of the data. According to Sullivan(1952), sincere communication with an intimate friend affords the pre-adolescent the opportunity to realize that his thoughts and ideational symbols are similar to those of another human being. This process is referred to as consensual validation of the self. Hence, the pre-adolescent, for the first time in his life, is able to resolve the uncertainty about his personality. His feelings of self-worth increase as he perceives the chum as having attitudes, interests, and feelings similar to his own. As Sullivan stated, "The freedom which comes from this expanding of one's world of satisfaction and security to include two people, linked together by love, permits exchanges of nuances of meaning, permits investigations without fear of rebuff or humiliation, which greatly augments the consensual validation of all sorts of things . . ."(pg. 20, 1952).

Sullivan's explanation seems plausible, especially in light of the previously-cited research concerning the bases upon which pre-adolescents choose their friends. Both Austin and Thompson(1948) and Byrne and Griffitt (1966) reported that similar attitudes, interests, and tastes were important reasons given for selecting best

friends during this period. In relation to Sullivan's theory, selecting best friends for these reasons would enhance the process of consensual validation of the self. As the pre-adolescent interacts closely with individuals who can reinforce his own attitudes and ideas, his feelings of self-worth will increase because he knows that he possesses certain qualities common to other human beings.

At this point, it would be helpful for the reader to recall the discussion focusing on friendships and altruism. One will readily discover that Sullivan was indeed suggesting that the same aspects of a chumship that contribute to a concern for others also play a crucial role in enhancing the self-esteem of the pre-adolescent. The critical factor in both areas seems to be related to this "sense of humanity". By realizing that one has much in common with the human race, the pre-adolescent develops not only a sympathy toward his fellow man but in addition, obtains a confirmation of his self-worth as a human being.

It is also worth pointing out that Sullivan's ideas with respect to the early development of a self-system were heavily weighted in the social area. His concept of reflected appraisals specifically implies that the child's feelings of self-worth evolve from the positive and/or negative evaluations made of him by significant others in his life. Hence, it comes as no surprise that Sullivan extended his emphasis on social factors in the development.

of a self-concept to the pre-adolescent era at which time the mutuality of a chumship is the critical variable at work.

Since there has been so little research in the area of friendships and their relation to self-concept, other possible theoretical interpretations of the data must be recognized. For example, a Rogerian theorist might suggest that a chum provides the same things for the pre-adolescent as a therapist does for his client within the context of a therapeutic relationship. Thus, the unconditional positive regard and genuineness of the therapist, which contribute to the client's feelings of self-worth, may be similar respectively, to the total acceptance and honesty displayed by the chum in relation to the pre-adolescent. Such an analogy is not totally without foundation as Rogers(1942) stated that the therapist-client relationship is not unique but instead has the qualities of all good human relationships.

An alternative interpretation might be offered by a learning theorist. From this theoretical perspective, it could be argued that the chum provides numerous reinforcements for the pre-adolescent such that the latter's uncertainty with respect to his self-perceptions is resolved. Due to the praise and warm verbal feedback from the chum, the pre-adolescent's positive feelings about himself are

consolidated while his negative self-conceptions extinguish. Of course, one must realize that either a Rogerian or learning theory interpretation is quite speculative since neither theoretical tradition specifically addresses this area. Accordingly, Sullivan's notions, at least at the present time, appear to provide the most fruitful explanation with regard to the relationship between self-concept development and pre-adolescent friendships.

The final hypothesis evaluated in this study was that there would be a positive correlation between self-concept and altruistic behavior. For the combined chumship and non-chumship groups, this hypothesis was supported. Specifically, a significant, positive correlation of 0.329 was computed between self-concept and the self-report measure of prosocial behavior. In addition, a highly significant correlation of +0.382 was found between self-concept and the behavioral measure of altruism. Thus, in this sample of pre-adolescent males, as one's self-concept increased, the likelihood of demonstrating a concern for others also increased. Such a finding is consistent with the work of Mussen et al(1970) and Peterson(1972) who discovered a similar relationship between these two variables.

Despite the statistical significance of the above finding, cogent interpretations are not easily elucidated since correlations of this type can provide no evidence with

respect to causality. Nevertheless, a few conjectures would seem appropriate. First of all, it is conceivable that self-esteem contributes to a concern for others. Perhaps as the pre-adolescent develops positive feelings of self-worth, he becomes more certain of his own personality strengths. With the resolution of some major self-doubts, he can spend less time worrying about himself and instead re-channel his energy outward. Of course, one cannot be certain that such an external perspective would necessarily lead to altruistic behavior, but at least, the opportunity might exist if the ego was released from continuous self-related activities.

On the other hand, the pre-adolescent with a low self-concept may be so uncertain of his own positive qualities that he spends most of his time trying to protect this impoverished self and accordingly, cannot afford to be concerned about others. Moreover, he may perceive people as a threat to his fragile ego. Thus, he might be less inclined to engage in altruistic acts, which entail giving to others, because although they progress materially or otherwise due to his generosity, his lot in life remains the same. Needless to say, his already weakened self could ill afford such a sacrifice.

The possible contributions of a high level of self-esteem to altruism may have even greater application for a type of prosocial behavior not examined in this study,

namely, rescue activity. The latter arises when one incurs some risk in order to protect or save another human being whose life is endangered. It seems likely, however, that before one risks personal injury or even death to come to the aid of a fellow human being, one must have enough self-confidence to believe that the challenge of the rescue could be met. In other words, feelings of competence would be essential in such a situation. Indeed, Midlarsky and Midlarsky(1973) have reported in a study of undergraduates that perceived competence was directly related to the amount of helping behavior exhibited toward a distressed peer. These authors reasoned that perceptions of competence may increase the probability of aiding partly because of the expectation that costs will be reduced as a result of one's competence in the situation. Unfortunately, experimental measures of rescue activity have rarely been included in studies of altruism in children, primarily due to the possibility of engendering excessive anxiety in these youngsters.

Of course, the nature of the relationship between self-concept and altruism in pre-adolescent males may be completely opposite to what was suggested in the preceding discussion. If that is the case, increases in self-esteem may be the result of altruistic behavior. To illustrate, since a norm of social responsibility appears to be a

fairly common standard in many religious and ethical codes of our society, perhaps displaying a concern for others enables the pre-adolescent to believe that he is doing the "right" thing. Thus, he feels good about himself because he is following a highly-esteemed moral principle.

In a reverse manner, the pre-adolescent who is not altruistic may develop a lower self-concept because his behavior is not consistent with this social responsibility norm. His transgressions may result in guilt and excessive anxiety, especially if significant others in his life have preached the virtue of prosocial behavior. In this situation, he may perceive himself as "bad" and his feelings of self-worth are reduced.

In actuality, the relationship between altruism and self-concept is probably not uni-dimensional and consequently, both contribute to each other in some yet unspecified manner. Moreover, because a positive correlation was found between these variables in a sample of pre-adolescent males, one cannot automatically assume that a similar relationship would be discovered in a different population.

The relationship between self-concept and altruism in each group alone was much more complex. For the chumship group, self-concept was not significantly correlated with the Altruism Scale, but was significantly related in a positive manner to the behavioral measure of altruism. However, the latter relationship was just barely significant.

On the other hand, in the non-chumship group, neither measure of prosocial behavior was significantly related to self-concept. As one can see then, all of these correlations were quite small, with only one achieving statistical significance. Such findings are not surprising, however, in light of the results reported with the analysis of variance. Since the chumship and non-chumship groups significantly differed with respect to self-concept and altruism, the scores on either variable in each group tended to be bunched at one end of the distribution or the other. Hence, with such a limited range of scores and lower N, the likelihood of obtaining a significant correlation in each separate group was appreciably reduced. Thus, it appears that these correlations have no real significance, other than making us aware of the possible statistical problems involved in computing correlations without a complete distribution of scores.

As reviewed in the preceding chapter, social acceptance was unrelated to altruistic behavior in this sample of pre-adolescent males. Thus, a concern for others could be found at all levels of peer group popularity. A positive correlation of 0.280, however, was found between self-concept and social status. This relationship was statistically significant, although the r computed was only moderately high. Such a finding is consistent with

two studies(Horowitz, 1962; Perkins, 1958) in which low, but significant correlations were discovered between these two variables.

Somewhat contrasting results were reported by Helper (1958) who found that boys having high sociometric status were significantly more self-accepting than boys having low status, but this difference was not significant for girls. In addition, Reese's(1961) findings suggest that the relationship may, in fact, be curvilinear. He discovered that children with moderately high self-concepts were more accepted by their peers than children with either low or very high self-concepts. As Hartup(1970) pointed out in his review of the literature in this area, these inconsistencies may stem from the use of different methods of assessing children's self-perceptions. Nonetheless, Reese's findings imply that extremely high levels of self-esteem may be associated with certain behaviors which "put off" the child's peers, such as "cockiness" or even snobbish withdrawal from peer interaction. Only further empirical examination of self-concept and peer group popularity can elucidate the precise nature of this relationship.

The findings reported here on the relationship between pre-adolescent friendships and altruism have a number of implications for the study of social development in childhood. For one thing, social acceptance has been a

frequently researched variable in this area, but in this study as well as others (Mussen et al, 1970, Peterson, 1972), peer group status was unrelated to prosocial behavior. Thus, a concern for others can be found among children both high and low in peer group popularity. In this regard, perhaps children nominate on a sociometric questionnaire those peers who possess highly valued qualities like brightness, high achievement, and poise in social situations while altruistic youngsters may or may not be nominated because this characteristic is not as highly esteemed. Another possibility is that children high in peer group status have learned to play roles rewarded within the group, but this behavior does not necessarily mean that they are truly concerned about their peers.

In any case, it is this writer's observation that the variable of social acceptance has been overworked in the psychological literature, with the consequence being that other social factors have been grossly neglected. In particular, as this study clearly demonstrated, friendships can be an important socializing agent during pre-adolescence and therefore, deserve the same vigorous attention accorded the variable of social acceptance.

A second implication of this study for childhood social relations concerns the theoretical perspective that has all too often been lacking in this field. Despite the

abundance of the empirical data, there have been very few attempts to tie this information together in a coherent theoretical network. For this reason, a socially-oriented theory, such as that presented by Sullivan, is most welcome. This theorist, in fact, has provided us with a wealth of theoretical material that still awaits experimental documentation. Until the time that more productive theorizing can be generated in the field of childhood social development, much of the existing empirical data will remain fragmented and difficult to analyze in any systematic way.

The findings of this study also have certain ramifications for contemporary ideas on the development of altruism. In an earlier section, it had been suggested that prosocial behavior increases until age eight, declines after this age due to the emphasis upon equalitarianism and reciprocity, and then re-emerges during pre-adolescence. In this regard, perhaps the formation of a pre-adolescent chumship is at least partly responsible for this return to altruistic responding. Through the intimacy of this relationship, the child may learn that his displays of kindness and generosity are not always directly reciprocated, but that he should, nonetheless, continue to demonstrate these qualities since his chum is human just like him. Of course, it is conceivable that those pre-adolescents with a chum had developed a concern for others prior

to pre-adolescence and consequently, if the identical groups of children had been compared at an earlier age, similar findings would have resulted. Such a situation could have arisen if a third variable, like the child-rearing practices of their parents, was the key factor in the development of both a chumship and an altruistic perspective. Only an investigation broad enough to include all the relevant factors would be able to more precisely delineate the contributions of each to the development of altruism.

Finally, in addition to supporting one segment of Sullivan's social-development theory, the self-concept findings have a more general relevance for the study of self-concept formation. Some theorists have hypothesized that self-esteem evolves out of success experiences which, in turn, generate feelings of personal competence and positive self-worth. In particular, the ego psychology of R. W. White(1959) has focused upon the idea of competence motivation, the latter implying that the growing child desires a control over his environment. If his actions are successful in this regard, he develops a trust in himself and his ability to have an effect upon the world. Although the results reported here do not challenge such a theoretical account, they do suggest that feelings of self-worth can have alternative origins. As Sullivan proposed, an

intimate friendship can enhance the self-concept of the pre-adolescent by providing consensual validation of his self-properties. Hence, Sullivan's real contribution in this area may have been in re-orienting us to the idea that social factors can play a significant role in the development of a self-concept. In fact, his basic notion of reflected appraisals resembles the old idea of a "looking glass" self which Cooley(1902) used to describe his belief that one's self-perceptions reflect the evaluations made of him by others in his life.

VII. Summary and Conclusions.

The primary purpose of this study was to examine the relationship between friendship patterns and altruistic behavior in pre-adolescent males. The theoretical perspective adopted was that of Harry Stack Sullivan who hypothesized that the formation of an intimate relationship with a same-sex peer during pre-adolescence is critical in learning a concern for others. Hence, a comparison was made between two groups of upper middle-class pre-adolescents, those with and those without a chum. The chumship group was selected based upon responses to three measures: a friendship stability measure, Chumship Check List, and preference for best friend vs. group of friends during one's free time. In total, thirty pre-adolescents qualified for this group. A second group of thirty youngsters without a chum was then chosen for the non-chumship group, with the latter equated with the chumship group with respect to level of social acceptance and intelligence.

Two measures of altruism were employed. One was a pencil and paper self-report instrument, the Altruism Scale, while the other was a behavioral measure, a modified version of the prisoner's dilemma situation. In addition, the

Children's Self-Concept Scale was administered to all subjects. The only background information collected was the number of siblings of each boy.

The major findings were as follows:

1. Pre-adolescent males in the chumship group were significantly more altruistic than those in the non-chumship group on both the self-report and behavioral measures of altruism. It was concluded that this finding directly supports that segment of Sullivan's theory which proposes that a close friendship during the pre-adolescent era is crucial in learning a concern for others. Through the intimacy of a chumship, the pre-adolescent becomes aware that he has much in common with the rest of the human race and thus, develops a compassion toward his fellow man.
2. A significant, positive correlation was found between the two measures of altruism in the sample as a whole.
3. Number of siblings was unrelated to either measure of prosocial behavior.
4. Pre-adolescent males in the chumship group had significantly higher self-concepts than those in the non-chumship group. This finding was also interpreted as supporting one aspect of Sullivan's social-development theory. Thus, the chumship relationship enables the pre-adolescent to realize that he is similar to another individual. His feelings of self-worth, accordingly, are consensually validated.

5. For the chumship and non-chumship groups combined, there was a significant, positive correlation between self-concept and both the self-report and behavioral measures of altruism. It was suggested that the relationship between these two variables is probably not uni-directional and each, therefore, contributes to the other in some manner. A few speculations were rendered in this regard.

6. Social acceptance was unrelated to either measure of altruism, but did correlate positively at a significant level with self-concept.

Despite the findings of this investigation, the author must caution the reader not to hastily generalize these results, due to the somewhat special population used. The boys who participated were all white; upper middle-class, and in the above-average to superior intellectual range. Thirty of the ninety-two boys in this sample qualified for the chumship group. Since the criteria for this classification were quite stringent, it is difficult to know if a similar proportion would be found in either a less homogeneous or lower to lower middle-class population. For that matter, the measures of a chumship, in particular the Chumship Check List, may have limited application to lower class children who might engage in an entirely different set of activities with their closest friends. Furthermore, the very concept of altruism may take on a different perspective among lower-class individuals. Thus, until the

issues addressed in this study are explored with other populations, one must be extremely cautious with regard to any far reaching generalizations.

Although the major focus of this research project was not on social acceptance, the findings with this variable have a more general relevance for future studies in this area. Unlike past researchers, the author did not find the distributions of social status scores to be severely skewed, but instead, they fairly closely matched normal curves. This finding could have resulted for a number of reasons. First, the homogeneity of this upper middle-class sample might have generated a more cohesive group of children and thus, few youngsters were either completely isolated or received an extraordinarily large number of nominations. On the other hand, perhaps the social organization in the classroom is indeed changing and more children today are being integrated into the group than was the case fifteen or twenty years ago. Thus, the results may be unique to this sample or may represent broader social changes in the classroom setting. Only more extensive examination of peer group status with other populations can determine the real significance of the finding reported here.

A couple of issues with regard to the experimental design employed in this study are also worth discussing. First of all, the examination of friendship patterns was

not intensive. Although the major purpose of the Chumship Check List was to survey some of the activities the pre-adolescents engaged in with their best friends, the author was still not able to undertake an in-depth analysis of the chumship relations. In this regard, at no time during the study was the interaction of a pre-adolescent and his best friend specifically observed. Moreover, the validity of the reported findings perhaps is as much a function of the subjects' accurate self-reporting on the friendship measures as the experimental manipulations themselves. It would appear, therefore, that a closer examination of the friendship patterns of pre-adolescents could certainly be made in a camp, recreation center, or similar setting in which the experimenter would have the opportunity to observe daily the changing nature of these relationships and decide whether in fact, they constitute what Sullivan labeled an intimate chumship. Unfortunately, practical considerations made such an endeavor impossible in this study.

There is, in addition, a methodological question with regard to the behavioral measure of altruism employed in this investigation; namely, the modified version of the prisoner's dilemma situation. This measure was set-up as a game and it is therefore legitimate to inquire whether the results obtained are relevant to more "real-life" settings. Perhaps this criticism carries less weight if

one realizes that for pre-adolescents, games are still an essential aspect of their lives and may have as great an impact on them as more "serious" activities, such as schoolwork. Moreover, probably many situations arise while children are playing during recess at school or in the neighborhood in which they are forced to decide whether or not to share with a friend, stick-up for a buddy if an older boy is picking on him, play for their own good or the good of the team, etc. Accordingly, a game situation may be as valid as any other means of assessment in the study of altruistic behavior in pre-adolescents.

As was noted in an earlier section, girls were not employed as experimental subjects primarily because Sullivan believed that their development was more complex than that of males; hence, he was uncertain as to how critical a chumship relationship would be in their pre-adolescent growth. Nonetheless, it would seem worthwhile to replicate this study with female subjects. In this regard, a few theorists (Douvain and Gold, 1966; Rogers, 1969) in the area of pre-adolescent and adolescent development have suggested that girls during these periods discuss more personal matters and are more emotionally involved with their friends than boys. Thus, although Sullivan was hesitant to extend his theoretical notions to girls, it may be that the formation of a chumship is even more

likely to occur in this group.

The findings of this study have certain implications for the general area of developmental psychology. Perhaps partly due to the influence of psychoanalytic theory, not too many writers have devoted much attention to the pre-adolescent era. It has often been considered to be a period of relative calm, with the child expanding his skills and knowledge as well as consolidating his sex role identity. Although dramatic personality changes may not characterize this period, it is possible that by looking ahead to adolescence, many theorists have neglected some significant developmental events. In particular, the influence of peers may play a greater role in the socialization process of this era than was once thought. Certainly, the results of this investigation suggest that this is so. Moreover, one need only examine the research on the factors predictive of adult mental health (Kohlberg et al, 1971) to conclude that pre-adolescent peer relations are extremely critical in the developmental process.

A second implication of this study for developmentalists concerns the social-development theory of Harry Stack Sullivan. The latter theorist, frequently categorized as a neo-Freudian, is rarely mentioned in either contemporary child development journals or textbooks. Perhaps some see his major contributions as coming in the

clinical area, in particular his extensive work on schizophrenia and psychiatric interviewing, and thus, have overlooked his developmental theorizing. Or, maybe some perceive his theory as merely an extension or elaboration of Freud's ideas and have failed to evaluate it on its own merits. In either case, the results reported here suggest that we should not yet close the book on Sullivan. Despite an untimely death, he generated many fruitful ideas that still await empirical documentation. Moreover, he, probably more than any other developmental theorist, focused upon the social factors contributing to the child's personality growth. In light of the dearth of theorizing in the area of childhood social relations, Sullivan's social-development theory certainly warrants closer examination by present-day theorists and researchers.

Perhaps the most important outcome of this study is that productive research can be successfully done in the area of altruistic behavior. In this regard, it is this writer's observation that many researchers are beginning to explore this variable with much more rigor than was the case in the past. For too long, psychologists have focused on the negative side of man (e.g. aggression, anxiety, guilt, etc.) and consequently, have ignored his positive characteristics. Thus, it may not be that man is a hedonistic being whose interests are primarily selfish, as the Darwinists or orthodox psychoanalysts would like us to

believe. Instead, some theorists suggest and this writer concurs, that the human organism is basically a social being. Hence, a concern for others might be beneficial in implementing this social orientation. Since altruistic behavior is not always prevalent in our society, however, it would seem that the task of the developmentalist is to discover not only what factors contribute to learning a concern for others, but also what variables are likely to inhibit its development. Hopefully, this investigation has shed some light on these issues.

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Appendix A
Measure of Social Acceptance

1. Name three children you most like to be with after school.

- a. _____
- b. _____
- c. _____

2. If you were being moved to another class, name three children you would most like to go with you.

- a. _____
- b. _____
- c. _____

3. If your teacher were placing you in a group in order to do a project, which three children would you like to be in your group?

- a. _____
- b. _____
- c. _____

Appendix B
Chumship Check List

Below, you will find things that children your age sometimes do with their best friend. If you and your best friend do one of these things together, put a check in front of that number. You may check as many or as few of the things that you wish. Just make sure that you and your best friend do that thing together.

- ___1. Play games in which you both take turns being the leader.
- ___2. Walk to school together.
- ___3. Help out when one of you gets behind in his work.
- ___4. Talk about girls.
- ___5. Share each other's games, bat and ball, etc.
- ___6. Tell each other things you wouldn't tell anyone else.
- ___7. "Stick-up" for each other if an older boy is picking on one of you.
- ___8. Sit together on school bus.
- ___9. Try to be on same side when choosing teams for football or baseball, even if he is not the best player.
- ___10. Do "fun" things together, such as going to the movies or ball games.
- ___11. Tell each other if one of you has done something wrong.
- ___12. Phone each other about school assignments.
- ___13. Talk about what you want to be when you grow-up.

- ___14. Sleep over at each other's house.
- ___15. Talk about your parents.
- ___16. Find it hard to disagree with him on important things.
- ___17. Go on a vacation or short trip with him and his family.

Appendix C

Altruism Scale

- ___1. People should take care of their parents when they are old, even if it costs alot.
- ___2. I would never let a friend down when he expects something of me.
- ___3. It's a good idea to do something for your neighbor, even if he is unable to do something for you.
- ___4. People would be a lot better off if they could live far away from other people and never have to do anything for them.
- ___5. "Never give a sucker an even break."
- ___6. It's more important to get the job done than worry about hurting other people's feelings.
- ___7. Every person should give some of his time for the good of the people of his town or city.
- ___8. Making "fun" of someone is okay, especially if he deserves it.
- ___9. It's more important to work for the good of the team than to work for your own good.
- ___10. Letting your friends down is not so bad because you can't do good all the time for everybody.
- ___11. Maybe some minority groups(Negroes, Indians, Mexicans, Jews) do get bad treatment, but it's no business of mine.
- ___12. Even if there is great danger, it's important that people help someone who has been hurt.

- ___13. It's a good thing the Atlantic Ocean separates us from Europe because then we don't have to worry about the people living there.
- ___14. I can be a helpful person, but only if I have the time to spare.
- ___15. It's not necessary to give money to the poor because they deserve to be that way.