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CHILDRENS' PERCEPTIONS OF ABILITY, EFFORT, AND GENDER AS DETERMINANTS OF SUCCESS AND FAILURE IN SOCIAL RELATIONSHIPS AND ACADEMIC SITUATIONS

The University of North Carolina at Greensboro PH.D. 1984

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CHILDRENS' PERCEPTIONS OF ABILITY, EFFORT, AND GENDER AS DETERMINANTS OF SUCCESS AND FAILURE IN SOCIAL RELATIONSHIPS AND ACADEMIC SITUATIONS

by

Ronald Keith Lean

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
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Doctor of Philosophy

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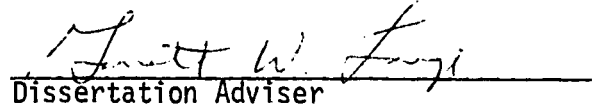

Dissertation Adviser

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

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October 18, 1984
Date of Acceptance by Committee

October 18, 1984
Date of Final Oral Examination

LEAN, RONALD KEITH, Ph.D. Childrens' Perceptions of Ability, Effort, and Gender as Determinants of Success and Failure in Social Relationships and Academic Situations. (1984)
Directed by Dr. Garrett W. Lange, 64 pp.

The present study was designed to examine the extent to which children of different ages perceive inherent ability, effort expended on the task, and gender as causal factors influencing success and failure in social relationships and academic task performance. Two hypotheses were considered; (1) As evidence of their ability to systematically differentiate ability and effort, older children (i.e., eighth graders) are more likely than younger children to systematically select ability as the most salient causal factor influencing success and failure in social relationships and academic situations; (2) Kindergartners are more likely than older children to select gender as an important causal factor influencing social relationships and academic task performance.

Seventy-two children (12 boys and 12 girls from grades K, 3, and 8) were chosen as subjects. They were presented with 32 pairs of pictures depicting school children of similar age and with narrative information in reference to the depicted children's levels of ability and effort. Of the 32 pairs, 16 picture pairs required subjects to select which depicted child was more likely to be successful in social relationships (i.e., friendship making), while the remaining 16 picture pairs required subjects to decide which depicted child was more likely to be successful in an academic achievement situation (i.e., school work). Also, subjects were asked interview questions in reference to causal factors that influence social and academic task performance.

Neither the results from the experimental tasks nor children's responses to the interview questions supported Hypothesis 1 or Hypothesis 2 of the present study. These findings were discussed in light of Nicholls' (1978, 1979) previous research. While differences in the characteristics of the samples may have accounted for some of the inconsistencies between the present findings and the findings of Nicholls (1978, 1979), procedural differences in the methodologies of the respective studies were highlighted as possible explanations for these inconsistencies.

Future attributional research must address the possibility that children's responses are influenced by methodology and their socio-economic backgrounds. Further exploratory research may reveal a more comprehensive set of factors that children perceive as important to success and failure in social relationships and academic settings.

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During this last phase of graduate studies, a number of people have made significant contributions to my graduate education and personal growth. Dr. Garrett Lange, my adviser, is especially remembered for his diligence, intellectual talents, critical evaluation of each step of the research process and his never-failing support. I also appreciate the contributions of other committee members: Dr. Helen Canaday for encouraging me to own this dissertation as mine; Dr. James Watson for helping me understand the process of becoming a peer; and Dr. Janis Berie for her unique synthesis of insightful criticisms and emotional support. Thanks also to Dr. Lynne S. Koester whose support during the early stages of the dissertation process fueled my perserverance.

I appreciate the active interests of principals, faculties, staffs, parents, and children of Mineral Springs Elementary and Mineral Springs Junior High Schools in the Winston-Salem/Forsyth County School System. Their cooperation in this research facilitated data collection and hence, the completion of this project.

Without the support of Drs. George Hamilton and Michael A. McColloch and Ms. Janet Ray at the Forsyth/Stokes Mental Health Center, I could not have enjoyed the dual roles of employee and student during my graduate career.

A very special appreciation is offered to my wife, Charlotte Diane Dillon. Throughout my graduate career, her steadfast love and acceptance have encouraged me to be all that I am. Her presence and support have made my life more meaningful.

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CHAPTER I

INTRODUCTION

The child's knowledge and awareness of factors responsible for success and failure in social relationships are essential for the development of socially skilled behavior. Such awareness not only increases the child's ability to predict success among actors in the social world, but also enables the child to adjust his or her own behavior to changing demands in social settings. Nevertheless, very little research has focused on how children of different ages perceive the causes of social success in relationships with peers, and it is to this question that the present research is directed. More specifically, this research is primarily designed to determine whether children of different ages perceive success in social relationships to be due to inherent ability, to the gender of social actors, or to the extent of effort expended in developing a relationship.

Related Literature and General Theoretical Background

A review of related research yields the general conclusion that very little empirical research has focused on characteristics of the earliest stages of relationship development in young children; that is, very little is known about how young children first develop relations with one another. Research in three areas, however, bears directly or indirectly on this issue: (1) characteristics of children's friendships,

(2) children's social skills training, and (3) children's causal attributions in social settings and achievement-related or academic situations.

Characteristics of children's friendships. Most of the research that has been conducted on children's relationships with peers has focused on characteristics of preestablished friendships, that is, dyadic relationships in which participants spontaneously seek the company of one another (Hartup, 1975). These developmental investigations have focused on several categories of issues. Generally, children progress from a rather primitive stage of defining friends as those with whom one shares material goods and play to a more advanced notion that friendship involves mutual sharing of private thoughts and feelings, and mutual respect (Youniss, 1975). This developmental trend is supported by research on the expectations that children have for their friends (Bigelow , 1977, 1982; Bigelow & LaGaipa, 1975; Reisman & Shorr, 1978). Bigelow and LaGaipa (1975) asked 480 children in grades 1-8 to think about their best friend of the same gender and write an essay about what was expected of this person that was not expected of an "acquaintance." The contents of the children's essays were analyzed on 16 dimensions (e.g., friend as a giver of help, common activities, propinquity, common interests). Consistent with the findings of others (Furman & Bierman, 1983; Hayes, 1978), younger children in this study were more likely than older children to see most friends as helpers or playmates with whom to share common activities. Older children were more likely to view friends as those with whom intimacy could be developed or common interests could be shared.

Other developmental differences in children's preestablished friendships have been noted. Between the second and third grades, children increase their numbers of friends (Reisman & Shorr, 1978) and third graders, more than younger children, prize propinquity, stimulation value, mutual participation in organized play, and acceptance as important (Bigelow & LaGaipa, 1975). Moreover, older children, more than younger children, indicate prosocial intentions in reference to sharing with and helping preestablished friends (Berndt, 1981).

Whether friendship development progresses through an invariant sequence is left to debate. In testing the sequential-invariance hypothesis for friendship expectation development, Bigelow (1977) used a methodology similar to that described above (Bigelow & LaGaipa, 1975). The findings of this study supported the sequential-invariance hypothesis by providing evidence for three successive stages in the development of expectations for preestablished friendships. In Stage 1, common activities and propinquity were major factors cited. In Stage 2, character admiration was the primary consideration for a best friend. In Stage 3, best friendships were said to be built on empathy, understanding, and self-disclosure.

Selman (1976) also sought to examine evidence for a hierarchical and invariant sequence in children's knowledge about friendships that have already been established. Consistent with previous findings in reference to children's role-taking abilities (Selman & Bryne, 1974), Selman (1976) postulated four types of knowledge that younger and older children communicated about their preestablished friendships. In early development (i.e., among 4-year-olds), friends were identified as those

with whom one has contact in the neighborhood, school, or at play. Among 6- to 8-year-olds, friendship was perceived to involve positive feelings for one another. Children 8-10 years of age viewed friends as sharing mutual interests and assistance. Finally, children 10 years of age and older perceived their friendships to involve mutual understanding and awareness through reciprocity of positive feelings. It should be noted that neither Selman (1976) nor others (Bigelow, 1977, 1982; Bigelow & LaGaipa, 1975; Reisman & Shorr, 1978) have addressed social-cognitive factors that influence preliminary selection processes necessary for the establishment of dyadic relationships, i.e., what knowledge the child must have to insure the establishment of effective relationships.

Perspectives from children's social skills training research. While much of the research in reference to the development of children's relationships with peers has emphasized children's understanding of preestablished friendships, other investigations have focused on the importance of children's social skills in establishing and maintaining relationships with peers. As Ladd and Mize (1983) indicated, children's social success is dependent on their ability to organize cognitions and behaviors into an integrated action plan pursuant to some social or interpersonal goal that is culturally acceptable. To maximize their chances for social success, children must continuously reassess and modify their cognitions and behaviors.

The importance of children's social skills for their interpersonal competence has clearly been demonstrated by studies in social skills training (Conger & Keane, 1981; Ladd, 1981; Urbain & Kendall,

1980). Generally, these studies have been based on a "social skills deficit interpretation," that is, children's lack of interpersonal competence and consequently their low social status with peers is a result of a deficiency in prosocial skill behaviors such as being cooperative, friendly and supportive. For instance, in demonstrating the effectiveness of a social learning method for enhancing children's social success, Ladd (1981) initially identified third graders of low social status through sociometric measures. Subsequently, he trained these children to increase their positive verbal interactions with peers (e.g., asking positive questions, making useful suggestions, making supportive statements). Consistent with previous findings (Gottman, Gonso, & Schuler, 1976; Gresham & Nagle, 1980; Oden & Asher, 1977), Ladd (1981) concluded that social skills training was not only beneficial in changing children's behaviors but also had significant and lasting positive effects on children's acceptance by peers.

More equivocal results were produced, however, when LaGreca and Santogrossi (1980) used a behavioral group approach in teaching elementary school children of low social status the social skills necessary for enhancing their acceptance by peers. While there was a significant increase in the number of socially skilled behaviors, such as smiling and sharing that children demonstrated in their interactions with peers, the social status of the trained children did not change. The failure of this study may have been the result of knowledge deficits necessary to monitor the appropriateness and frequency of skill behaviors.

Although the organization of both cognitions and behaviors into an integrated plan of goal-directed action is essential for social

success, studies in social skills training have emphasized behavioral components of the action plan, nearly to the exclusion of the cognitive dimension. However, Ladd and Mize (1983) have identified three forms of social knowledge that are represented in social success. Children must know appropriate goals for social interactions, appropriate strategies for attaining these goals, and social contexts in which the goals and strategies are applicable, if social functioning is to be successful. While Ladd and Mize have suggested these three forms of social knowledge as prerequisites for interpersonal competence, they failed to cite the child's knowledge of specific personal factors such as inherent ability, effort, and gender that may influence the child's success in social relations.

Perspectives in attribution theory. More relevant to the present investigation is research that has been generated from the perspective of attribution theory, that is, a theory that explains how people make causal attributions for task outcome (Kelley, 1973). Dweck (1975) investigated the effects of taking personal responsibility for failure in an experimental problem-solving task on subsequent task performance. Children who had demonstrated an extreme deterioration in performance following failure were retrained to attribute their failures to a lack of motivation or effort rather than to low ability or difficult tasks. After the retraining, these children decreased their maladaptive reactions to failure and increased the number of correct responses per minute on the problem-solving task.

Subsequently, Goetz and Dweck (1980) examined the relationship between children's causal attributions and their reactions to social

rejection by peers. After being rejected, fourth- and fifth-grade children who attributed their rejection to their lack of ability to gain the acceptance of peers demonstrated major disruptions in their goal-directed behavior. Rather than devising new strategies to gain the peers' acceptance, these children either withdrew from the task or continued using previous strategies. In contrast, children who attributed their rejection to reasons other than incompetency (e.g, incompatibility or a misunderstanding) were more likely to use new strategies to win the acceptance of peers. Such strategies included providing additional information to the peer, making friendly overtures, or intimating popularity with other children.

Medway's (1979) developmental investigation compared children's attributions for their own and their best friend's imagined behavior. Selecting subjects from the first, third, fifth, and seventh grades, Medway predicted that children's personal attributions would increase with age as would the difference in attributions that children offered themselves and their best friends. The subjects were presented social and achievement-related stimulus situations. In each category, positive as well as negative situations were presented. For instance, the positive social situation was described as helping someone carry packages, the positive achievement situation as doing well on a test, the negative social situation as losing books on the way to school, and the negative achievement situation as not knowing the answer in class. Seventh graders only attributed more personal causation to the imagined behaviors involving friends than the same behaviors involving themselves; this was only true, however, for positive social situations. Positive

achievement-related situations were explained by personal causes much more often than negative achievement-related events by all children regardless of grade level. Moreover, all children assigned personal causation less to positive or successful social situations than to social failure.

Research from an attributional perspective that has focused on children's knowledge of factors responsible for success and failure in academic or intellectual settings or tasks has more clearly revealed four causal factors that children commonly use to explain successful and unsuccessful outcomes in such settings: namely, (1) inherent ability of the actor, (2) the effort that the actor expends on the task, (3) the difficulty of the task, and (4) luck while performing the task. While Nicholls (1984) has suggested that ability can be judged as high or low relative to one's perceived mastery, understanding, or knowledge of previously performed tasks, he has also explained that, in a more differentiated sense, that ability is conceived as capacity relative to that of others. In this latter regard, Nicholls (1978, 1979) has demonstrated an interesting developmental trend in younger and older children's references to ability and effort as factors influencing academic task performance. In a theoretical integration of earlier work, Nicholls and Miller (1983) explained that the concepts of ability and effort are not clearly differentiated in young children. If one conceives of ability as capacity relative to that of others, then to define ability necessarily entails consideration of effort. As Nicholls

and Miller (1983) suggested:

> This conception of ability as capacity implies that effort is limited by ability. Conversely, the trait ability is only fully evident when effort is high. Also, these concepts make sense only in context of social comparison. Alone individual's ability to do any specific task with high or low effort does not enable a valid inference of ability. High ability means higher ability than that of others. (p. 13)

This process of differentiation of ability and effort is a gradual one that was identified in Nicholls' (1978) earlier empirical work.

Using Piaget's clinical interview method, Nicholls (1978) sought to clarify the development of children's causal schemes involving ability and effort. After viewing three short films of two children working at different levels of intensity (one working constantly, the other working intermittently) on a workbook exercise, subjects (ages 5 through 13 years) were then asked why the children had received either the same low score, the same high score, or why the child who had worked constantly had received a lower score than the child who had worked intermittently. To correctly infer the greater ability of the child who worked intermittently and received a higher score required the capacity to coordinate proportional relations vis a vis ability and effort, a capacity that appears in the formal operational stage of cognitive development as previously demonstrated by children being able to correctly combine the concepts of weight and distance of the weight from the fulcrum in the balance problem (Inhelder & Piaget, 1958). Consequently, Nicholls reasoned that children less than 12 years of age would not consistently explain the importance of ability, separate

from effort, as the major causal factor influencing the higher score of the child who had worked intermittently on the workbook exercise.

Younger children (generally, the 5- and 6-year-olds) could not distinguish ability, effort, and outcomes from one another (Nicholls, 1978). As Nicholls and Miller (1983) explained:

> Children center on effort (people who try harder are seen as smarter even if they get a lower score) or, less commonly, on outcome (people who get a higher score are said to work harder--even if they do not--and are seen as smarter). (p. 15)

By seven years of age, children could see effort and outcome as cause and effect, but did not clearly distinguish effort and ability. When the effort expended on an academic task was different but the scores were the same, children at this level often explained the outcome in terms of compensatory effort (e.g., "He worked really hard for awhile." "She worked at the end."). With an increase in age, children begin to differentiate ability and effort (e.g., "He is faster or smarter."), although the concept of ability was not systematically used to explain the outcomes of achievement-related tasks until 12 or 13 years of age. These older children systematically perceived ability as capacity, separate from effort. With the formal operational capacity to coordinate proportional relations, the older children perceived ability and effort as joint causal factors influencing performance and outcome.

In another study, Nicholls (1979) examined the relationship between the child's high and low achievement status in reading and the child's use of causal factors to explain this status. Nicholls (1979) found, as he had previously (1978), that among the younger age groups children did not understand the importance of ability as a

clearly defined causal factor influencing reading achievement. By 12 years of age, however, children had not only developed differentiated concepts of ability and effort, but had also begun to use these concepts to more accurately assess their levels of academic achievement in reading.

Nicholls (1978, 1979) has shown in achievement-related situations that young children are likely to explain success and failure on the basis of how hard they worked or how much effort was expended on the task, and erroneously refer to this criterion as ability. It is not until 12 or 13 years of age, however, that the child begins to assess task success or failure on the basis of inherent ability, as a concept that is separate from effort. What is not known is whether Nicholls' (1978, 1979) findings in reference to children's perceptions of ability and effort as determinants of success and failure in achievement-related settings can be generalized to children's social relationships.

Rationale and Statement of the Problem

As Ladd and Mize (1983) have argued, for children to be successful in social relationships, they must be aware of the goals for social interractions, know strategies for attaining these goals, and know social contexts in which the goals and strategies are applicable. Nevertheless, very little empirical research addresses children's knowledge of specific personal factors such as inherent ability, effort, and gender during the initial stages of developing successful social relationships with peers.

Research from a causal attribution perspective has generally focused on children's understanding of factors responsible for success and failure in academic or intellectual tasks. Nicholls (1978, 1979) has concluded that it is not until 12 or 13 years of age that children systematically use the concept of ability, separate from effort, to explain success or failure on achievement-related tasks. In contrast, younger children focus on effort as the causal explanation for success and failure in academic tasks; that is, the person who receives the higher score worked harder or faster (Nicholls, 1978, 1979).

However, it is possible that children's perceptions of inherent ability and effort as causal influences of success and failure in social relationships and academic settings may not be as important as their perceptions of gender-related factors as determinants of social and academic outcomes. For instance, Ladd, Lange, and Stremmel (1983) have found that younger children are much more likely than older ones to base decisions on whether to help another child on the gender similarity of the children in the helping situation. What is not known is whether there are differences in younger and older children's perceptions of gender as a salient causal factor influencing outcomes in other social situations or in academic-achievement settings.

Therefore, the purpose of the present research is to investigate children's perceptions of ability, effort, and gender as determinants of success and failure in social relationships and academic settings. Children from three grade levels (K, 3, 8) served as subjects for the present research. Children from these grade levels correspond in age to the youngest and oldest age groups in Nicholls' (1978, 1979) previous research.

Hypotheses

The following hypotheses were considered.

H_1: Since Nicholls (1978, 1979) has suggested that older children (i.e., 12- or 13-year-olds) demonstrate systematic differentiation of ability and effort by selecting ability as the most salient causal factor influencing academic task performance, eighth graders are more likely than younger children in the present investigation to systematically select ability as the most salient causal factor influencing success and failure in social relationships and academic situations.

H_2: Based on the findings of Ladd et al. (1983), kindergartners are more likely than older children to select gender as an important causal factor influencing social relationships and academic task performance.

CHAPTER II

METHOD

Sample

A total of 72 children were chosen as subjects for this research. Twenty-four children (12 boys and 12 girls) were selected from grades K, 3, and 8 in the Winston-Salem/Forsyth County Schools. According to school officials, most of these children were from working-class backgrounds. For kindergartners and third graders, all of the children in each of the chosen classrooms were invited to participate via a letter seeking the parents' permissions for their children's participation (see Appendix A). When this did not result in an adequate number of male subjects, additional letters were sent to parents of boys who had been randomly selected from another classroom in both kindergarten and third grade. For eighth graders, letters of parent permission were sent to parents of students who had been randomly selected from four different math classes (representing all levels of 8th-grade math). The return rate for letters of parent permission was at least 95% for each grade level. After parental permissions were ascertained, the research tasks were administered to subjects whose parents had given permission. Subsequently, 12 boys and 12 girls were randomly chosen from each grade level. In Table 1, the age and gender of subjects at each grade level are shown.

Table 1

Age and Gender of the Sample at Each Grade Level

	Males			Females		
Grade	N	$\bar{x}$ Age (mos.)	SD Age (mos.)	N	$\bar{x}$ Age (mos.)	SD Age (mos.)
K	12	73.58	6.68	12	72.25	2.53
3	12	114.58	9.16	12	112.42	9.19
8	12	170.00	5.58	12	168.67	4.52

Design

At each grade level, subjects were presented with 32 pairs of pictures depicting school children of similar age and asked in each case to decide which depicted child was more likely to be successful in both academic-achievement and friendship-making situations. Of the 32 pairs, 16 picture pairs required decisions for the academic-achievement task (AC-ACH TASK); the remaining 16 pairs required decisions for the friendship-making task (FRIEND TASK). The order in which AC-ACH and FRIEND TASKS were administered was randomized for boys and girls at each grade level. The presentation of narrative information in reference to ability and effort levels of the depicted children was counterbalanced for boys and girls at each grade level. These considerations yielded a three-factor ANOVA design with grade level (3) and gender (2) as the between-groups factors, and task (2) as the within-groups factor.

Subsequently, subjects at each grade level were asked a set of interview questions related to factors that may be important to success and failure in academic situations and social relationships. The

presentation of these questions was counterbalanced so that equal numbers of boys and girls were presented with the academic and social questions first.

Tasks and Materials

The child's task was to look at 32 pairs of line-drawn pictures depicting school children (head and shoulders portrayal) and, on the basis of the experimenter's narrative information in reference to the depicted child's ability and effort and the gender information in the pictures, decide which of the two depicted children in each pair would be more successful in either an academic-task situation (AC-ACH TASK) or a friendship-making social situation (FRIEND TASK). The stimulus pairs shown in Table 2 were designed so that subjects could base their selections on either gender, ability, or effort in both AC-ACH and FRIEND TASKS. The order in which pairs were presented for both the AC-ACH and FRIEND TASKS was randomized with the constraint that no two successive pairs were to constitute the same comparison. There was a single random order for the AC-ACH TASK and a single random order for the FRIEND TASK (see Appendix B).

Three sets of pictures were used, each set depicting a boy and a girl from each of three different grade levels (see Appendix C). The 4" x 4" pictures were drawn on 8" x 11" white paper. Each picture of the presented pair was exhibited on a separate page (under clear plastic) in one of three 3-ring notebooks, each notebook representing the stimulus pairs for each grade level. The order in which the pictures in each notebook appeared were consistent with the single

random order for the AC-ACH TASK and the single random order for the FRIEND TASK.

Table 2

Stimulus Pairs for Academic and Friendship Tasks

Pair	Gender	Ability	Effort	Pair	Gender	Ability	Effort
1a.	B	HI	HI	1b.	G	LO	LO
2a.	B	HI	LO	2b.	G	LO	HI
3a.	B	LO	HI	3b.	G	HI	LO
4a.	B	LO	LO	4b.	G	HI	HI
5a.	G	HI	HI	5b.	B	LO	LO
6a.	G	HI	LO	6b.	B	LO	HI
7a.	G	LO	HI	7b.	B	HI	LO
8a.	G	LO	LO,	8b.	B	HI	HI
9a.	B	HI	HI	9b.	G	LO	LO
10a.	B	HI	LO	10b.	G	LO	HI
11a.	B	LO	HI	11b.	G	HI	LO
12a.	B	LO	LO	12b.	G	HI	HI
13a.	G	HI	HI	13b.	B	LO	LO
14a.	G	HI	LO	14b.	B	LO	HI
15a.	G	LO	HI	15b.	B	HI	LO
16a.	G	LO	LO	16b.	B	HI	HI

After the subject had completed the AC-ACH and FRIEND TASKS, the experimenter asked each subject a set of four questions related to academic achievement and a set of four questions related to a friendship-making social task (see Appendix D).

Procedure

The tasks were administered to each child individually in a designated room at the child's school. While the kindergarten children were seen in two separate sessions, third and eighth graders were seen in a single session. The classroom teacher was asked to announce the experimenter's visit to the class prior to the task administration date. Also, prior to that date, the experimenter ascertained a list of children whose parents had given permission for their children's participation. From this list, only children who were willing to participate were included. While each of the children was presented with both the friendship-making (FRIEND TASK) and the academic-achievement task (AC-ACH TASK), half the boys and half the girls from each grade level were randomly assigned to either FRIEND or AC-ACH TASK first. In reference to the interview questions that were asked after the subject had completed the FRIEND and AC-ACH TASKS, half of the boys and half of the girls at each grade level were also randomly assigned to friendship-making and academic-achievement questions first.

Upon the subject's arrival at the designated room, the experimenter asked the subject to sit in one of two chairs facing a table. The experimenter sat beside the subject so that both the experimenter and subject were facing the table on which the notebook, containing the stimulus pairs of line-drawn pictures, was placed. In order to orient the subject to the task, the experimenter made the following comments:

> Today we are going to look at pictures of boys and girls. With each picture, I will tell you something about the boy or girl. I will then ask you which boy or girl is better at _____ (Assignment 1 - "making

> friends" or "solving a workbook problem") or _____ (Assignment 2 - "solving a workbook problem" or "making friends"). There are no right or wrong answers. I am only interested in who you think is better at _____ (Assignment 1) or _____ (Assignment 2).

Since workbooks were not part of eighth graders' current academic experience, "school work" was substituted for "solving workbook problems" with eighth-grade subjects.

Each subject was then shown a sample comparison pair complete with narrative information. The same sample with regard to gender and ability and effort levels was used with each subject. The information contained in the sample problem did not coincide with information in any one of the comparison stimulus pairs in either the AC-ACH or FRIEND TASKS. For example, "This boy (pointing to the picture) is good at making friends and does not try hard to make them. This girl (pointing to the other picture) is good at making friends and does not try hard to make them." Before asking the subject to decide which depicted child was "better at making friends" or "solving workbook problems," the experimenter asked the subject to repeat the narrative information in reference to the depicted child's gender, ability, and effort. This was done in order to rule out the influence of short-term memory problems on the subjects' responses. For children who were addressing the AC-ACH TASK first, the sample problem described a "workbook problem" or "school work" scenario. The experimenter then stated that if the subject had any difficulty in remembering or in understanding the narrative information in reference to the depicted children, that upon request, all of the narrative information in that particular set would

be repeated. The experimenter then asked the subject whether he or she had any questions before beginning the tasks.

The 16 comparison stimulus pairs for each task situation (AC-ACH and FRIEND) were presented, one pair at a time. At the completion of these tasks, the subject was asked whether he or she had any questions before the experimenter asked academic-achievement and friendship-making interview questions. Upon completion of all tasks, the experimenter invited the subject's questions again. The experimenter answered questions and thanked the subject for the time spent on the tasks. While kindergarten and third-grade subjects were then accompanied back to their respective classrooms, eighth graders were invited to return to their classes.

Data Analysis

Data derived from the experimental tasks (both AC-ACH and FRIEND) were analyzed within two different sets of three-factor ANOVA designs, each set featuring grade (3) and sex of subject (2) as between-subjects factors and task (2) as a within-subjects factor. The first analysis focused on subjects' choices between a HAHE child (i.e., a child high on both ability and effort) and a LALE child (i.e., a child low on both ability and effort). Set two analyzed subjects' choices between a HALE child (i.e., a child high on ability and low on effort) and a LAHE child (i.e., a child low on ability and high on effort). Minimum and maximum scores on any of the above-mentioned choices were 0 and 8 for ANOVAs collapsed across the sex of the stimulus (i.e., boy and girl pictures) and 0 and 4 when calculated separately for boy and girl

stimuli. Descriptive statistics only were used to tabulate subjects' responses to interview questions.

CHAPTER III

RESULTS

The major purpose of this research was to examine age differences in children's perceptions of the importance of ability, effort, and gender for academic task performance and success in making friends. The procedure required subjects to select one of two fictitious children (depicted in line drawings) for each of the academic and social tasks. Since this procedure called for a fixed number of responses, it was not deemed feasible to analyze the data within a single nested stimulus--gender (2) x ability (2) x effort (2) ANOVA design. Rather, analyses focused separately on the responses children made to each of two subcomponents of the academic and social task lists. Half of the pairs of each list required subjects to choose between a child described to be high on both ability and effort (HAHE) and a child described to be low on both ability and effort (LALE). Hence, the first set of analyses focused on the number of choices made by boy and girl subjects at each grade level for each of the academic and social tasks. This resulted in a three-factor ANOVA design with grade (3) and sex of subject (2) as between-subjects factors, and task (2) as a within-subjects factor. Minimum and maximum HAHE scores were 0 and 8 for ANOVAs collapsed across the sex of the stimulus (i.e., boy and girl stimulus pairs) and 0 and 4 when calculated separately for boy and girl stimuli.

The remaining eight stimulus pairs required subjects to choose between a child described to be of high ability and low effort (HALE)

and a child described to be of low ability and high effort (LAHE). Hence, the second set of grade (3) x sex of subject (2) x task (2) analyses focused on the number of HALE choices (i.e., choices based on ability as opposed to effort) made by subjects. As with the HAHE analyses, minimum and maximum HALE scores were 0 and 8 for ANOVAs collapsed across sex of stimulus, and 0 and 4 when calculated separately for boy and girl stimuli.

Task List Analysis

Analysis of HAHE scores. Table 3 shows mean numbers and percentages of HAHE selections made by boy and girl subjects at each grade level for each of the academic and social task lists. ANOVAs performed on the means of Table 3 revealed a significant main effect for grade level, F (2,66) = 7.02, $p < .001$. Newman-Keuls post hoc comparisons test revealed that HAHE scores were similar ($p > .05$) for third and eighth graders, and that children of these grades had significantly higher scores than kindergartners ($p < .01$). Moreover, the ANOVA revealed a marginally significant sex of subject effect, F (1,66) = 3.03, $p < .09$, with boys generally having higher scores than girls. This sex difference appears to be most apparent among kindergarten children (see Table 3).

Additional grade (3) x sex of subject (2) x task (2) ANOVAs were performed, separately, on subjects' HAHE scores for boy stimuli and girl stimuli (see Table 4). The results of these analyses are comparable to those revealed in the total score ANOVAs. For boy stimuli, the ANOVA yielded a significant main effect for grade level, F (2,66) =

Table 3

Means and Percentages of HAHE Selections for Subjects by Grade, Subject Gender, and Task

(Minimum Score = 0; Maximum Score = 8)

	Grade					
	K		3		8	
	Boys	Girls	Boys	Girls	Boys	Girls
Academic Task Means	6.92	5.17	7.67	7.58	7.83	7.75
Percentages	86.5	64.6	95.9	94.8	97.9	96.9
Social Task Means	6.92	5.83	7.58	7.33	7.42	7.17
Percentages	86.5	72.9	94.8	91.6	92.8	89.6

Note: Table 4 summarizes a breakdown of these means for boy and girl stimuli.

6.67, $p < .01$, favoring third and eighth graders. Again, a marginally significant effect for sex of subject, F (1,66) = 3.42, $p < .07$, suggested that boys had higher HAHE scores than girls. For girl stimuli, the ANOVA also yielded a significant grade effect favoring older subjects, F (2,66) = 6.38, $p < .01$.

Analyses of HALE scores. Table 5 shows the means and percentages of HALE selections made by boy and girl subjects at each grade level for the academic and social task lists. Analysis of variance performed on the means of Table 5 failed to reveal main or interactive effects for grade level and sex of subject. However, the ANOVA did

Table 4

Means and Percentages of HAHE Selections for Subjects by Grade, Subject Gender, Gender of Stimuli, and Task

(Minimum Score = 0; Maximum Score = 4)

	Grade					
	K		3		8	
	BStim/GStim	BStim/GStim	BStim/GStim	BStim/GStim	BStim/GStim	BStim/GStim
Academic Task Means	3.50/ 3.42	2.58/ 2.58	3.92/ 3.75	3.83/ 3.75	4.0/ 3.83	3.83/ 3.92
Percentages	87.5 /85.5	64.5 /64.5	98.0 /93.8	95.8 /93.8	100.0/95.8	95.8 /98.0
Social Task Means	3.42/ 3.50	2.92/ 2.92	3.83/ 3.75	3.58/ 3.75	3.75/ 3.67	3.67/ 3.50
Percentages	85.5 /87.5	73.0 /73.0	95.8 /93.8	89.5 /93.8	93.8 /91.8	91.8 /87.5

Table 5

Means and Percentages of HALE Selections for Subjects by Grade, Subject Gender, and Tasks (Minimum Score = 0; Maximum Score = 8)

	Grade					
	K		3		8	
	Boys	Girls	Boys	Girls	Boys	Girls
Academic Task Means	4.33	3.92	3.67	4.08	3.58	4.08
Percentages	54.1	49.0	45.9	51.0	44.8	51.0
Social Task Means	4.67	4.25	4.17	4.67	5.0	5.17

Note: Table 6 presents a more detailed description of these means for boy and girl stimuli.

reveal a significant main effect for task, F (1,66) = 5.19, $p < .02$. Boys and girls at each grade level were more likely to select a high ability child in the social task.

Additional grade (3) x sex of subject (2) x task (2) ANOVAs performed on boy and girl stimuli separately (see Table 6) reveal that task effect was statistically significant only for boy stimuli, F (1,66) = 5.56, $p < .02$. The ANOVA performed on girl stimuli failed to reveal a statistically significant task effect, F (1,66) = 2.59, $p > .11$.

Table 6

Means and Percentages of HALE Selections for Subjects by Grade, Subject Gender, Gender of Stimuli, and Task

(Minimum Score = 0; Maximum Score = 4)

	Grade					
	K		3		8	
	Boys BStim/GStim	Girls BStim/GStim	Boys BStim/GStim	Girls BStim/GStim	Boys BStim/GStim	Girls BStim/GStim
Academic Task Means	2.17/ 2.08	1.67/ 2.25	2.17/ 1.50	2.0 / 2.0	1.75/ 1.83	1.83/ 2.25
Percentages	54.3 /52.0	41.8 /56.3	54.3 /37.5	50.0 /50.0	43.8 /45.8	45.8 /56.3
Social Task Means	2.50/ 2.17	2.0 / 2.25	2.08/ 2.08	2.30/ 2.0	2.67/ 2.33	2.50/ 2.67
Percentages	62.5 /54.3	50.0 /56.3	52.0 /52.0	57.5 /50.0	66.8 /58.2	62.5 /66.8

Description of Interview Data

Following the selection of one of two fictitious children from each of 16 pairs for each task, subjects were asked a series of interview questions related to success and failure in academic task performance and making friends. Four questions focused on each task. Two of the questions referred to success. These questions were presented in the following manner: (1) "I am going to give you four reasons why some boys and girls might do well in school work (making friends): they are good at school work (making friends); they try hard at school work (making friends); the person is a boy or girl; and the person is lucky. Which do you think is the most important reason? Next most important? etc." The options were presented in random order after the initial question as well as after each response. (2) "What is it about some boys and girls who always seem to do well in school work (making friends)? What makes them do so well?" Two other comparable questions related to failure on the task in question were also asked (see Appendix D).

Tabulation of subjects' first choices on closed questions related to academic task success and failure is shown in Table 7. Since boy and girl responses did not differ appreciably, the tabulations have been collapsed across the sex of the subject. Table 8 shows a tabulation of subjects' first choices on closed questions related to social task success and failure. Again, the tabulations have been collapsed across sex of subject.

As shown, Table 7 and Table 8 suggest several interesting grade level trends. On one hand, it is clear that kindergartners are as

Table 7

Number of Children at Each Grade Level Selecting Each Factor as the First Choice ("Most Important") for Academic Task Success and Failure

	Grade					
	K		3		8	
	Success (N = 24)	Failure	Success (N = 24)	Failure	Success (N = 24)	Failure
Ability	7	8	5	5	4	1
Effort	8	4	18	19	20	23
Gender	6	4	0	0	0	0
Luck	3	8	1	0	0	0

likely to select gender and luck as they are to select ability and effort as most important reasons for success and failure in academic task performance and making friends. In contrast to kindergartners, third and eighth graders are more likely to select ability and effort as most important reasons for success and failure on academic tasks and friendship making. Moreover, by eighth grade, subjects selected effort rather than ability as the most important factor influencing success and failure in academic task performance and making friends.

A second set of open-ended interview questions was asked, designed to explore factors influencing success and failure on academic and social tasks that had not been included in the forced-choice picture selections or closed questions. The five most frequent responses

Table 8

Number of Children at Each Grade Level Selecting Each Factor as the First Choice ("Most Important") for Social Task Success and Failure

	Grade					
	K		3		8	
	Success (N = 24)	Failure	Success (N = 24)	Failure	Success (N = 24)	Failure
Ability	9	6	7	2	5	4
Effort	6	6	15	17	17	19
Gender	3	4	0	1	2	1
Luck	6	8	2	4	0	0

to these questions are summarized for academic task performance and making friends in Tables 9 and 10, respectively.

Interesting grade level trends are also suggested by these tables. As shown in Table 9, third and eighth graders, more frequently than kindergartners, mentioned effort as an important factor influencing success and failure in academic task performance. For eighth graders, effort was mentioned most frequently as the factor influencing successful academic performance.

As shown in Table 10, personality characteristics (e.g., being friendly, polite, kind) were mentioned more frequently by third and eighth graders than kindergartners as important factors influencing success in making friends. Moreover, while eighth graders mentioned

Table 9

Frequency of Referral to Each Factor by Children at Each Grade Level for Success and Failure in Academic Task Performance

Factor	Grade K Success/Failure	Grade 3 Success/Failure	Grade 8 Success/Failure
Effort (trying hard-studying/not trying hard-not studying)	3/0	12/8	15/8
Attentiveness (listening to teacher/not listening to teacher)	9/9	14/15	6/5
Ability (being good at school work-smart/not being good at school work)	3/2	4/1	7/5
Classroom Deportment (behaving in compliance with classroom rules/ behaving in noncompliance with classroom rules)	7/8	6/10	1/6
Compliance (following teacher directions/not following teacher directions)	2/5	2/3	0/0

Table 10

Frequency of Referral to Each Factor by Children at Each Grade Level for Success and Failure in Making Friends

Factor	Grade K Success/Failure	Grade 3 Success/Failure	Grade 8 Success/Failure
Personality (good personality, e.g., friendly, polite, kind/bad personality, e.g., quiet, braggart, untrustworthy)	2/0	16/0	17/15
Mutual Interests (playing and talking together-doing things together/not playing and talking with one another-not doing things together)	11/4	5/0	5/0
Behavior (prosocial, e.g., giving, sharing, helping/antisocial, aggressive e.g., hitting, fighting, throwing things, stealing)	3/12	9/13	0/5
Effort (trying hard/not trying hard)	3/3	2/2	2/4
Ability (being good at making friends/not being good at making friends)	2/1	0/1	0/1

personality characteristics (e.g., being quiet, untrustworthy, or bragging) most frequently as a reason for failure in friendship making, kindergartners and third graders cited antisocial behavior (e.g., hitting, fighting, stealing) as the most common reason for failure in making friends.

CHAPTER IV

DISCUSSION

This research was designed to determine the extent to which children of different ages perceive success and failure in social relationships and in academic task situations to be due to an actor's gender, an actor's inherent ability, or the degree of effort expended by the actor on the task. The theoretical significance of this series of questions stems largely from the attribution theory perspective of Nicholls (1978, 1979). Nicholls (1978), after examining economically advantaged children's responses to videotaped scenarios of children working with different degrees of on-task behavior on a workbook exercise, concluded that it is not until 12 or 13 years of age that children systematically differentiate the concepts of ability and effort when explaining success and failure in academic-achievement settings. However, whether this finding can be generalized to children of different socioeconomic classes or to children's social relationships is not known.

The present investigation employed two methodological approaches to discern age trends in children's knowledge of effort and ability as determinants of academic and social success. The first presented method, here referred to as the experimental tasks, required the children to select one of two fictitious children in each of 32 pairs of pictures judged to be more successful in either an academic-task

situation (16 of the pairs) or a friendship-making social situation (the remaining 16 pairs). The results of analyses performed on these tasks provided only partial support of Nicholls' (1978, 1979) findings. Older subjects (i.e., third and eighth graders) selected reliably greater numbers of fictitious children high on both ability and effort than did kindergartners. However, older children were no more likely than younger children to select a child high on ability and low on effort, or for that matter, high on effort and low on ability. At all grade levels, children made approximately equal numbers of high ability-low effort and high effort-low ability choices. The only reliable finding in this analysis was that children at all grade levels were more likely to select the high ability child than the high effort child in the social task than in the academic task. These findings are inconsistent with Hypothesis 1 (i.e., eighth graders are more likely than younger children to systematically select ability as the most salient explanation of social and academic task outcome) in the present investigation.

An examination of the children's protocols showed that the absence of an overall tendency to select ability over effort in the HALE analysis was not due to individual differences in preferences for ability and effort. It is conceivable that some children may have selected effort consistently throughout their responses to HALE or LAHE choices and when their responses were collapsed in the form of a group mean, the result failed to indicate a systematic group pattern of responses. However, this was not the case in the present study. As shown in Table 11, most subjects at each grade level failed to show

Table 11

Numbers of Children at Each Grade Level (Total N = 24) Exhibiting Each Possible Combination of Ability (HALE) and Effort (LAHE) Choices for Academic (Ac) and Social (Soc) Tasks

Ability Choices	Effort Choices	Grade K		Grade 3		Grade 8	
		Ac	Soc	Ac	Soc	Ac	Soc
0	8	1	0	5	4	5	3
1	7	4	3	3	3	2	2
2	6	3	4	3	1	4	0
3	5	3	3	2	1	2	2
4	4	4	2	1	3	0	4
5	3	1	2	1	3	3	0
6	2	2	4	0	1	1	1
7	1	1	3	3	3	1	4
8	0	5	3	6	5	6	8

systematic choice patterns for the high ability or high effort dimensions, but rather exhibited both high ability and high effort choices within the choice protocol. In contrast to previous findings (Bar Tal & Darom, 1979; Dweck & Bush, 1976; Dweck & Reppuci, 1973), there were no clear differences in boys' and girls' responses to the experimental tasks. Consequently, subjects' responses were collapsed across gender in Table 11.

Results of the interview data provide a somewhat different perspective on children's understanding of ability and effort as causes of academic and social effectiveness. These results do not support Hypothesis 1 of this study or the findings of Nicholls (1978, 1979). In the present investigation, ability factors were not systematically selected as the salient explanation of success and failure in social relationships and academic task performance by children at any grade level. Interestingly, clear majorities of third- (72%) and eighth- (82%) grade children responded with effort when asked closed interview questions in reference to the most salient explanation for success and failure in academic and social settings. Similar findings were revealed through children's responses to open-ended questions in reference to academic task performance. While ability was rarely mentioned by children at any grade level as a salient factor influencing academic task performance, effort was routinely mentioned as an important causal factor influencing success and failure in academic tasks by third (27% of total responses) and eighth (43% of total responses) graders. However, to open-ended interview questions in reference to social relationships, neither ability nor effort was consistently mentioned by children at any grade level as an important factor influencing social relationships. Moreover, gender was not mentioned consistently as an important causal factor influencing task outcome by children at any grade level to either closed or open-ended questions. As with the experimental tasks, there were no clear differences in boys' and girls' responses to either closed or open-ended interview questions.

Differences in the results of the experimental and interview tasks may be explained by the relative sensitivity of these two methodological approaches in assessing children's perceptions of the most salient causal factor influencing academic and social outcomes. The experimental tasks required subjects to consider simultaneously the relaimportance of three causal factors (i.e., ability, effort, and gender) before making a choice selection. The constant narration in reference to the three causal factors over repeated trials may have suggested to subjects that more than one dimension or factor was important to academic and social outcomes. The experimental tasks may have implicitly encouraged children to consider the salience of three separate dimensions rather than to focus on a single dimension thought to be the most important causal influence on task outcome. The interference with the production of the most salient or preferential dimension may have resulted in subjects selecting each factor as the most salient in some of the protocols, rather than continuing to select the one factor that was initially thought to be most important.

In contrast, both closed and open-ended interview questions required children to freely select a single most important determinant of academic task performance and social relationships. With the interview questions, there was no implicit suggestion for subjects to consider the salience of multiple causal factors. Consequently, interference with the subjects' production of the preferential dimension was minimized. Differences in children's responses to closed and open-ended interview questions in reference to social relationships may also be explained by the relative sensitivity of each category of questions in

assessing the most salient explanation of success and failure in friendship making. The closed questions limited subjects' choices to factors that children may not routinely consider important causal influences in the process of establishing friendships. When not constrained by limited choices, subjects may have more accurately reported the preferential dimension (e.g., personality factors, peers' behaviors) believed to be the most important causal influence in social relationships. In other words, conclusions drawn from children's responses to open-ended interview questions may provide a much richer understanding of children's knowledge than conclusions based on children's responses to either the closed interview questions or the experimental tasks.

There are several possible explanations as to why the results of the present investigation were not consistent with those of Nicholls (1978, 1979). One concerns the possibility that Nicholls' (1978) subjects, having come from economically advantaged families, were more sensitive through their upbringing to the role of ability factors as causal influences in academic-achievement situations than subjects from working-class families in the present investigation. Aside from the characteristic of the sample, however, there are several major procedural differences between the present study and those of Nicholls (1978, 1979). In Nicholls' (1978) research procedures, boys and girls were shown three videotapes of two children working at different levels of intensity on workbook problems. One of the filmed children worked constantly, while the other worked intermittently. After viewing the films, subjects were asked why filmed children had received the same high score, the same low score, or why the filmed child who had worked constantly had received a

a lower score than the cohort who had worked intermittently. Accordingly, Nicholls (1978) provided salient behavioral indications of ongoing effort for one of the filmed children but provided no observational indications of ability. While effort expended on the workbook task could have been perceived from direct observations of filmed children, the subjects' choices of ability as the most salient explanation for the level of task competence required inferential reasoning, an ability believed by some investigators (e.g., Piaget, 1952) not available to children in the concrete operational stage of cognitive development. Thus, Nicholls' (1978) findings that the predominant explanation given by most young children was effort rather than ability may reflect differential cognitive demands of effort and ability inferencing.

Another possible explanation concerns the possibility that the salience of effort discrepancies between the two children shown in the videotaped segments in Nicholls' (1978) design may have set children to focus their attention on the effort dimension throughout the task. Since younger (preoperational) children characteristically exaggerate the importance of one dimension of a perceptual set (e.g., the height of the beaker in a conservation of continuous quantity exercise), it is possible that younger children in Nicholls' study were more constrained by the perceptual effort set than older children, thereby rarely mentioning ability as a causal factor.

On the other hand, older children (i.e., 12- and 13-year-olds) in Nicholls' (1978) study may have been inadvertently discouraged from mentioning effort as the most salient explanation for academic task performance. Although the two filmed children worked at different levels of

intensity or effort on the workbook exercise, the child who expended the greater effort on the task never received the higher score. Consequently, older subjects may have dismissed effort as an important causal factor influencing academic task performance and, as a result, may have mentioned ability as the most salient explanation for performance in an academic-achievement situation.

While Nicholls' (1979) study featured a heterogeneous sample, there were still major procedural differences between this study and the present investigation. After measuring children's (6-12 years old) self-perceptions of personal reading achievement relative to the achievement level of classmates, Nicholls asked subjects to consider four causal factors (ability, effort, task difficulty, and luck) as possible causal influences affecting personal success and failure in reading performance. Consideration of these causal factors came in the form of subjects choosing the more salient explanation of success or failure from a pair of possible causes (e.g., for success - "being clever at reading" vs. "trying hard," for failure - "not being clever at reading" vs. "not trying hard"). All possible combinations of causal factors were presented for both success and failure protocols. Attributions scores were derived by adding the number of times that each factor was selected. Nicholls found that older subjects (i.e., 12-year-olds) not only had a more accurate perception of their own attainment in reading in relation to teachers' ratings of children's reading achievement, but also selected ability factors as explanatory of reading achievement with much greater consistency than did younger subjects.

As with Nicholls' (1978) study, however, procedures of the later study (Nicholls, 1979) may have inadvertently discouraged subjects from reporting the preferential dimension or causal factor thought to best explain success and failure in reading. When initially asking children to select the more important of two causal factors, Nicholls (1979) may have encouraged children to consider a causal factor that, under less constrained circumstances, would not have been perceived as the most salient explanation of reading achievement. Since younger children do not characteristically consider multiple causes when explaining task outcome (Smith, 1975), it is more likely that many of their later responses were affected by a response set developed in the first one or two protocols, resulting in no single dimension being consistently mentioned as the most salient explanation of reading competence.

On the other hand, older subjects in Nicholls' (1979) study may have been implicitly encouraged to emphasize ability as the most salient factor influencing reading achievement. Subjects' initial task in this design was to measure or assess their personal reading achievement relative to the level of achievement of classmates. Since older subjects were more accurate in their assessments of personal reading achievement in comparison to teachers' ratings, the initial task may have been perceived as more competitive by older subjects than by younger ones, who routinely judged themselves as much more accomplished in reading than they actually were. As Ames, Ames, and Felker (1977) have suggested, the salience of ability factors as mediators of achievement behavior is enhanced by competitive academic situations.

Consequently, the initial research task (i.e., measurement of self-perceptions in reference to reading attainment) may have increased the chances that older subjects would mention ability more frequently than younger subjects as a causal factor influencing reading achievement.

Whether gender-related factors are perceived by children to be important causal influences in academic task performance and social relationships was a secondary focus of the present investigation. In contrast to Hypothesis 2 (i.e., kindergartners more than older children will focus on gender as an important causal factor influencing task outcome) and the findings of Ladd et al. (1983), gender was not consistently selected as a salient causal factor influencing social relationships and academic task performance by children at any grade level on either experimental tasks or interview questions. For instance, on closed interview questions in reference to academic and social competence, kindergartners were as likely to select ability, effort, and luck as they were to select gender as the most important factor influencing task outcome, while older children rarely mentioned gender as an important causal influence in success and failure in academic-achievement tasks and social settings. Since younger children do not have the cognitive sophistication to consider routinely the importance of multiple causes when explaining task outcome, kindergartners in the present investigation may have been more influenced than older children by the order of presentation of the causal factors in closed questions and, as a result, were more likely to select the factor that was presented first. Since the factors were presented in random order, the "first choice" selections for kindergartners were equally

distributed over the four causal factors presented as reasons for task outcome.

Procedural differences between the present investigation and the research of Ladd et al. (1983) provide a possible explanation for why the findings of the former study do not support the findings of the latter in reference to the salience with which younger children perceive gender as a causal factor influencing task outcome. While Ladd et al. (1983) did not consider children's perceptions of gender-related factors as explanations for academic task outcome, their investigation did focus on the importance of gender similarity of social actors in a helping situation on children's decisions to help another child. In this latter regard, the findings were based, in part, on children's personal commitments or willingness to interact with another child (i.e., "Whom would you help in this situation?"). In contrast, the findings of the present investigation were based on a third person evaluation in the experimental tasks (i.e., "Which child is better at making friends/school work?") and an assessment of factors considered important to success and failure in social relationships and academic situations in the interview questions. Since younger children in the present study did not have to consider a personal commitment to interact with another child, they may have minimized the relative importance of gender as a causal factor influencing the initial stages of establishing a friendship with another child.

CHAPTER V

CONCLUSIONS

The present investigation was designed to examine the extent to which children of different ages perceive inherent ability, effort expended on the task, and gender as causal factors influencing success and failure in social relationships and academic task performance. In contrast to the findings of Nicholls (1978, 1979), the findings of the present study suggest that few working-class children at any grade level cite ability as the most salient causal influence on task outcome. While children's responses to the experimental tasks of the present study did not reveal an age trend in children's knowledge of ability, effort, and gender as causal factors influencing task outcome in social and academic settings, third and eighth graders consistently selected effort on closed interveiw questions as the most salient causal factor affecting academic task performance and social relationships. However, when given the freedom to respond spontaneously to open-ended interview questions, children in the present investigation often mentioned factors other than ability, effort, and gender as important causal influences in academic task performance and social relationships (e.g., attentiveness in academic settings, personality factors in social relationships).

Whether differences in children's responses to the experimental tasks and interview questions are due to problems of design and methodology in the present investigation or whether such differences would be

commonly revealed in future attributional research featuring experimental and interview methodologies is uncertain. Future research must address this question. It is possible that the limited range of causal factors that has been featured in previous experimental research from an attributional perspective does not accurately reflect the full range of factors that children perceive as determinants of success and failure in academic and social settings. Exploratory research featuring children's spontaneous responses to questions related to causal influences of success and failure in academic task performance and social relationships is also needed.

Finally, future research must be sensitive to the possibility that children from different socioeconomic backgrounds may have different perceptions of the salience of causal factors such as ability, effort, gender, and others noted here.

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APPENDIX A

LETTER OF INFORMED CONSENT

March 30, 1984

Dear Parents:

With the cooperation of the Winston-Salem/Forsyth County Schools, we are conducting some research with elementary and junior high school children that we think can help us learn more about what children think is important to their success and failure in social relationships and academic situations. While we already have some information in this area, we are particularly interested in whether children of different ages explain their successes and failures in making friends and doing well on school work by factors such as their own natural ability, the amount of effort they make, or their gender. What we would like to do with children in your child's classroom is to show then 32 pairs of line-drawn pictures of boys and girls which bear no connection to any of the children in your child's school. After telling them whether the children in the pictures are of high or low ability and effort, we want to ask them to decide which child would be better at making friends and solving workbook problems. Then we would like to ask each child some questions about what they think is important in doing well in friendship and academic situations. For kindergartners the task will take two 15-minute sessions. Third and eighth graders can accomplish the task in a single session lasting not more than 25 minutes. The tasks would be done in a vacant room or area in the school building at a time that the teacher finds convenient. The task will be administered by Ronald K. Lean, Ph.D. candidate, who has had a good deal of experience working with children in this age group.

Your willingness to allow your child to participate is strictly voluntary. Should you provide consent, but your child chooses not to participate, we would not have your child do the task. Also, you and your child can withdraw your consent at any time if you wish. Your child's name will never appear on any of our records or in the results of this study. We will simply assign him or her an identification number to make sure that all records are confidential. If at any time you have questions about our study or would like to talk further about it, please feel free to call Ronald Lean at 725-7777.

We would appreciate your filling out the form below and asking your child to return it as soon as possible to the teacher.

We thank you, in advance, for your help. We are looking forward to working with your child.

Sincerely,

Ronald K. Lean

Ronald K. Lean, Ph.D. Candidate
Child Development & Family Relations
University of NC-Greensboro

Garrett Lange

Garrett Lange, Ph.D.
Professor and Chair,
Department of CDFR
University of NC-Greensboro

Name of Child _____

Teacher _____

☐ Yes, my child may participate

☐ No, my child may not participate

_____
Parent's Signature

☐ I want to receive a summary of the results of the study when it is ready.

Address where summary report should be sent.

_____

_____

_____

APPENDIX B

RANDOM ORDER FOR ACADEMIC ACHIEVEMENT AND FRIENDSHIP-MAKING TASKS

DATA SHEET

Date:_____

School:_____

Teacher:_____

Grade:_____

Child's Identification Number:_____

Child's Date of Birth:_____

Child's Gender: M or F

AC-ACH

Task 1 or 2

Pair	G	A	E	Pair	G	A	E
1a.	G	HI	LO	1b.	B	LO	HI
2a.	G	LO	LO	2b.	B	HI	HI
3a.	G	HI	HI	3b.	B	LO	LO
4a.	B	LO	HI	4b.	G	HI	LO
5a.	G	HI	HI	5b.	B	LO	LO
6a.	G	LO	HI	6b.	B	HI	LO
7a.	G	HI	LO	7b.	B	LO	HI
8a.	B	HI	LO	8b.	G	LO	HI
9a.	B	HI	HI	9b.	G	LO	LO
10a.	B	LO	LO	10b.	G	HI	HI
11a.	G	LO	LO	11b.	B	HI	HI
12a.	G	LO	HI	12b.	B	HI	LO
13a.	B	LO	LO	13b.	G	HI	HI
14a.	B	LO	HI	14b.	G	HI	LO
15a.	B	HI	LO	15b.	G	LO	HI
16a.	B	HI	HI	16b.	G	LO	LO

FRIEND

Task 1 or 2

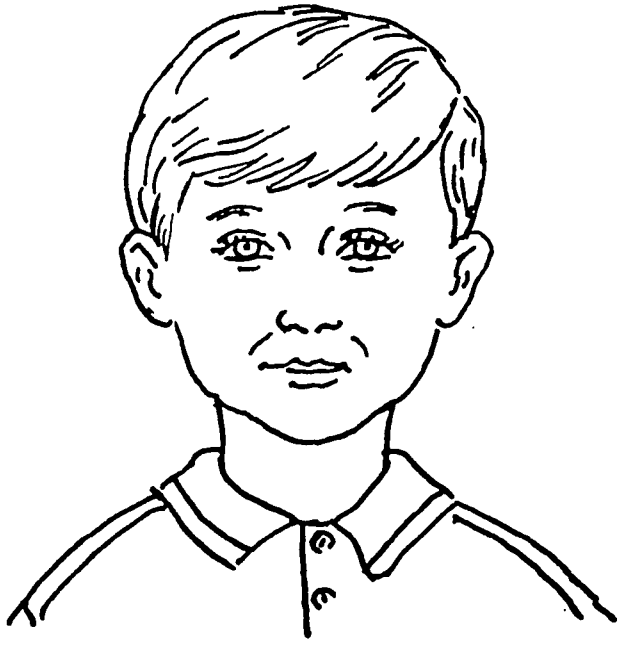
Pair	G	A	E	Pair	G	A	E
1a.	B	HI	LO	1b.	G	LO	HI
2a.	B	HI	HI	2b.	G	LO	LO
3a.	B	LO	LO	3b.	G	HI	HI
4a.	G	LO	LO	4b.	B	HI	HI
5a.	B	LO	HI	5b.	G	HI	LO
6a.	B	LO	LO	6b.	G	HI	HI
7a.	G	LO	LO	7b.	B	HI	HI
8a.	G	LO	HI	8b.	B	HI	LO
9a.	G	HI	LO	9b.	B	LO	HI
10a.	G	LO	HI	10b.	B	HI	LO
11a.	G	HI	LO	11b.	B	LO	HI
12a.	B	HI	HI	12b.	G	LO	LO
13a.	G	HI	HI	13b.	B	LO	LO
14a.	B	LO	HI	14b.	G	HI	LO
15a.	G	HI	HI	15b.	B	LO	LO
16a.	B	HI	LO	16b.	G	LO	HI

APPENDIX C

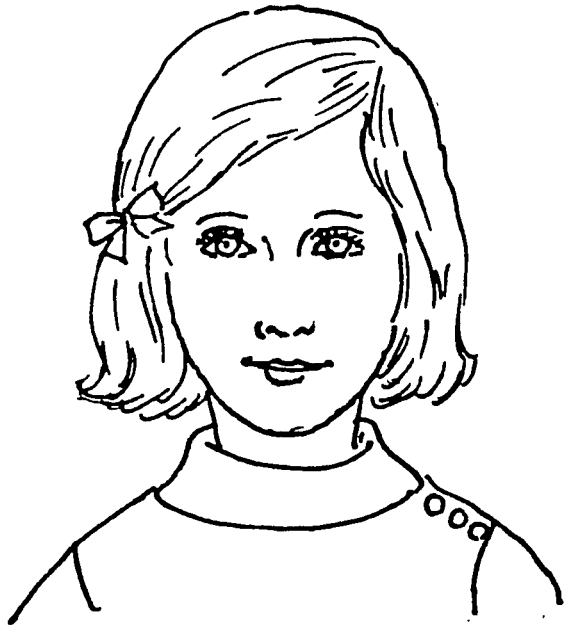
PICTURES OF A BOY AND A GIRL FROM KINDERGARTEN, THIRD, AND EIGHTH GRADES

Kindergarten Boy

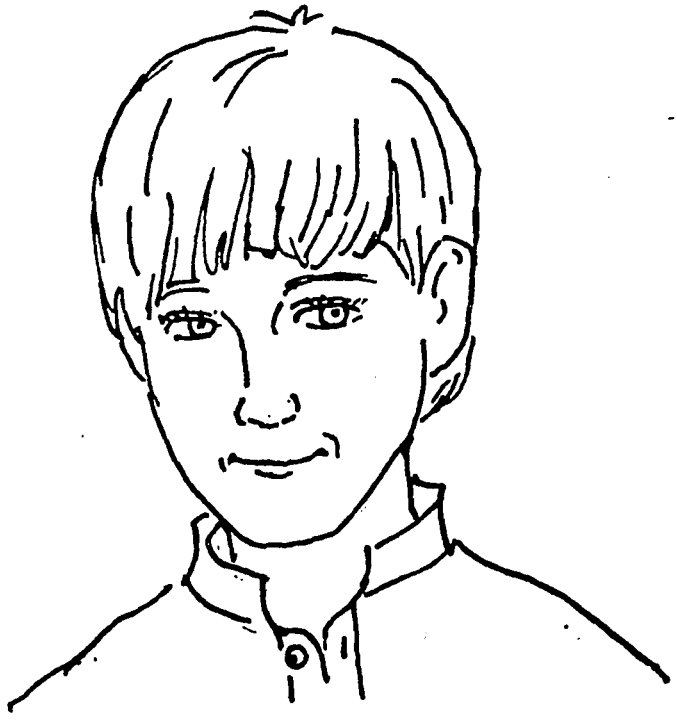
Kindergarten Girl



Third Grade Boy



Third Grade Girl



Eighth Grade Boy

Eighth Grade Girl

APPENDIX D

INTERVIEW QUESTIONS FOR THE ACADEMIC ACHIEVEMENT AND THE FRIENDSHIP-MAKING TASKS

Clinical Questions
AC-ACH
Question Set 1 or 2

1. What is it about some children who always seem to do well in their school work? What makes them do so well?

   _____

   _____

2. I am going to give you four reasons why some children might do so well: they are good at school work, they try hard at school work, the person is a boy or girl; the person is lucky. Which do you think is the most important reason?_____. Next most important?_____. Next most important?_____. Next most important?_____.

3. What do you think causes a person to do poorly in school work?

   _____

4. I am going to give you four reasons why some children might do poorly in school work: They are no good at school work; they do not try hard at school work; the person is a boy or girl; the person is not lucky. Which do you think is the most important reason? _____ _____. Next most important? _____ _____. Next most important? _____ _____. Next most important?_____.

FRIEND
Question Set 1 or 2

1. What is it about some children who always seem to do well at making friends? What makes them do so well?

   _____

   _____

2. I am going to give you four reasons why some children might do well at making friends: they are good at making friends; they try hard to make friends; the person is a boy or girl; the person is lucky. Which do you think is the most important?_____. Next most important? _____. Next most important? _____. Next most important?_____.

3. What do you think causes a person not to make friends?

   _____

4. I am going to give you four reasons why some children might do poorly in making friends: They are not good at making friends; they do not try hard to make friends; the person is a boy or girl; the person is not luck. Which do you think is the most important reason? _____ _____. Next most important?

_____. Next most important? _____

_____.