INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.
Ethnicity as a mediator of a social skill

Akamine, Hale S. T., Ph.D.
University of Hawaii, 1991
ETHNICITY AS A MEDIATOR OF A SOCIAL SKILL

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN PSYCHOLOGY

MAY 1991

By

Hale S. T. Akamine

Dissertation Committee:

Clifford R. O'Donnell, Chairman
Alison Adams
Daniel Blaine
Gilfred Tanabe
Kathleen Wilson
ACKNOWLEDGEMENTS

I realize I will omit many who have made this project possible and I hope they forgive me.

I would like to thank the principals and teachers of the following schools who had given me permission to conduct my study: Hahaione Elementary School, Koko Head Elementary School, Aina Haina Elementary School, Hokulani Elementary School, Waiau Elementary School, Pearl City Elementary School, and Wahiawa Elementary School.

Secondly, I would like to thank the Center for Youth Research, University of Hawaii, for providing me with support for this research.

Thirdly, my deepest appreciation goes to Clifford O'Donnell, my professor, graduate advisor, thesis and dissertation chairman. His warm, gentle, yet firm guidance throughout my graduate career made it all possible.

Fourthly, to my sweetheart, Gayle, who was my cheerleader, typist, research assistant, and best friend throughout my graduate studies - my sincerest gratitude.

Lastly and most importantly, to Jesus Christ, my Lord and Savior who has blessed me so richly - my all.
The verbal and nonverbal behavior of 45 Japanese-American and Caucasian-American sixth-grade boys, about one-half of whom had undergone social skill training, were compared in a "resisting peer pressure" roleplay situation. Findings suggest that Japanese-Americans behave differently depending upon the ethnicity of the roleplaying partner. Japanese-Americans are significantly more likely to use direct verbal behavior with subjects from their own ethnic group and exhibit a tendency to use indirect behavior with Caucasian-American partners. It was suggested that this finding may be analogous to previous research showing that friendship, thus candor, is more likely to occur with same-race peers. Social skill training was found to significantly increase direct behavior and decrease indirect behavior. However, training was found also to increase the use of a relaxed posture. An explanation of this finding was that the behavioral coding system may not have included a posture compatible with direct verbal behavior. Implications for future study are discussed.
# TABLE OF CONTENTS

ACKNOWLEDGEMENTS ......................................................... iii

ABSTRACT ........................................................................ iv

LIST OF TABLES .................................................................... viii

LIST OF FIGURES .................................................................... ix

CHAPTER I. INTRODUCTION ..................................................... 1
  Foundational Years 1930 - 1940 ........................................ 2
  Development Years 1940 - present .................................. 13
  Definitions of Social Skill ............................................... 19
  Related Factors of Social Skills ...................................... 23
  Assessment of Social Skills ............................................. 28
  Treatment Approaches to Social Skills Training ............. 49
  Criticisms of Social Skills Training ............................. 62
  The Present Study ......................................................... 69

CHAPTER II. METHOD ........................................................... 72
  Design ............................................................................ 72
  Sample ............................................................................ 73
  Experimental Procedure .............................................. 75
  Instruments Used ........................................................ 77
  Hypotheses ...................................................................... 84

CHAPTER III. RESULTS ......................................................... 87
  Section One: Predicted Findings .................................... 87
  Section Two: Confounding and Reliability .................. 96
  Section Three: Non-predicted Findings ..................... 102

CHAPTER IV. DISCUSSION ..................................................... 110
  Confounding Factors ................................................... 110
CHAPTER IV. DISCUSSION ..............................................110
  Confounding Factors..............................................110
  Predicted Findings...............................................114
  Unpredicted Findings............................................119
  Implications of the Study........................................122
APPENDIX A. Student Demographic Information.................125
APPENDIX B. CPSI Form...............................................126
APPENDIX C. Sociometric Scale....................................128
APPENDIX D. Teacher Evaluation Form................................129
APPENDIX E. Confederate's Evaluation Form.......................130
APPENDIX F. Subject's Evaluation Form............................131
APPENDIX G. Nonverbal Coding Form..............................132
APPENDIX H. Verbal Coding Form..................................133
APPENDIX I. Coding Procedure.....................................134
APPENDIX J. Social Skill Training Procedure.......................136
APPENDIX K. Saying No Steps Coding Form.........................137
APPENDIX L. Saying No Explanation Sheet........................138
APPENDIX M. Interview Your Partner Form.........................139
APPENDIX N. Saying Positives Form................................140
APPENDIX O. The Good Feeling Award Form........................141
APPENDIX P. Roleplay Script Illustration.........................142
APPENDIX Q. Roleplay Script Example................................143
APPENDIX R. Variable Descriptions of Abbreviations (I)........144
APPENDIX S. Variable Descriptions of Abbreviations (II).......145
APPENDIX T. Grand Means (I)......................................146
APPENDIX U. Grand Means (II).................147
APPENDIX V. Grand Means (III)................148
APPENDIX W. Grand Means (IV)..................149
APPENDIX X. Grand Means (V)....................150
APPENDIX Y. Grand Means (VI)....................151
APPENDIX Z. Grand Means (VII)..................152
REFERENCES............................................153
LIST OF TABLES

Table 1. Study Design and Sample Sizes.........................72
Table 2. Social Skill Correlate Variables by Confederates' Ethnicity...............................97
Table 3. Social Skill Correlate Variables by Subjects' Ethnicity.................................97
Table 4. Subjects' Self-Perception of Roleplay Performance.................................99
Table 5. Inter-rater Percent Agreement for the Nonverbal Behavioral Scale Categories.........100
LIST OF FIGURES

Figure 1. Subjects' Indirect Verbal Behavior by Confederates' Ethnicity ...................... 90

Figure 2. Subjects' Direct Verbal Behavior by Confederates' Ethnicity ...................... 94

Figure 3. Subjects' Direct Verbal Behavior by Training ... 103

Figure 4. Subjects' Indirect Verbal Behavior by Training ........................................... 105

Figure 5. Subjects' Questioning Statements by Training ... 106

Figure 6. Subjects' Self-Expressive Statements by Confederates' Ethnicity ...................... 108
Chapter I

INTRODUCTION

Recent research findings have suggested that socially skilled children are less likely to encounter social maladjustment both in their adolescence and adulthood, while children deficient in social skills are at high risk for developing serious social and emotional problems. Consequently, renewed interest has spawned efforts to develop social skills training programs to prevent later psychosocial difficulties.

However, in an effort to develop effective social skills training programs for children, crucial yet subtle assumptions appear to be flawed. One of these assumptions is that social skills are free from ethnicity differences. It is the purpose of this study to test whether in fact ethnicity is an important variable to consider when conducting social skills training.

This chapter will begin by providing a brief historical review of the foundations of social skills research leading into current work in the area; covering such topics as the various definitions of social skills, related factors of social skills, assessment methodologies, treatment approaches, and criticisms of previous research. The chapter concludes with a proposed study.
Foundational Years 1930 - 1940

The foundations of social skills training were laid during the zeitgeist of peer interaction research which swept across the country in the 1930s (Asher & Gottman, 1981). Two significant developments in the late 1920s presaged what is today a topic of intense interest. The first was Thrasher's 1927 study of children gangs and clubs in the city of Chicago. Thrasher drew from the works of Cooley (1902) who noted the powerful socializing influence of peer groups, and from Park (1915) who highlighted the influence of urban environments upon human behavior. Thrasher's study demonstrated how researchers could study mobile and unpredictable behaviors of groups in natural settings by analyzing the formation, location, membership, and behaviors of gangs in Chicago. This study is considered to be the first empirical work on peer group behaviors (Asher & Gottman, 1981).

The second major influence was the growth of child-welfare institutions. During the late 1920s child-welfare institutes housed at the universities of Iowa, California - Berkeley, Yale, Minnesota, and Teacher College - Columbia received large long-term grants to study childhood development (Sears, 1975, p. 21). These funded studies were mainly observational in nature, focusing on behavioral descriptions of young children.
The third major influence occurred during the 1930s when many western countries became concerned over the vulnerability of democratic social institutions (Becker, Ulich, Piaget, Lindemann & van der Leeuw, 1932; Zorbough, 1938). In the United States the economic depression stirred social unrest. Youth unemployment rose considerably; revolutionary ideals were perceived to be taking hold. The potential for disillusionment with democracy's social values raised deep anxiety within the country (Zarbough, 1938). Child researchers such as Piaget (1932) urged that democratic ideals be taught early in the life of children. Other voices called for allowing high-schoolers more freedom in order that they might come up with solutions to the growing social ills, since adults were unsure of what was needed to generate answers to the troubled times (Thelen, 1967).

Across the Atlantic, the increasing political tensions in Europe forced prominent researchers such as Lewin, Buhler, and Moreno to flee to the United States. The result was a tremendous boon to peer interaction research. With these researchers fresh creative energies infused the child welfare institutes (Asher & Gottman, 1981). As an example, H. Anderson (1937) and Page (1936) combined research on children's interactive styles with Lewin and Lippitt's (1938) work on democratic and autocratic group instructor styles.
Experimental nursery schools, which were attached to the child welfare institutes provided for even more research into child social behavior. However, these nursery schools were not reflective of child care in the United States during the 1930s. Only five percent of preschool age children attended preschool and only 30% of 5 year olds were in kindergarten. Virtually no children of low socioeconomic families attended nursery school and less than 25% of high income families sent their children to nursery school. Nevertheless, these schools provided the environment needed to develop theories and methodologies for peer interaction research.

The research climate during the 1930s allowed for consideration of various conceptual frameworks to understand children's social behavior. One major researcher, Sherif (1936), combined Lewin's field theory which stressed that the group should be the unit of analysis, with Piaget's work on the development of children's rules for regulating behaviors. Another influential researcher, Jack (1934), combined naturalistic observation and controlled experimentation to study personality traits in children.

Competing theories concerning the social character of children were being formulated during this period. Anna Freud (1935) espoused the view that children were basically inconsiderate, self-centered, and cruel; that children's underlying antisocial traits were the inevitable struggle
between the child's spontaneous and self-centered impulses and the restrictions imposed by the environment.

A wholly different perspective drawn from observational studies, suggested that children were basically friendly, cooperative, even quite sympathetic (e.g., Cocknell, 1935; Isaacs, 1933; Parten, 1932). While others such as Murphy (1937) who through a series of studies of preschoolers within naturalistic and contrived settings, argued that children's behavior were mostly dependent upon the nature of the setting.

Methodologically, use of observational studies gained popularity during this early period. Well-respected child development researchers, for example, Thomas (1929) and Blatz & Bott (1929), were convinced that the science of child psychology would emerge only after sufficient empirical data were obtained. They also believed that researchers must stay away from predetermined categories of behaviors and code only actual observable behaviors. However, as Asher and Gottman (1981) noted, this type of methodology often lent itself to observations devoid of much information. For example, Bott (1928) summarized the play behaviors of a child only in terms of numbers of peers involved (e.g., alone, with one other child, with two other children, etc.). Others developed more sophisticated techniques such as the use of equal number of observational periods for each subject and the use of short time samples
of behaviors rather than continuous records (e.g., Goodenough, 1928; Anderson, 1933).

Wellman (1926) studied friendship patterns by observing the frequency of interactions among junior high school students and comparing the results to similarities and differences in their personality, physical attributes, and developmental markers (mental and chronological age). This study stimulated other researchers to study preschoolers' friendship patterns (e.g., Challman, 1932; Hagman, 1933). Wellman's work also influenced the work of Moreno (1942) who examined the process of peer rejection in groups of elementary school students.

Researchers also began to consider the context in which behavior occurs. Isaac (1933), one of the most well-known of the early researchers, influenced others to consider contextual cues. She would record peer interactions of whole episodes of behavior noting actors, context, and precipitating events, and consequences. Note the following example (cf. Asher & Gottman, 1981).

11-24-24. The children were all modelling very quietly and Dan made a boat and gave it to Benjie. Benjie told the others, "He has made a boat for me." Dan remarked, "Yes, I like you very much, and I'm going to kiss you." He kissed Benjie's hand. Bengie told the others, "He likes me." Dan then said to Harold, "I like you, and I'm going to kiss
you," and kissed Harold's hand. Harold said, "He's a dear little thing," and all the others agreed. [Isaacs, 1933, pp. 93-94].

The attention to context was incorporated into research by other investigators interested in children's social interactions (e.g., Dawe, 1934; Murphy, 1937). Dawe (1934) recorded over 200 quarrels between preschool children and noted their characteristics (age, sex, name), precipitating events, context (indoor or outdoors), resolution process, and aftereffects.

Observational studies also used time-sampling procedures. Pioneered by Goodenough (1928) and Olson (1929), this procedure was used to study children's friendships and quarrels (Green, 1933), successful social interactions (Mallay, 1935), resistance and acquiescence in social transactions (Caille, 1933), and children's play behavior (Parten, 1932). Using a time-sampling procedure, Parten (1932) developed specific categories of interactions (e.g., solitary play, onlooker play, parallel play, associative play and cooperative play) to denote increasingly interdependent forms of peer interactions.

The development of sociometric measures, still in wide use today, was developed during 1930s. This methodology entails assessment and description of interpersonal attraction among members of a group. Moreno (1932), the first to widely use this method, applied it to his theory
that interpersonal choices should be the basis of formulating groups (e.g., dormitories, recreation, work, etc.); given that cohesive groups functioned more effectively. Koch (1933) used a paired comparison sociometric measure to rank a group in terms of comparative peer status and showed that social effectiveness with one's peers related to other measures of social adjustment (e.g., compliance with classroom routine, avoidance of disruptive behaviors, playing alone, aggression).

These two researchers through their use of sociometric measures spawned two traditions in children's research: Moreno's focus on group structure (as affected by interpersonal attraction) and Koch's interest in individual differences and individual children's characteristics. Following Koch's guidelines, Northway (1943, 1944, 1946) attempted to identify behavioral characteristics of unpopular children and devise ways of helping these children gain in peer acceptance. Northway proposed classifying isolated individuals based on observation, teacher reports, and information in the pupil's records. He came up with three categories: (1) recessive children - children who were listless, below average in intelligence, and lacking physical, and mental vitality; (2) socially uninterested - unmotivated to become socially involved; and (3) socially ineffective - those who were noisy, rebellious and arrogant.

Jennings who had previously worked with Moreno,
furthered the use of sociometric measures in analyzing group structure. He (Jennings, 1937, 1952) suggested that the characteristics of the situations elevated individuals to leadership or relegated them to isolation. Jennings suggested that teachers reshape classroom grouping practices (e.g., establish home rooms by child's choice, that teachers monitor children's interactions so that no child gets left out, and that teachers manipulate classroom roles to give the child some important group role). Jennings (1959) felt it was unproductive to pursue research into individual social skill or learning deficits, preferring instead to focus upon the context in which behavior occurs.

Experimental studies also took hold during the 1930s. Researchers began to see if they could change either the interaction styles of children (Chittenden, 1942; Jack 1934; Page, 1936) or help unpopular or unsocial children gain in peer acceptance (e.g., Koch, 1935). Researchers felt that not only would they be able to help children but also discover the processes underlying change in peer relationships.

During the 1930s Lewin argued for the experimental approach to be applied to the study of group phenomenon. An example was his classic study of group climates (Lewin, Lippitt & White, 1939) in which interaction patterns of groups of boys were found to differ according to the democratic or autocratic styles of leadership, irrespective
of what particular person played the role of the leader. Thus he said that it was the interactional patterns, not individuals, which needed to be addressed.

Intervention research was also attempted to see if behavior could be manipulated. Jack (1934) in an ingenious experiment taught children whom he had classified as submissive to exhibit assertive behaviors. Murphy (1937, p. 403) regarded Jack's study as an important breakthrough in showing that behavior could be altered in a relatively short time through simply increasing the subjects' skill.

The 1930s was an exciting period. With the explosion in research there also was the need to communicate, thus the advent of journals and handbooks to spread the growing wealth of information. These included Thomas and Thomas (1928) The Child in America, Murchison (1933)'s Handbook of Child Psychology, and the first volume of the journal Child Development (begun in 1930). Various child welfare institutes also started publications of their own research monographs. Researchers were blessed with resources, a medium for communication, and new ideas to conceptualize and measure children's interactions.

The period after the 1930s however proved less fruitful. World War II took many of the child psychologists away from the child welfare institutes. While peer research did continue after the war, the nature of the research changed. Observational studies decreased substantially from
53 in 1930 to fewer than 40 during the next two decades (Wright, 1960), with few of them concerned with peer interaction (Asher & Gottman, 1981). Peer intervention studies (i.e., social skills training) failed to garner much interest. Michelson and Wood (1980) documented only 55 articles dealing with peer intervention from 1942 to 1978, an average of 1.5 articles per year.

The lack of peer interaction research could also be attributed to major shifts in conceptualizing children's social behavior. Child development and social psychology moved away from studying peer relationships focusing instead on parent-child relationships, with renewed interest in psychoanalytic and Piagetian concepts (Asher & Gottman, 1981; Lewis & Rosenblum, 1975). In social psychology the movement from observed behavior to covert processes also affected the view of children's behavior. Research shifted away from observable behavior to attitudes, i.e., perceptions of sociometric status (Ausubel, Shiff, & Gasser, 1952), children's racial and ethnic attitudes toward each other (Radke, Trager, & Davis, 1949), and children's concepts of race, religion, and ethnicity (Hartley, Rosenbaum, & Schwartz, 1948a, 1948b).

Influential researchers of the 1940s and 1950s (e.g., Keller, 1950; and Skinner, 1947) strongly advocated using experimental designs (i.e., laboratory) in the study of children's behavior. Sears (1947) even noted that
nonbehaviorists felt that principles of behavior could best be discovered in a controlled setting, as opposed to naturalistic observational studies. Under this climate, observational studies were not to regain popularity until the mid-1970s (Asher & Gottman, 1981).

In summary, the foundations of social skill training were laid during the zeitgeist of peer interaction research in the 1930s. In the previous decade, the study of youth gangs and the growth of child welfare institutions signaled the beginnings of the movement towards understanding social behavior in children. During the 1930s, Western countries became increasingly concerned about the stability of democracy. With the increasing tensions in Europe, European child development researchers flocked to the United States infusing creative energies into research at child welfare institutes. Theories developed by Piaget, Freud, and Lewin were being tested by various methodologies such as naturalistic and contrived observation, experimental designs, and sociometric measures. Intervention research also grew out of this decade.

However, after the 1930s peer interaction subsided considerably. The major reasons were the outbreak of World War II forcing psychologists away from their work in the area, theoretical shifts in child development and social psychology from peer interaction to parent-child interaction.
and covert processes, and the shift towards favoring experimental (i.e., laboratory) designs.

**Development Years 1940 - present**

Interest in social skills research rekindled when investigators began to find a relationship between early childhood social difficulties and later disturbances. Children with poor peer relations were found to be at significantly higher risk for delinquent behaviors (Roff, Sells, & Golden, 1972), dropping out of school (Ullmann, 1957), suicide (Stengel, 1971), bad conduct military discharges (Roff et al., 1972), and adult mental health disorders (Cowen, Pederson, Babigian, Izzo, & Trost, 1973; Roff et al., 1970). In one study (Cowen et al., 1973), third grade students were assessed on their intellectual functioning, teacher rating of behavior, self-report of behaviors, and peer popularity. It was peer unpopularity which best predicted psychiatric disturbances 11-13 years later.

Social skill studies have further identified several groups of children vulnerable to later dysfunctions. These children can be classified into two categories, clinic and non-clinic samples. The clinic sample includes troubled adolescents, the mentally and emotionally impaired, and children whose behavior fit a variety of diagnostic classifications (e.g., Diagnostic and Statistical Manual
Third Edition - Revised, 1987). The latter are often referred to special placements such as special education classes and mental health services. Included are children who are behaviorally disordered or handicapped in interactions with peers and adults (i.e., overly aggressive, oppositional, impulsive, or withdrawn) or delinquent.

Numerous studies show that handicapped children interact minimally with non-handicapped children (e.g., Bruininks, 1978; Bryan, 1974, 1978; Feitelson, Weintraub, & Michael, 1972; Morgan, 1977) and are not readily accepted by their non-handicapped peers. This finding has been reported in populations of the mentally retarded (Ballard, Corman, Gottlieb, & Kaufman, 1978; Bruininks, Ryners, & Gross, 1974; Gottlieb, 1975; Sheare, 1974), learning disabled (Bruininks, 1978; Bryan, 1974, 1976, 1978), and emotionally disturbed/behaviorally disordered (Cowen et al., 1973; Morgan, 1977; Victor & Halverson, 1976; Weintraub et al., 1978). These studies also strongly suggest that handicapped children would benefit from training which would increase their rate of positive social interaction, decrease their rates of negative social interaction, and/or enhance their acceptance by non-handicapped peers.

Troubled adolescents have been found to have social skill deficits, such as poor eye contact, and poor verbal and nonverbal conversation skills, such as hesitant speech and fidgeting (Freedman, Rosenthal, Donahoe, Schlundt, &
McFall, 1978; Spence & Marzillier, 1979, 1981). However, Hollin and Trower (1988) caution that most of the studies conducted on this population have been laboratory studies and are not necessarily ecologically valid. More importantly, studies have not established a causal relationship between skill deficits and delinquent behaviors (see reviews, Henderson & Hollins, 1983; Spence, 1979, 1982; Henderson & Hollin, 1986).

The non-clinic sample includes nonhandicapped children who are believed to be at risk for later social maladjustment. These children have been studied in public schools rather than in clinics, special classes, or treatment centers. They include those who display low rates of social interactions with peers (usually referred to as either neglected or socially isolated-withdrawn) or those who are actively disliked or ignored by peers (usually referred to as rejected).

The neglected, or socially isolated-withdrawn children are viewed as shy, passive, and lethargic (Bower, Amatea, & Anderson, 1976; Patterson, 1964). Bornstein, Bellack, and Hersen (1980) described these children as being unable to stand up for themselves, easily conforming to others, and having difficulty speaking clearly when frustrated. Not surprisingly, withdrawn-isolated children elicit and receive few social reinforcers for engaging in cooperative behaviors (Greenwood, Walker & Hops, 1977; Hartrup, Glazer, &
When around a group they are more likely to hover and wait (apparently for peers in the group to allow them in) than initiate entrance into the group (Dodge, 1983; Dodge, Schlundt, Schocken, & Delugach, 1983). Interestingly, while categorized as unpopular by sociometric measures, neglected children are not necessarily disliked by their peers (Dodge, 1983; Dodge, Coie, & Brakke, 1982; Dodge et al., 1983; Gottman, 1977).

On the other hand, rejected children are disliked. They display significantly more inappropriate play, engage in less social conversations, hostile verbalizations, hostile behaviors (Coie, Dodge, & Coppotelli, 1982; Dodge, 1983; Dodge et al., 1983) and focus attention on themselves (Dodge et al., 1983). When attempting to enter a group, rejected children are significantly more likely to engage in disruptive entry behavior, e.g., stopping the activity or interrupting the group (Dodge et al., 1983). These children also engage in more exclusionary behavior (i.e., they refuse to allow peers to enter into the group) than either popular or neglected children (Dodge, 1983).

The extent to which poor peer interaction was a concern was first reflected in a report by Gronlund (1959). He noted that nearly 6% of third through sixth grade children in one school system had no friends in their classrooms, with 12% having only one friend. This was confirmed by
Hymel and Asher (1977) who found that 11% of their sample lacked friends.

Adding to the dilemma of unpopular children is the relative enduring nature of social status. While there are few long-term prospective studies, shorter-term (one to five years) prospective studies confirm the stability of early social status (e.g., Bonney, 1943; Coie & Dodge, 1983; Coie et al., 1982; Roff et al., 1972). Bonney (1943) found the correlation of social acceptance from the second to the third grade to be .84 and from third to fourth, .90, .68, and .69, for each of the three sample schools. Roff et al. (1972) followed a large sample (n=1,156) of third graders in Texas and Minnesota into the sixth grade and found that sociometric scores remained relatively stable. The correlations for the Like Least scores from third to fourth grade was .38; from third to fifth grade it was .35, and from third to sixth grade it was .34. Coie & Dodge (1983) followed 208 third and fifth graders for five years and found that the average correlations from the first to the fifth year of those students labeled rejected and neglected was .36 and .45, respectively.

Conversely, popularity in childhood has been associated with superior achievement (Laughlin, 1954; Muma, 1965, 1968; Northway, 1944; Porterfield & Schlichting, 1961) and adequate interpersonal adjustment in later life (Barclay, 1966; Brown, 1954; Guinourd & Rychlak, 1962; Young & Cooper,
Peer popularity, from preschool to adolescence, has been associated consistently with characteristics as friendliness (e.g., Marshall & McCandless, 1957; Moore, 1967) and outgoingness or social participation (e.g., Bonney, 1943). High peer acceptance also has been associated with nurturance given to peers (Moore & Updegraff, 1964); frequent positive social reinforcers to peers (Gottman, Gonso, & Rasmussen, 1975; Hartup et al., 1967); willingness both to give and receive friendly overtures and to respond positively to the dependent behavior of peers (Campbell & Yarrow, 1961); and sensitivity to the social overtures of other children (Klaus, 1959). Consequently, peer popularity has become synonymous with being socially competent or skilled (see reviews by Combs & Slaby, 1978; Dygdon, 1988; Green & Forehand, 1980; Hollin & Trower, 1988; Ladd, 1984; Michelson & Woods, 1980).

In summary, the body of literature on peer interaction and later functioning identifies two major categories of children who are at risk for later dysfunctioning, a clinic population which includes handicapped children and troubled adolescents, and a non-clinic population consisting of children who are considered to be neglected or rejected by their peer group. All of these children appear to have poor social skills. Conversely, there exists a population of popular children who have excellent social skills and appear to be not as much at risk for later dysfunctioning.
Definitions of Social Skills

There are various definitions of social skills that appear in the literature. One approach to defining social skills has been to take a functional perspective. Chittenden (1942) defined it in terms of assertiveness, and the impact or influence one child has on another. Years later, Rinn & Markle (1979) define assertiveness and its influence as necessary components of a definition of social skills. Social skills were defined as a:

"... repertoire of verbal and nonverbal behaviors by which children affect the responses of other individuals (e.g., peers, parents, siblings, and teachers) in the interpersonal context. This repertoire acts as a mechanism through which children influence their environment by obtaining, removing, or avoiding desirable and undesirable outcomes in the social sphere (p. 108)."

Barret and Yarrow (1977) discuss children's "assertions" as behaviors which direct or terminate another child's activity; the goal being to "influence or control" with no intent to injure.

Others with a functional view variously define social skills as the ability to interact with others in ways that are beneficial to the self and to others (Combs & Slaby, 1978); interpersonal and task-related behaviors that produce
positive consequences in the classroom (Cartledge & Milburn, 1978); responses emitted in interpersonal situations that prove effective or have a high probability of reward for the user (Foster & Ritchey, 1979); and the ability to emit behaviors likely to be reinforced by others and refrain from those likely to be punished (Libet & Lewinsohn, 1973).

A second view has been to define social skills in terms of interpersonal cognitive strategies (e.g., Shure & Spivack, 1974; Pellegrini, 1980; Pellegrini & Urbain, 1985). According to this perspective, competent production of social skills are dependent upon the individual's cognitive skills of alternative thinking (i.e., ability to generate multiple alternative solutions to an interpersonal problem situation), consequential thinking (i.e., ability to foresee the immediate as well as the long-range consequences of a particular alternative, and to use this information in the decision-making process), and means-ends thinking (i.e., ability to elaborate or plan a series of specific actions to attain a given goal, to recognize and devise ways around potential obstacles, and to use a realistic time framework in constructing a means to the goal). The goal of interpersonal cognitive strategies, according to Pellegrini and Urbain (1985, p. 20), "... is not to generate a particular belief system in the child, but rather a way to reason and to use one's own belief and values in decision-making relative to problems that arise."
Another perspective has been to define social skills as a subset of social competency; with social competency being the ability to perform a task adequately (McFall, 1982). According to McFall, meaningful human activities (e.g., conversing, playing a game) are organized into tasks that can be broken down into necessary basic steps to successfully accomplish a specified performance. Individuals differ according to the extent to which they have the essential subskills to perform the task. As an example, whether a person is able to converse effectively with a new student in his class (the task) would depend on his past history in conversing with new students, his ability to interpret the right cues of the situation (e.g., the new student is willing to chat), his ability to choose the right time and topic of mutual interest, and his actual production and monitoring of his skills (e.g., chats with the student and stops when he ceases to be interesting or informative). An observer then would rate the performance as being either competent or not.

Still another approach has been to define social skills as separate from their situational consequences. For example, Curran (1979) suggested viewing social skills as a construct limited to motoric behaviors performed in interpersonal settings. The consequences of the behaviors may be considered in the judgement of the individual's competency but they are not needed to define the skill itself.
One example of this approach looks at social skills from a cognitive-social learning perspective (e.g., Asher, 1983; Asher & Renshaw, 1981; Ladd & Mize, 1983). From this viewpoint social skills are defined as having several components: relevance (i.e., ability to read social situations and adapt their behaviors to the ongoing flow of interactions); responsiveness (i.e., positively responding to the initiations of others); a "process view" (i.e., appreciating that things take time to develop and that the most effective way to obtain a goal may not be going for it directly); appropriate goal selection (i.e., interpersonally beneficial goals); self-confidence in ability to achieve interpersonal goals; and ability to monitor social interactions and regulate behaviors as a function of feedback from others.

In summary, there are four basic approaches to defining social skills: (1) functional or consequential - defining social skills in terms of its results, (2) interpersonal cognitive strategies - defining social skills in terms of the individual's ability to reason, (3) as a subset of social competency - defining social skills as the ability to perform the various subskills of a specific skill, and (4) cognitive-social learning perspective - defining social skills as having the appropriate cognitive and behavioral components.
Related Factors of Social Skills

Studies also have identified factors that are related to the expression of social skills. Peer popularity, previously discussed in this paper is used in most current social skill studies as the indicator of social competency (see reviews, Asher, 1983; Combs & Slaby, 1978; Dygdon, 1988; Michelson & Woods, 1980; Ladd, 1984). Again, the findings show that children who are perceived as popular appear to be more socially skilled than those who are perceived not to be popular.

More recently, researchers have identified children's self-confidence as mediating the expression of social skills. Asher and Taylor (1983) suggest that children who have been unsuccessful in obtaining their interpersonal goals may avoid pursuing further relationships because of the fear of experiencing either failure or negative responses. Thus, these children lose confidence in their ability to control their own social outcomes. To assess causal attribution of failure in social situations, Goetz and Dweck (1980) designed a questionnaire which depicted hypothetical situations involving rejection by peers. Fourth and fifth graders were then asked to develop a list of reasons why rejection occurred. Children who attributed failure in social situations to themselves used less effective strategies to gain peer acceptance following a mild rejection experience, than children who attributed
failure to either certain characteristics of the rejector or incompatibility with the rejecter. In addition, children with low sociometric ratings were more likely than popular children to attribute failure to their incompetence. In another study, Wheeler and Ladd (1982) tested a children's self-efficacy measure on 138 third through fifth grade students. They found that children's feeling of self-efficacy was significantly correlated with teacher rating of social efficacy and peer rating of popularity.

Academic achievement has been also shown to correlate with the expression of social skills (Dorman, 1973; Feldhusen, Thurston, Benning, 1970; Payne, Halpin, Ellett, & Dale, 1975). Kim, Anderson, & Bashaw (1968) found significant correlations between standardized measures of achievement and social behavior of children. Myers, Atwell, and Orbet (1968) in a longitudinal study of third and sixth graders who were identified as disruptive or socially appropriate, found that achievement scores collected five years later were able to predict which of the students were previously disruptive or appropriate. Selman, Beardslee, Schultz, Krupa, and Podorefsky (1986) showed that adolescents with high IQs negotiated with others on a more mature level than adolescents with low IQs, regardless of age.

Gender differences have been found to be a factor in social skills studies, with boys consistently having
significantly more difficulty in social situations than girls. Boys have more learning-related problems (e.g. poor work habits, difficulty following directions) and more acting-out behaviors (e.g., overly aggressive to peers, disruptive behaviors, defiant) (e.g., Gottman et al., 1975; Lorion, Cowen, & Caldwell, 1975). While girls exhibit more empathy in problem-solving tasks (Dodge, McClaskey, & Feldman, 1985; Ford, 1982; Selman et al., 1986) and are seen by both sexes as having more social skill (Ford, 1982; Lowe & Cautela, 1978). One study (Selman et al., 1986) assessed adolescent negotiation strategies and found that female subjects showed more sophisticated strategies when age and IQ were held constant. Several studies suggest that successful use of social skills by girls require using more verbal behavior (e.g., making offers, making positive comments) than boys; conversely, successful use of social skills by boys require significantly more physical behavior (e.g., touching, pushing, pulling) than girls (Charlesworth & Dzur, 1987; La Frienere & Charlesworth, 1987; La Frienere, Strayer, & Gauthier, 1984).

Age has also shown to be a factor in social skills research. The amount of positive social behavior increases from ages 3 to 6 and through the fourth grade (Gottman et al., 1975; Greenwood, Walker, Todd, & Hops, 1976; Hops & Finch, 1982; Hops & Greenwood, 1988; Mueller, 1972; O'Connor, 1975; Raph, Thomas, Chess, & Korn, 1968; Reuter &
Yunik, 1973; Rubin, 1982). Rates and quality of aggressive acts decrease through middle childhood and into adolescence (Hartup, 1983). During this same developmental period, students increase in their ability to display affective understanding (Fischler & Kendall, 1988; Ford, 1982), respond to failure and success (Dodge et al., 1985), and negotiate problematic situations (Fischler & Kendall, 1988; Selman et al., 1986). Gottman et al. (1975) studied 198 third and fourth graders and noted that fourth graders were significantly more likely to differentiate between different emotional states when shown faces in photographs. Fourth graders also were more likely to offer assistance to peers having difficulty with arithmetic problems.

As a whole, socioeconomic status (SES) as a mediating variable has not been widely examined. Gottman et al. (1975) found in a study of third and fourth grade students from middle- and lower-income schools that lower-income students spend significantly more time interacting with the teacher, distributing negative reinforcement, and receiving less positive reinforcement. Lower-income students dispensed more nonverbal reinforcement to their friends while middle-income school students dispensed more verbal reinforcement to their friends. The researchers also noted that from third to fourth grade, middle-income students displayed less "making friends" behavior than lower-income students when observed in a role-play situation.
Intervention studies with SES as a variable have used primarily an interpersonal cognitive problem-solving approach to social skill development (Pellegrini & Urbain, 1985). These studies indicate significant increases in problem-solving ability can occur in low-SES preschoolers (Shure & Spivack, 1980; Spivack & Shure, 1974), mothers of preschoolers (Shure & Spivack, 1980; Spivack & Shure, 1974) and elementary-aged students (Weissberg et al., 1981b), albeit with mixed results in behavior changes. Weissberg et al. (1981b) found that a group of inner-city, low-income black third-grade students actually worsened in teacher-rated social behaviors over a 52-lesson, school-based program. A related study (Weissberg et al., 1981a) using similar procedures (Weissberg et al., 1981b), resulted in improvement of problem-solving skills and teacher-rated behaviors of the low-SES students. However, the study was clouded by the inability to rule out the effects of rater bias; and the existence of weak or non-significant correlations between changes in problem-solving ability and behavior change (Pellegrini & Urbain, 1985).

Similarly, the ethnicity of students also has not been studied widely in social skills research. Studies conducted on students from kindergarten through the sixth grade consistently show that black and white students prefer same-race peers as friends (Bartel, Bartel, & Grill, 1973; Gerard, Jackson, & Conolley, 1975; Shaw, 1973). A study of
classroom observation of behavior and sociometric ratings of work and play in black and white third-graders found same-race preference in sociometric ratings but not in observational data (Singleton & Asher, 1977). In both measures, same-sex preference accounted for most of the variance.

In the previous section on SES and social skills, the low SES subjects were also black (Shure & Spivack, 1980; Spivack & Shure, 1974; Weissberg et al., 1981a, 1981b). Consequently, delineating the precise contribution of either SES or ethnicity based upon the previously cited research is not possible due to the inherent confound of the two variables.

In summary, several variables have been identified as related to increased levels of social skills expression: positive peer popularity, high academic achievement, high levels of self-confidence, and being female. Currently, the contribution of SES and ethnicity remains unclear.

Assessment of Social Skills

This section examines two basic social skills assessment strategies, indirect assessments (e.g., self-report inventories) and direct assessments (e.g., naturalistic observation).

Social skills level of large numbers of individuals can be determined rather quickly using self-report techniques.
Using this technique data can be quantified thus easily analyzed. They are an economical method of collecting data on self-perceptions and self-reports of social behavior.

Most self-report inventories have been used to measure assertiveness behaviors. For example, Rathus Assertiveness Scale (Rathus, 1973) was modified for children and used with elementary school students (D'Amico, 1976) and junior high school students (Vaal & McCullogh, 1975). However, acceptable reliability and validity data have not been obtained with this inventory (Michelson & Wood, 1980).

Another self-report measure of assertiveness, the Self Report Assertiveness Test for Boys (SRAT-B) was developed by Reardon, Hersen, Bellack, and Foley (1979). Subjects checked response alternatives to several situations based upon the subjects' judgment of whether the situation required a positive or negative assertion. Reardon et al. (1979) reported the measure failed to show convergent validity with analogue roleplay situations. No reliability data were presented.

The Children's Assertive Behavior Scale (CABS) is a 27-item measure in which subjects select along a continuum of passive, aggressive, and assertive responses which they feel best fits the presented problem situations (Wood & Michelson, 1980). The scale was pretested on several samples of children and administered to 149 fourth-graders in public school settings. The measure has demonstrated
adequate internal consistency (KR20 = .78) and test-retest reliability (.87). Correlation with in vivo observations was not reported, thus determination of external validity was not possible.

More recently, self-report measures of children's confidence in engaging in social interaction have been used (Bierman & Furman, 1984; Harter, 1982; Wheeler & Ladd, 1982). Bierman and Furman (1984) used two measures, the Social Self-Efficacy Scale and the social subscale of the Perceived Competence Scale for Children (Harter, 1982).

The Social Self-Efficacy Scale was designed to measure children's perceived efficacy on three targeted skills as well as measure general feelings of social efficacy. Children were asked 20 questions about their perceived ability to express themselves, ask questions, or make leadership bids. Five questions also were asked regarding their perceived ability to be accepted by their peers. The only data the investigators provided was on its internal consistency (alpha = .94).

Another self-report instrument, The Perceived Competence Scale for Children (Harter, 1982) assesses a child's sense of competence across three domains: cognitive, social and physical, and an overall (general) category. On each item the child is asked to decide the extant to which he or she most resembles one of two versions of a given characteristic (e.g., "Some kids often forget what they
learn."...."But other kids can remember things easily"). The scale was validated using over 3600 third- through sixth-grade students. The 28-item scale has four subscales which has demonstrated high internal consistency. Alpha ranges of .75 to .83, .75 to .84, .77 to .86, and .73 to .82, (averaged across all samples) were reported for the cognitive, social, physical, and general subscales, respectively. Test-retest reliabilities for the subscales averaged .79 and .76, for the Colorado and New York sample, respectively. Convergent validity for the cognitive domain was assessed against a teacher version of the scale with an overall correlation in the .40s. For the social subscale, the relationship was established using a sociometric scale, the Roster and Rating Scale (Roitascher, 1974), with a correlation of .59. The physical subscale was assessed against gym teachers' ratings, with average correlations of .62.

Another recently developed self-report measure, the Children's Self-Efficacy for Social Interactions with Peers (CSPI) has demonstrated sufficient psychometric properties to warrant its use in conjunction with other social skill measures (Wheeler & Ladd, 1982). The CPSI was administered to two separate samples of third-, fourth-, and fifth-graders (n=138). The 22-items of the scale showed positive and significant correlation with the total score (p<.05). Correlations ranged from .26 to .61 with a median of .43.
These correlations suggest that each scale item taps the construct of self-efficacy. Alpha coefficient of internal consistency was .85 for the total scale. Test-retest correlation coefficient for the CSPI was .86. Correlations with Piers-Harris Children's Self-Concept Scale (1964), a widely used measure of self-concept, ranged from .21 (third grade, n=48) to .45 (fifth grade, n=32). The CPSI also was validated against a teacher version of the CPSI (questions stated in the third person) and the Play Nominations Sociometric Measure (Asher & Hymel, 1981), again showing adequate and significant reliability.

In general, while self-report measures are convenient to use, they often have not been used in conjunction with other measures to verify external validity (Michelson & Wood, 1980; Van Hasselt et al., 1979).

Sociometric questionnaires and ratings have been widely used in social skills research (see reviews, Asher, 1983; Combs & Slaby, 1978; Dygdon, 1988; Michelson & Woods, 1980; Ladd, 1984). They provide a measure by which children's social status may be identified and selected for further evaluation. Sociometric measures have been shown to correlate with predictions of delinquency (Kohn, 1977; Roff & Hasazi, 1977) and adult maladjustment (Cowen et al., 1973; Stengel, 1971).

The most common sociometric procedure has been the peer nomination or partial ranking method. The child selects a
predetermined number of peers for a specified purpose (e.g., play companions, best friends). A score is derived from the number of nominations each child receives. Both positive criteria (e.g., "name three of your best friends in the class") and negative criteria (e.g., "name three classmates you don't like") have been used (Green & Forehand, 1980). Studies have shown only low to moderate correlation between positive and negative nominations (Asher et al., 1980). Children who are neither liked nor disliked (i.e., neglected) cannot be accurately selected with the nomination method (Greenwood et al., 1977; Hops & Hymel, 1988).

Another sociometric method is the paired comparison technique, in which a child makes choices for all classmates. In one study children nominated one or more peers for each of 20 roles (10 positive and 10 negative) in a hypothetical class play (Cowen et al., 1973). In another study, Cohen and Van Tassell (1978) obtained pictures of all class members and had each subject choose between all possible pairs. While test-retest reliability was high for 3-4 year olds, the procedure was extremely lengthy.

Another method which has gained increasing use has each class member rate one another on a 5- to 7- point Likert-type scale in reference to a specific situation (Asher et al., 1979; Asher & Taylor, 1981; Gesten et al., 1979). In one example of this scale, each student was asked to rank each class member on a 5-point Likert-type scale (1 - "I
wish s/he weren't in my class" to 5 - "I feel really happy about his/her being in my class") (Gesten, 1979; Weissberg et al., 1981a, 1981b). The average rating given to each child by his/her classmates was used for analysis.

Peer rating scales, another type of sociometric measure, provide for better distributed scores across the entire peer group and ensure that every individual in the group is given equal consideration. Both of these provisions cannot be guaranteed with a nomination procedure (Greenwood et al., 1977). A peer rating and sociometric nomination comparison was made on 208 fourth-grade students (cf. Hynes, Feldhusen, and Widlak, 1975). Results indicated that: (1) Peer rating data approximated a normal distribution, while nomination data failed to display normal distribution; (2) internal consistency ranged from .84 to .92 for peer rating data but only ranged from .30 to .68 for nomination data; and (3) validity estimates for peer rating surpassed those of nomination data. The rating procedure also eliminates problems with spelling, writing, or recall (Hops & Hymel, 1988) and is considered one of the better procedures to screen for problem children (Hops & Hymel, 1988; Michelson & Woods, 1989; Van Hasselt et al., 1979).

While widely used, sociometric measures have notable limitations. They are unable to show specific behavioral deficits and/or competencies (Van Hasselt et al., 1979). Sociometric measures are not practical for day-to-day
determination of status. Finally, they lack demonstrated reliability in young children (Michelson & Wood, 1980).

Teacher rating scales are another approach to assessing social skills. One advantage is that they are usually easy to administer. However, rating scale formats vary greatly (Michelson & Wood, 1980). One rating scale asked teachers to submit names of children they felt to be most socially withdrawn (Evers & Schwartz, 1973). Another scale had teachers choose from their enrollment lists the five most socially withdrawn children in their class (O'Connor, 1969, 1972).

Despite variations in scales, efforts to standardize teacher ratings have been met with some success. One widely used standardized measure of social functioning is the Walker Problem Behavior Inventory Checklist (WPBIC) (Walker, 1970). The WPBIC was developed as a classroom screening device to identify problem students. It is quickly completed and consists of a total score and five subtests (Acting Out, Withdrawal, Distractability, Disturbed Peer Relations, and Immaturity). Walker (1970) has demonstrated that the WPBIC can discriminate groups of identified behavior problem children, however, external validity has not been demonstrated.

Michelson and Wood (cf. 1978) has developed a teacher's version of the Children's Assertiveness Behavior Scale (CABS), in which teachers observe and rate a child's
behavior with other children and adults. Averaged correlations of the CABS with a structure behavior observation situation were low and individual teacher's correlations ranged from .09 to .82.

The AML (Cowen et al., 1973), is an 11-item quick-screening device for detection of students' problem behavior. While it was developed on kindergarten through third-grade students, the AML also has been successfully used on a sixth-grade population (Hopper & Kirschenbaum, 1985). The scale presents 11 items: 5- "Acting-out", 5- "Moody-internalized", and 1- "Learning disability" (e.g., Gets into fights or quarrels with other students). A 5-point scale, from "Never" to "Most or all of the time" with descriptors for each of the 5 points (e.g., "never" - "You have literally never observed this behavior in this child."), is used to evaluate each item. The authors estimate the screen takes about a minute per child to complete.

The AML has demonstrated strong psychometric properties. Two-week test-retest reliability (on 209 first and second graders) was .85 overall. A varimax rotation factor analysis revealed all five A factor items loaded at >.70; no other other items loaded above .45. For the M factor items, all loaded at >.66; all other items loaded <.48. For the L factor, item (1) load was at .91; with no other item >.36. The normative data was collected on more
than 2350 students at four grade levels. Concurrent validity was conducted using the Teachers Behavior Rating Scale, Teachers Adjective Check List and Ottawa School Behavior Survey with overall scale correlations of .85, .86, .78, respectively.

The advantages of teachers rating scales include: (1) the quickness and economy with which they can be used, (2) collection of usually easily quantifiable data, (3) evaluation of a wide range of problems, and (4) the potential use for outcome data.

Disadvantages are that teacher measures are subject to demand characteristics, personal biases, expectancies, operational understanding of the behaviors to be rated, response set, and carelessness. Additionally, only a few teacher ratings have reported psychometric properties (Michelson & Wood, 1980; Van Hasselt et al., 1979). Lastly, while some believe teacher ratings to be accurate measures of children's behaviors (e.g., Greenwood et al., 1976), others contend that their usefulness has not been adequately demonstrated (Rinn & Markle, 1979).

Direct observation of social behavior has been one of the most commonly used methods to assess social skill behavior (Hops & Hymel, 1988; Michelson & Wood, 1980; Van Hasselt et al., 1979). Strategies which fall under this method are roleplay tests or behavioral analog situations, structured observations, and naturalistic observations.
The roleplay tests attempt to measure specific social responses in contrived settings that are designed to simulate interpersonal problem situations. They have provided for relatively economical, convenient and systematic analyses of social skill deficits and training. Generally, a situation is presented to the subject (via videotape, narrator, or live model) and a prompt is given to a confederate who initiates the subject to respond. The subject's responses (i.e., verbal or nonverbal behavior which can include voice tone, body movements, etc.) are recorded with a video camera, tape recorder, or an unobtrusive observer and coded (Hops & Hymel, 1988; Michelson & Wood, 1980; Van Hasselt et al., 1979).

One assessment system developed for use in the behavioral analog situation is the Behavioral Assertiveness Test for Children (BAT-C) (Bornstein, Bellack, & Hersen, 1977). This test is composed of having children act out nine scenes reflecting typical daily encounters. It has been used in numerous case studies to assess levels of social skills (e.g., Bornstein et al., 1980).

Another assessment system, the Behavioral Assertiveness Test for Boys (BAT-B) (Reardon et al., 1980), examines the relationship between children's roleplay performances and their responses in other assessment tasks. The BAT-B, similar in form to the BAT-C, is consists of 24 items designed to elicit both positive and negative responses.
While the BAT-B has demonstrated behavior differences in boys "high" in assertion from those "low" in assertion, teacher and self-report ratings failed to correlate significantly with the BAT-B (Reardon et al., 1980).

Freedman, Donahoe, Rosenthal, Schlundt, & McFall (1978) have developed an assessment device, the Adolescent Problems Inventory (API) to measure social skill deficits in delinquent boys by observing them in a roleplaying context. The API consists of 44 behavioral roleplaying, problem-solving situations. Moderate reliability data were reported and concurrent discriminant validity was assessed through comparisons of identified delinquents and nondelinquents. However, no data on external validity were presented.

Shumaker, Hazel, & Pederson (1988) have developed the Social Skills Curriculum Guide based on their work with delinquents showing that impairments of their social skills contributed to their adjudication (Hazel, Schumaker, Sherman, & Sheldon-Wildgen (1982). This guide lists 31 different skills that are taught and assessed through roleplay tests. One skill called "Saying No" presents different situations in which subjects are taught to assertively refuse to engage in illegal acts (e.g., stealing merchandise). A 10-item pre- and post-test checklist of skills steps assesses subjects' verbal and nonverbal behavior (e.g., maintain eye contact with person, make a positive statement about the person).
In other studies, Hazel et al. (1981a) and Goldfried and D'Zurilla (1969) found delinquents had significantly more difficulty in resisting peer pressure. However, a recent study did not find resisting peer pressure as defined by Hazel et al. (1981a, 1981b) to be a skill deficient in a sample of multiethnic alienated youths (Higa, Manos, & Yempuku, 1986).

An on-going five year delinquency prevention study of elementary school students from a multiethnic community (Youth Development and Research Center, 1986) is using an adapted version of the Social Skills Curriculum Guide (Shumaker et al., 1988). A third year evaluation study of 4-through 6-graders who underwent training showed significant improvement in absenteeism, tardiness, disciplinary referrals, and teacher-student relationships compared to a no-attention comparison group (Manos, 1988). Of the 31 skills taught, students and teachers listed "Saying No" as one of the top six skills the students mastered. Whether in fact it was the specific skill of "Saying No" that contributed to the students improvement cannot be ascertained from the study data (Manos, 1988). No psychometric data was provided to further assess the curriculum guide.

Akamine (1988) created a behavioral coding system for analyzing a behavior analog situation based upon the Social Skills Curriculum Guide's "Saying No" social skill (Shumaker
et al., 1988). According to Shumaker et al. (1988) there are five "basic skill steps" common to the proper production of each of the 31 social skills: (1) face the person, (2) make eye contact, and depending on particular social skill, (3) use pleasant or serious voice tone, (4) have a smiling or serious facial expression, and (5) have a straight or relaxed body posture. Thus, the constructed behavioral coding system is composed of five categories: 1) overall posture (stiff, relaxed, fidgety); 2) head orientation (face directly, faced slightly away, faced completely away); 3) eye orientation (eye contact, look slightly away, look completely away); 4) facial expression (no emotion, serious/firm, smiling, giggling/chuckling), and 5) voice tone (monotone, pleasant, serious/firm, pleading, joking, other). The behavioral coding system was constructed to analyze the above behaviors in 10-second intervals for 120 consecutive seconds. A remote-controlled video recorder was used to allow for later analysis.

In a pilot study to test the coding system (Akamine, 1988), confederates were instructed to convince subjects to steal the teacher's portable tape recorder (located by the teacher's desk). In the roleplay the subjects were told that the teacher was out of the room and they (both confederate and subject) were alone in the classroom. The subject was advised prior to the roleplay that he would be approached by the confederate to engage in
an illegal behavior and that he (the subject) should do his best not to participate in the illegal behavior, while still "being himself". After each roleplay, the subject and confederate filled out a 5-question, 5-point Likert-type scale assessing the realistic nature of the roleplay (e.g., "My partner would have acted the same way if the situation was real" - (1) "NO WAY!", (5) "YES!"). The behavioral coding system was tested on two small samples of 6-grade boys. No psychometric data were presented.

While the use of roleplay tests in social skills assessment and training will likely continue, several issues confront its utility. Roleplay tests with adult populations have not shown external validity when compared with observed interpersonal behaviors in more naturalistic settings (Bellack, Hersen, & Turner, 1978, 1979; Curran, 1978). Roleplay performances may only represent "knowledge" of the correct responses and subjects may only be demonstrating their "acting ability." (Michelson & Wood, 1980). Studies using roleplaying as pre-test and post-test measures of changes due to training may instead only be reflecting how well subjects learn to roleplay instead of reflecting true change in behavior (Beck et al., 1978; Goldfried & Linehan, 1977). Lastly, the limited time frame usually allotted to roleplays may be too restrictive, unrealistic, or anxiety-provoking to accurately represent reality (Michelson & Wood, 1980).
Structured observation is another method to measure children's social skills. Generally, structured observations involve confederates who behave in a pre-programmed manner with all subjects. This approach allows adequate sampling of social behavior and achieves some measure of standardization and control over antecedent and consequent conditions (Hughes & Haynes, 1978; Rich & Schroeder, 1976).

Chittenden (1942) used a "controlled play situation" in which a novel toy was placed in a room with randomly paired children. Passive, assertive, and aggressive behavior were observed for 5 minutes and coded.

The Children's Behavioral Scenario (CBS) developed by Wood and Michelson (cf. 1978) elicits assertive or nonassertive behavior during a contrived interview. A trained adult confederate interviewed each child with various questions to assess assertiveness. As an example, a child was told, "I would like you to give up all your recess for the next six months to pick up the paper around the school grounds instead." The child's response was observed unobtrusively and coded. Also, the room was designed to assess assertive behavior (e.g., a stack of books was place on the only chair available for the child to sit on). Michelson and Wood (1980) reported that correlation of the CBS with a self-report measure of assertiveness and a teacher rating were both adequate and significant.
There are several assessment issues regarding structured observations. External validity has not been demonstrated with naturalistic observations. Like roleplay tests the responses may be too restrictive due to the nature of the setting (Michelson & Wood, 1980). Lastly, given the nature of the subjects (children) and the unobtrusive nature of the study, ethical questions arise that must be addressed (Cummins, 1978).

Naturalistic observation or direct observation of a child's behavior in the natural environment have been used to assess both problem behavior as well as the effects of social intervention. They have been applied to various developmental age levels (Greenwood et al., 1977; Meighan & Birr, 1979; Mueller & Vandell, 1976) in different settings and activities (Bryan, 1974; Dorman, 1973). Frequency (e.g., rate of interaction per minute) (Walker & Hops, 1973) or percentage of time in interaction or in targeted behavior (Hops & Greenwood, 1980) have been used commonly to measure observations. Depending on the social behavior specified, researchers usually develop their own behavioral coding systems specific for their study, thus a wide variation in behavior observed and complexity of coding systems exist (Michelson & Wood, 1980; Van Hasselt, 1979).

For example, Buell, Stoddard, Harris, and Baer (1968) calculated the percentage of intervals in which a targeted behavior occurred using 10-second intervals. In another
variation, Strain, Shores, and Timm (1977) and Strain (1977) assessed interactions along two behavioral dimensions, motor-gestural and vocal-verbal. Coding was done on initiator's responses emitted 3 seconds before or after another child's behavior and respondent's behaviors were also coded within 3 seconds of another child's motor-gestural or vocal-verbal behavior. One study classified interactions between a child and his/her peers, teachers, and parents (Durlak & Mannarino, 1977; Wahler, 1975). There were nineteen categories divided into five general categories of behaviors: autistic, work, play, compliance-opposition, and social behavior. The system was used for assessing home, classroom, and laboratory behaviors of socially deficient children.

One specific application of the direct observation method has been to conversational skills. This skill has been assessed in numerous settings and found to be deficient in both handicapped (Kelly, Furman, Phillips, Hathorn, & Wilson, 1979) and nonhandicapped children and adolescents (Bierman & Furman, 1984; Gottman, 1977; Gottman et al., 1975; Minkin et al., 1976). Minkin et al. (1976) analyzed three components of conversational skills: questioning, providing positive feedback, and proportion of time spent talking. The social validity was first established with five university and five junior-high students being videotaped while conversing. Two trials of adult judges
rated each conversant on a seven-point scale (from "poor" to "excellent") with correlations of .85 and .84, respectively. In both trials each of the three components were performed significantly more times when coded into 24 10-second intervals. Statistics for the first trial was given in mean occurrence rate (agreement between judges). Mean occurrence rate for questions asked, positive conversation feedback and total time talked was 90%, 89%, and 98%, respectively. For the second sample, correlation coefficient between the composite behavioral score and the judges' ratings was .84. Correlation coefficients for each of the components (questions asked, positive conversation feedback, and total time talked) was .63, .64, .65, respectively. Lastly, Minkin et al. (1976) validated the behavioral code by obtaining pre- and post-test measures of four girls (ages 12-14) who were deemed deficient in social skills, using a multiple baseline method. Each girl showed substantial improvement in each of the components of conversation.

More recently, Bierman and Furman (1984) and Bierman (1986) adapted Minkin et al. (1976) behavioral coding. They developed seven categories by which to code conversation skills which they labeled: (1) self-expression - statements about oneself and statements of personal reference; (2) questions and statement functioning as questions; (3) leadership bids - suggestions, directives,
invitations, or advice; (4) talk - all other statements; and (5) social noise - verbal but non-talk utterances; (6) no information - if child responded with "I don't know"; and (7) silence - if child fails to respond within six seconds.

Bierman and Furman then observed children previously found to have low sociometric scores in several settings (i.e., classroom, in a structured dyadic conversation, and during lunch periods). The categories of self-expression, questions, and leadership bids were then summed to give a total conversational skill performance score. The data was used as a dependent variable to measure the conversation skills training effect. Significant differences were noted after training had been completed, thus the measure appears to be sensitive to training effects. Bierman (1986) used the same methodology with similar results showing the measure to be sensitive to training effects.

The combining of various assessment strategies also have been used to assess children's social behaviors. Again, assessment measures differ in reliability, validity, complexity, practicality and information provided.

One example of this type of assessment strategy is the instrument called the Social Assessment Manual for Preschool Level (SAMPLE) (cf. Greenwood et al., 1976; Walker & Hops, 1976). The instrument was developed primarily to assess socially-withdrawn children in a classroom. Three assessment strategies were used in the SAMPLE: (1)
naturalistic observation of children's social interaction rate and peer contact; (2) teacher rankings of interactive frequency and ratings of social adeptness and popularity; and (3) peer-picture sociometric nominations of acceptance and rejection (Michelson & Wood, 1980). While the SAMPLE was found to be practical and inexpensive as an assessment device for use in schools, further work is warranted to establish the reliability, validity, and accuracy of the measures (Hops & Hymel, 1988; Michelson & Wood, 1980).

Numerous methodological issues exist for naturalistic observations. Data gathered by direct observation may be influenced by expectancies of the observer or subject (Kent & Foster, 1977), observer reactivity (Romanczyk, Kent, Diament, & O'Leary, 1973), and knowledge of reliability assessment (Michelson & Wood, 1979). In a comprehensive review of 118 studies using behavioral checklist to assess social interaction, only 25 (21%) provided any information on reliability and/or validity of the instrument (Walls, Werner, Bacon, & Zane, 1977).

In summary, there are four basic types of assessments used in social interaction research with children: self-report, sociometric questionnaires and ratings, teacher report and ratings, and direct observation which includes behavioral analog situations, structured observations, and naturalistic observations. All appear to provide different
perspectives to assessing social behaviors in children, however, numerous limitations in their applications exist.

**Treatment Approaches to Social Skills Training**

Social skill training approaches can be grouped into four categories: (1) operant techniques, which use contingent reinforcement of appropriate peer interactions; (2) modeling strategies which demonstrate competent performance by role models, either actual, imagined, or filmed; (3) combination interventions, which involve the target child in training, using coaching, rehearsal, guided practice, role playing, and/or operant procedures to enhance effectiveness; and (4) problem-solving strategies (Spivack & Shure, 1974).

Operant reinforcement (contingent reinforcement) techniques were applied early in social skills training. In one study attention (contingent reinforcement) was applied to increase the behavior of a socially withdrawn preschooler (Allen, Hart, Buell, & Wolf, 1964). By using a reversal design, the authors were able to demonstrate that operant reinforcement was responsible for increasing the percentage of interactions of the preschooler with other children. Whitmore, Mercurio, and Caponigri (1970) showed that food and praise could be used as positive reinforcers to increase the social behaviors of two retarded, socially withdrawn children.
Operant reinforcement also has been used to decrease aggressive responses. Brown and Elliot (1965) instructed teachers to ignore aggressive behaviors in 27 nursery school children and to attend to positive social interactions. Significant decreases in physical and verbal aggression resulted.

Peer reinforcement is another method of contingent intervention. A withdrawn 5-year old child was taught to increase social interaction with her peers by having the child pass out candy (Kirby & Toler, 1970). Interestingly, the authors noted a corresponding increase in aggressive behavior in the child although they offered no explanation as to why this occurred. Strain and Timm (1974) studied a socially-isolated girl by reinforcing (verbal praise and physical contact) her under two conditions: (1) application of the reinforcement directly to the subject's peers, and (2) reinforcement directed to the subject. Results indicated that under both conditions positive interactions between the subject and her peers occurred. Similarly, Strain, Shores, and Timm (1977) found that when subjects were prompted to engage in interactions and were given social reinforcement for interpersonal behaviors, both the behavior of the targeted socially isolated children and non-targeted displayed positive improvements in social interactions.
Strain et al. (1977) used a peer confederate to increase the rate of positive social interactions in three withdrawn preschoolers in an ABAB experimental design. The confederate was instructed to get the other children to play with him. Although all three targeted children showed increases in their positive behaviors, only two displayed generalization across settings. Strain et al. (1977) concluded that in peer reinforcement procedures rates of improvement were directly related to initial ability levels. Thus those with high ability in the baseline condition showed greater improvement in social interactions at the end of treatment than those children who were deemed low in ability.

Token reinforcement also has been used to increase positive social interactions with withdrawn, isolated children. In a four study analysis of token reinforcement, Todd, Walker, Greenwood, & Hops (cf. 1976) examined the effectiveness of social reinforcement, token reinforcement, combined social and token reinforcement, differential reinforcement of other behavior and cost contingency (withdrawal of reinforcer when negative behavior is produced). The summarized results found were: (1) social and social-plus-token reinforcement contingencies were insufficient and did not affect occurrence of negative-aggressive behavior; (2) cost contingency was a critical requirement to effect behavior change of aggressive
(3) follow-up of the aggressive children indicated continued improvement in the regular classroom; and (4) for socially unresponsive children, a reinforcement procedure that provided positive consequences for starting, answering, and continuing interactions with peers was most effective in increasing the amount of time of peer interaction.

In general, operant studies have demonstrated that social reinforcement, praise, and material rewards have powerful effects on peer interaction. The studies also demonstrated that peer confederates can be used effectively to facilitate social interaction. Operant studies highlighted the importance of individual differences in predicting treatment response.

Operant studies also have several shortcomings. Maintenance of treatment has not been demonstrated consistently (Kazdin, 1975; Michelson & Wood, 1980; Van Hasselt et al., 1979). Operant approaches are not efficient for remediating complex behaviors. The focus of the operant technique has been on increasing or decreasing behaviors and this procedure has yet to demonstrate that the all important variable of peer acceptance can be increased by solely increasing or decreasing peer interactions (Combs & Slaby, 1978).

Based in large part to the theoretical work of Bandura (1969), modeling techniques have had a significant effect on social skills training. In one of the first studies using
modeling (O'Connor, 1969), a film depicting positive consequences of active social interaction between children was shown to six withdrawn preschool children. The results were compared to a control group of seven withdrawn preschool children who watched a film that depicted no social interaction. While the interaction rates of the control group were unchanged, the rate of interaction of the withdrawn children approached that of normal preschoolers. Positive changes occurred for all experimental subjects. Anecdotal follow-up one year later revealed only one of the six treatment group children had regressed to being an isolate, while four of the seven control group children were still seen as withdrawn.

Keller and Carlson (1974) studied 19 socially-isolate preschoolers using video training tapes. In the modeling group, children viewed social behaviors such as smiling, laughing, token-giving, and affectionate physical contact, for 5 minutes a day over 4 consecutive days. The control group viewed a non-interaction video. Results indicated that children in the modeling condition showed significant increases in the modeled social behaviors while the control group showed no change in behaviors. Three weeks after termination of treatment declines in the dependent measures were noted, in direct relationship to the children's initial social skill level. The authors suggested that the study supported Bandura's (1969) hypothesis that modeling
increases existing behaviors without necessarily developing new ones. They further suggested that if new social behaviors were to occur more explicit and direct training would need to be applied. The study also noted the strong relationship of peer reinforcement and reciprocity, \( r = .78 \), confirming earlier studies demonstrating the reciprocal nature of social relationships (Charlesworth & Hartrup, 1967; Fagot & Patterson, 1967).

The application of modeling interventions to hyperactive children also have suggested some success. Goodwin and Mahoney (1975) studied three hyperactive boys with high rates of aggression using a videotape of a boy coping with verbal aggression by using self-statements (dubbed onto tape) such as "I'm not going to let them bug me," or "I won't get mad." A "taunting session" followed without any noticeable difference in the boys ability to cope. The following day the investigators coached, guided, and instructed the boys as to what was happening in the film. This resulted in significant improvements in behavior. The authors commented that given the short follow-up and the lack of a control group, caution must be used in interpreting the results.

While modeling studies appear to be useful in increasing social interaction, as yet only global changes have been noted. Further work is needed to show greater treatment efficacy and maintenance (Michelson & Wood, 1980).
Combination studies include both operant, modeling, and cognitive mediation strategies. One of the first studies (Chittenden, 1942), used a combination of instructions, modeling, roleplaying, behavioral rehearsal, social reinforcement, and problem solving. The goal was to teach nursery school children to understand, interpret, and respond appropriately to social situations. The children received 11, 15-minute, play periods in which they observed dolls in short skits in various social situations. Results showed that children decreased their "dominative" behaviors and increased (although not significantly) their cooperative behaviors. Treatment effects still were seen at the 4-week follow-up.

Gottman et al. (1976) two decades later compared a social skills training program which included communication, modeling, roleplaying, self-coping statements, and instructions with a control group who played games and had discussions. Two female children were assigned to each of the two conditions. The treatment consisted of watching O'Connor's (1969) film (modeling condition), coaching and roleplaying in friendship making skills, distributing positive reinforcement to their peers, and teaching the perspective of the listener (referential communication). At the 9-week follow-up, the treatment subjects showed an improvement in their sociometric status while control subjects showed no change. Interestingly, treatment subjects
did not increase the amount of social interaction with their peers. Instead they showed a redistribution of the interactions among their peers.

Bornstein et al. (1977) tutored 4 unassertive children (ranging from 8 to 11) in social skills through the use of feedback, instructions, modeling, and rehearsal. Targeted behaviors included ratio of eye contact to speech duration, loudness of speech, and request for new behaviors. After initial baseline data was obtained, three weeks of training ensued (15-30 minutes per week). The BAT-C was used to assess progress. Noticeable positive treatment effects were recorded at the second and fourth weeks of follow-up.

A similar procedure was tried on 4 highly aggressive children (Bornstein et al., 1980). Positive effects were found for all subjects on all behaviors. Only 2 of the 4 showed the newly acquired positive behaviors in different settings in the natural environment.

On a larger scale, Bierman and Furman (1984) examined the effects of social skills training and peer involvement on peer acceptance of unpopular preadolescents. Fifty-six 5th- and 6th-graders were identified as unpopular and deficient in social skills. They were randomly assigned to four conditions: (1) conversational skills training (individual coaching), (2) peer involvement (making videotapes), (3) conversational skills training with peer involvement (coaching plus group experience), and (4) no-
treatment control. The treatment conditions consisted of 10 - .5 hour sessions over 6 weeks. At the end of the treatment and follow-up period, differential effects were noted. Coaching increased use of conversational skills and increases in social interaction occurred. While peer involvement increased peer acceptance and children's self-perception of their social efficacy, the authors noted that just learning a new social skill (in this case, conversation skills) did not lead to greater peer acceptance. The study did note that promoting mutual goals did lead to increased peer acceptance.

Bierman (1986) further analyzed Bierman and Furman's 1984 study focusing on the process change of those who received coaching in conversational skills and group experience as compared to those who only had group experience. She found that as conversational skills increased so did their level of peer acceptance, thus she demonstrated that improving conversational skills can increase peer acceptance (i.e., popularity).

In summary, combination packages show success in gaining and maintaining social skills as well as tentatively showing that peer acceptance can be enhanced.

Recently, the application of interpersonal cognitive problem-solving strategies, ICPS, (Shure & Spivack, 1974) to social skills research has garnered some attention (Pelligrini & Urbain, 1985). In early studies, Schneider
(1974) and Robin, Schneider, and Dolnick (1976) found that ICPS training, combined with social reinforcement and training in guided imagery and relaxation, was effective in reducing interpersonal aggression in emotionally disturbed children. However, no pre-post ICPS measures nor attention-control groups were included in the experimental design.

Ollendick and Herson (1979) studied 36 juvenile delinquents in an institutional setting with an external locus-of-control and randomly assigned them to a social skills or discussion group. The social skills group were instructed to bring any peer or staff problems to the group. The problems were discussed and alternative solutions to approach the problems were devised and solutions modeled by the therapist and other group members. The subjects with the problems first rehearsed their solution followed by group feedback; with social reinforcement given for problem-solving thinking and behavior. Members of the discussion group also discussed their problems, but their training was limited to ways to circumvent the problems. The social skills group reported lower anxiety levels, greater internal locus-of-control, greater improvement in eye contact, requests for new behavior, latency of responding, and decreased aggression in roleplay situations than the discussion-only group. The social skills group also earned more tokens for good behavior in their token economy system. However, only a non-significant trend toward decreasing
acting-out behavior (e.g., fighting) was noted during the discussion-only group over the two-week follow-up period.

Several methodological flaws made interpretation of the study difficult (Pelligrini & Urbain, 1985). The investigators failed to assess pre-post measures of ICPS, thus it was uncertain if the youths actually had problem-solving deficits. Secondly, lack of assessment meant that there was no way to know for sure whether cognitive and behavioral skills were actually gained during the study. Since the study had multiple interventions (i.e., coaching, social reinforcement), it was unsure how much ICPS contributed to the change in behaviors. Lastly, since no attention-control group was used, non-specific factors (e.g., subject motivation, therapist attention, multiple assessments) could not be ruled out as contributing to positive changes in the social skills group.

Spivack and Shure (1974) and Shure & Spivack, 1980) trained teachers to work with 113 lower-class black inner city nursery school children. Prior to treatment the children were classified into three groups: impulsive and aggressive (44), inhibited (28), and a no-treatment well-adjusted (41), on the basis of teacher report. Training was conducted for three months and included forty-six 20-30 minutes of scripted lessons, games, and dialogues, as well as, application of problem-solving strategies to problems that arose. Significant improvements in behaviors were
found for both problem groups over the control group. The children who showed the most gain in cognitive skills also showed the most positive behavior change, suggesting that ICPS training did mediate observed changes.

Spivack and Shure (1974) failed to note whether peer acceptance accompanied behavior change. Also, it was uncertain whether adult attention to the treatment group or other non-specific treatment factors (e.g., expectancies for change) may have contributed to the positive change (Pelligrini & Urbain, 1985).

Weissberg et al. (1981b) incorporated a parents training component to support ICPS training in a 52-lesson, school-based program. One group of subjects were black, inner-city, lower-class, third-graders and a second group was composed of white, suburban, middle-class third-graders. Both groups improved with training on a variety of cognitive problem-solving measures. However, teacher-data suggested that the training program produced significantly worse behaviors on five of nine rating dimensions of social behavioral problems in the inner-city children. Teachers reported that during brainstorming sessions, the urban children produced mostly aggressive solutions which in turn affected class discipline.

A replication study was conducted (Weissberg et al., 1981a) with increased emphasis on classroom management strategies and extending the sample to include suburban and
inner-city 2nd-, 3rd-, and 4th-graders. Both suburban and inner-city children showed improvements in teacher-rated social behaviors and problem-solving skills. However, correlations between most of the ICPS measures and behavior change scores demonstrated only weak or non-significant changes.

Overall, there is reason for optimism in applying ICPS to social skills training although methodological flaws (similar to those in other approaches) are apparent. Greater use of pre-post measures as well as adequate use of control groups could clarify ICPS findings. Differential results have been found among ethnic groups (e.g., Weissberg et al., 1981b; Shure & Spivack, 1974) and needs to be studied further. Noteworthy with ICPS studies has been the willingness to cross ethnic boundaries thus attempting to verify its utility in nonwhite populations.

In summary, four basic categories of treatment approaches were presented: operant reinforcement, modeling, combination approaches and interpersonal cognitive problem-solving strategies. Each approach had demonstrated some success in increasing peer interaction. However, as Combs and Slaby (1978) pointed out, the meaningful variable is peer acceptance and thus far few studies have been able to demonstrate that it can be improved significantly. Reiterating, it is peer acceptance (popularity) not
increased peer interactions that has been shown to correlate with later adult functioning.

Criticisms of Social Skills Training

Given the long-term negative implications for children lacking in social skills, intervention research is warranted. However, at least three fundamental issues must be addressed: the integration of the concept of social skills, the clarification of the goals of social skills training, and the appropriateness of applying social skills intervention to non-white populations.

A review of the social skills literature reveals a lack of conceptual integration. Currently there are at least four distinct models for defining social skills: functional (e.g., Cartledge & Milburn, 1978), interpersonal cognitive problem-solving (e.g., Shure & Spivack, 1974), cognitive-social learning (Ladd & Mize, 1983), and social competency (McFall, 1982). There are also four treatment approaches: operant (e.g., Strain & Timm, 1974), modeling (e.g., Keller & Carlson, 1974), interpersonal cognitive problem-solving (e.g., Shure & Spivack, 1974), and a catch-all combination category (e.g., Bierman, 1986).

These variations of approaches make systematic research difficult (e.g., different approaches may be studying similar phenomena with differing terminologies). Two theoretical models have been proposed to integrate the
field, with neither having gained widespread acceptance. Ladd and Mize (1983) have proposed a cognitive-social learning theory, while McFall (1982) proposed a social competency model.

Secondly, confusion exists in defining the goal of social skills training. In the introductory section of most social skills intervention articles, the negative long-term consequence of being unpopular is cited as a major reason for intervention. The implication is that the intervention strategy proposed would increase peer acceptance (i.e., peer popularity), consequently lowering the risk of negative consequences. Yet most studies fail to show the empirical relationship between attainment of the targeted set of social skills and greater peer acceptance. This failure of logic is revealed by the limited number of intervention articles which include measures of peer acceptance (see reviews, Combs & Slaby, 1978; Hops & Hymel, 1988; Michelson & Wood, 1980).

Finally, conducting social skills intervention (developed primarily on white students) on a mixed group of white and non-white students pose significant concerns. Methodologically, research has shown that sociometric measures (currently the most reliable measure) can vary solely by subjects' ethnicity. These studies have demonstrated that black and white children view their own ethnic group peers as significantly more acceptable than the
other (Bartel et al., 1973; Gerard et al., 1975; Shaw, 1973; Singleton & Asher, 1977), potentially confounding any significant findings where sociometric measures are applied to a mixed population. One possible interpretation of the finding that black and white children view each other differently is that prejudice among children is alive and well. Another interpretation could be that black and white children may not be prejudiced per se, but that the behavior used to communicate may differ by ethnicity. That is, different ethnic groups may train their children to use different sets of behavior to communicate similar aims, leaving open the possibility of misunderstanding. This misunderstanding could then lead to disparaging judgements based solely on ethnic differences (i.e., prejudice).

John Ogbu (1981) in his article "Origins of Human Competence: A Cultural-Ecological Perspective" strongly suggests that conventional research practices of developing theories and methodologies based on middle-class whites and applying the findings to, for example, lower-class blacks, is not only nonscientific but also ethnocentric. Ogbu believes that behavior can only be understood and meaningfully altered if the culture of the persons under study is understood. He gives examples of how the cultural upbringing of the lower-class black child can lead to a difference in behavior from a white middle-class child. He postulates that the reason some black ghetto children behave
with a sense of mistrust, self-reliance, manipulation of people and situations, and mistrust of people in authority is that these are the characteristics of people around whom the children have been raised. Ogbu describes the children's role model, "... adult categories of success not only include conventional jobs but also include hustlers, pimps, preacher-hustlers, entertainers, and the like" (p. 424). Given this culture, Ogbu says, it is quite understandable why behavior that may be meaningful to middle-class white children (e.g., performing well in school) may be meaningless to lower-class black children.

If children's behavior is culture-bound, is it also possible that the "eye of the beholder" (i.e., social skills researcher) is culture-bound? Goldfried and D'Zurilla (1969) suggest that a socially-skilled response is one that is maximally effective in resolving the immediate problems in a situation, while minimizing the likelihood of future problems. McFall (1982) in his citation of Goldfried and D'Zurrilla, suggests that "effectiveness" depends upon the objectives, values, and perspectives of the person (e.g., researcher) who is making the judgement.

The social skills literature reveals some appreciation that ethnicity could mediate the effects of social skill training. Yet this appreciation is quite limited as only two (Ladd & Mize, 1983; Ladd, 1984) out of ten recent major reviews of social skills research even mentioned ethnicity.
as a variable (Combs & Slaby, 1978; Dygdon, 1988; Hops & Greenwood, 1988; McFall, 1982; Michelson & Wood, 1980; Pelligrini & Urbain, 1985; Schneider, Rubin, Ledingham, 1985; Van Hasselt et al., 1979). Even in the two cited cases, the mention was worth less than a line (Ladd, 1983, p. 330; Ladd & Mize, 1983, p. 153).

In terms of social skills training, what are the ramifications of McFall's (1982) view that socially skilled behavior is in the eye of the beholder, and Ogbu (1981) thesis that the behavior and the beholder are bound by ethnicity? One possible outcome is that social skills training that is insensitive to the students' ethnicity would not produce positive results. One study is suggestive of this hypothesis (Weissberg et al., 1981b). They found when an interpersonal cognitive problem-solving approach was taught to black third-grade students, social behavior actually worsened.

On the other hand, there are indications that when attention is paid to ethnic variations in learning positive results can occur. In a fascinating series of articles and books (Gallimore, Boggs, & Jordan, 1974; Gallimore & Tharp, 1982; Gallimore, Tharp, & Speidel, 1976; Howard, 1974; MacDonald & Gallimore, 1971; Tharp & Gallimore, 1988), these researchers described how they incorporated the students ethnocultural upbringing (e.g., greater use of child-child versus adult-child learning) into the typical Western
educational system (greater use of adult-child learning) to significantly improve the academic motivation and performance of educationally at-risk native Hawaiian children. As an example, initial standardized testing of the experimental-condition students in the traditional school setting showed them to be performing poorly (mean 27th percentile on the Gates-MacGinitie Tests of Reading Achievement). Four years later these students were achieving at national norms (mean 50th percentile on the Gates-MacGinitie Reading Tests). Students' performance at national norms levels has been achieved for at least four consecutive years (Tharp & Gallimore, 1982). The investigators realized the lack of universality of the Western approach to education. They also understood that this approach was in large part "causing" the children to become dysfunctional by imposing Western objectives, values, and perspectives onto children of a non-Western culture. As the studies were conducted, efforts were made to develop and implement a more culturally appropriate method of educating native Hawaiian children.

While many children within the United States share English as a common language, behavior can differ by ethnicity. For example, investigators have found that persons of Japanese-American ethnicity differ considerably from persons of Caucasian-American ethnicity. One noteworthy difference between the Japanese-Americans and
other ethnic American groups is their family structure. Japanese-American families have a very cohesive structure (Conner, 1976; Johnson, 1977; Kitano, 1969). They also have a deep sense of obligation to their parents, referred to in the Japanese language as "on" (Johnson, 1977; Kitano, 1969). A related concept is the strong sense of "oyakoko" or filial piety (Kitano, 1969). This interactional pattern of obligation is not only from parent to child but also from child to parent. Kitano (1969) described this concept in the daily life of the Japanese-American parent by the example of a parent giving up a choicer cut of meat to her child. Johnson (1977) noted that it was not uncommon to find individuals who gave up promising careers to return to Hawaii to fulfill filial duties when no one else was available to care for their parents' needs.

Another feature of the familial relationship is the reciprocity and exchange system. Johnson (1977) in a study of this system found that for the Japanese-American family members this system was obligatory. In comparison, this system was found to be optional for Caucasian-American family members. Johnson also noted that as Japanese-Americans in Hawaii became more socially mobile and extended their contact outside the family, kinship contacts did not decrease but instead increased. She attributed this phenomena to the continual maintenance of interdependence through obligatory reciprocity.
Related psychological studies of Japanese-Americans have found a greater degree of dependency needs than in Caucasian-Americans (Arkoff, 1959; Conner, 1976; Fenz & Arkoff, 1958; Meredith & Meredith, 1966). These studies strongly point to the individual acquiring this characteristic of dependency through the fostering of interdependence within the Japanese-American family.

Familial studies of Caucasians indicate the high values placed on nurturance, achievement demands, and the fostering of autonomy and expression (Billings & Moos, 1982; Devereux, Bronfenbrenner, & Rodgers, 1969; Moos & Moos, 1976; Russell, 1979; Siegelman, 1965). High family functioning is associated with moderate levels of family cohesion corresponding with low levels of conflicts in the family, moderate levels of internal family organization, and an overall ability to be adaptable to changing environments and situations (Billings & Moos, 1982; Russell, 1979).

Given the differences in the family structures of the Caucasian-American and Japanese-American, it may be very reasonable to hypothesize that the expression of any behavior, particularly interpersonal behavior, may differ by a person's ethnicity.

The Present Study

The purpose of this study will be to test the hypothesis that ethnicity is a significant mediating
variable in the display of at least one social skill. The study will compare the verbal and nonverbal behavior of Japanese-American and Caucasian-American sixth-grade boys, one-half of whom have undergone some social skill training, in a roleplay situation.

It is predicted that irrespective of previous social skill training, Japanese-Americans boy will tend to behave in accordance with their ethnic orientation. That is, Japanese-American boys will engage in less direct verbal and non-verbal behavior than will the Caucasian-American subjects, irrespective of the ethnicity of their roleplaying partners. A corollary is that Japanese-American boys will engage in fewer direct verbal and nonverbal behaviors when roleplaying with same-ethnicity partners than when roleplaying with Caucasian-American partners. Alternately, Caucasian-American subjects will engage in more direct verbal and nonverbal behavior when roleplaying with same-ethnicity partners than when roleplaying with Japanese-American partners.

Should the results occur in the anticipated direction, they would suggest that ethnicity is a significant mediating variable of at least one important social skill. More importantly, they would suggest that there is no universal set of verbal and nonverbal behavior that one must use to be considered socially skilled. Rather, there are a variety of socially-skilled verbal and nonverbal behaviors that are
based upon one's ethnicity. Consequently, before designing an intervention program for non-white groups, the designers must first identify the socially-skilled responses of the target group(s).
To evaluate the study's hypotheses, a $2 \times 2 \times 2$ factorial design was used (Figure 1). The factors considered were social skill training - training of subjects prior to roleplays (Trained) and no training prior to roleplays (Untrained), subject's ethnicity - Caucasian-American and Japanese-American, and confederates' ethnicity - Caucasian-American and Japanese-American. Each subject was exposed to only one condition (i.e., subjects either were trained or untrained, and roleplayed with Japanese-American or Caucasian-American confederates). Each confederate roleplayed with either trained or untrained subjects.

<table>
<thead>
<tr>
<th>Confederates</th>
<th>Jpnse (n = 7)</th>
<th>Cau (n = 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained Subjects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jpnse</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Cau</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Untrained Subjects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jpnse</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Cau</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Jpnse = Japanese-American  Cau = Caucasian-American
subjects of both ethnicities. Thus a confederate would engage a trained Caucasian-American subject in one roleplay and a trained Japanese-American subject in another roleplay.

Sample
The overall sample consisted of Caucasian-American and Japanese-American sixth-grade students from seven public elementary schools in rural, suburban, and urban areas on Oahu, Hawaii. For the experimental part of the study, only Caucasian-American and Japanese-American boys from the overall sample, whose natural parents were either of Japanese or Caucasian ancestry, were selected. Only boys were selected because previous research suggests boys are at a significantly higher risk for delinquent behavior. Sixth-graders were used because they had sufficient cognitive skills to quickly learn the concepts and techniques of the social skill, and to construct quick, relatively spontaneous, and coherent responses to the roleplay scenario.

Procedure for permission. Ten public elementary schools on Oahu, Hawaii known to have Caucasian-American and Japanese-American sixth-grade boys were contacted and asked to participate in the study; seven agreed. Principals of these schools were briefed on the study with seven agreeing to participate. One non-participating principal cited lack of interest in the study; while the other two cited full
school calendars. The study was then reviewed with the sixth-grade teachers of all those who agreed to participate. Both the principals and teachers agreed that each teacher would discuss the study with all of their students, with the understanding that students were free not to participate. Students who agreed to be videotaped obtained written parental permission.

Subject selection procedure. The sampling population from which subjects were drawn consisted of 24 sixth-grade classrooms from seven elementary schools. Schools were assigned alternately to either the control (Untrained) or treatment (Trained) condition to achieve as balanced of a design as possible.

The following procedure was followed for both conditions. All students from each classroom were asked to complete a battery of measures which included: 1) basic demographic data including ethnicity of natural parents and occupation of parent(s) with whom the child resides; 2) a sociometric measure of peer popularity and; 3) a self-report measure of social efficacy in peer situations. Japanese-American and Caucasian-American boys who had both natural parents of similar ethnicity (e.g., mother and father both of Japanese ancestry) were selected for further study.

Each classroom teacher completed an 11-item screen meant to identify overall in-class behavior. This screen
was administered to each of the Caucasian-American and Japanese-American male students in their classrooms.

Each teacher also selected two students, one from each of the two ethnic groups, whom the teacher judged to be the most verbally competent. These students were designated as confederates, the others were assigned as roleplay subjects. In one school, the pool of Caucasian and Japanese males was deemed too small to have two confederates from each ethnic group so only one confederate was selected.

In all, the Untrained condition was composed of 8 Caucasians and 11 Japanese male roleplay subjects, and three Japanese and three Caucasian male confederates. The Trained condition was composed of 13 Caucasians and 13 Japanese male roleplay subjects, and four Japanese and three Caucasian male confederates.

**Experimental Procedure**

*Social skill training.* All students from the Untrained and Trained conditions received social skill training. Students from the Untrained condition received training after roleplays were videotaped, while students from the Trained condition received their training prior to videotaping. The procedure (described below) was repeated for each classroom.

Training was conducted in three one-hour weekly sessions. The objective of the first session was to get students comfortable with each other and with public
speaking. This was done by grouping students into pairs or triads. Each person was told to obtain personal data (e.g., name, age, favorite food, favorite musical group, etc.) from one another, then "introduce" their partner to the class. The second assignment was to place students into groups of four to six and having each student in the group write one positive comment about each member in the group.

The second session introduced the "Saying No" social skill by explaining the skill steps and then demonstrating the social skill by engaging in a roleplay with the classroom teacher. The students were then instructed to practice the social skill using instructor-suggested roleplay scenarios. Following approximately 30 minutes of roleplaying, students were asked to voluntarily demonstrate one of their roleplays to the class.

The third session consisted of reinforcing the social skill. Students were instructed to pair off and develop written roleplay scripts. They then voluntarily demonstrated their roleplays to the class.

Treatment condition. Prior to videotaping of the roleplay, the investigator met with the confederates for 20 minutes to discuss and practice their roles. The confederates were told that their job was to convince their partner to help them steal the teacher's portable tape recorder. The scenario given to the confederates was that they would be alone with the subjects during recess and that
the teacher had stepped out and probably wouldn't return for 10 minutes. Confederates roleplayed with each other until they felt comfortable with their role.

Immediately before the videotaping, subjects were each told that the confederate would try their best to convince them to steal the teacher's tape recorder, thus they must do their best to resist doing so.

The roleplays were videotaped for 120 seconds. After each roleplay, both confederate and subject completed the 4-item questionnaire concerning the realism of the roleplay (described in the next section).

**Instruments Used**

A battery of measures were used to obtain information regarding the socioeconomic status of students' family, students' popularity, and their perceived ease in peer-oriented social situations.

Socioeconomic status was derived from the highest occupational level of either parent. An adapted version of the Hollingshead and Redlich (1958) socioeconomic scale was used for the study. The seven levels of the original scale were combined into three: 1 = professional (e.g., doctors, lawyers, business executives); 2 = technical (e.g., carpenters, plumbers, supervisory level positions); and 3 = labor (e.g., fast food worker, janitors).
The sociometric measure of peer popularity used was based upon Gesten et al.'s study (1979). All students in each participating classroom was asked to rank each class member on a a 5-point Likert-type scale (1 - "I wish s/he weren't in my class" to 5 - "I feel really happy about his/her being in my class"). The average of the ratings given to each child by his/her classmates was used for analysis.

The self-report measure of ease in social situations, CPSI (Wheeler & Ladd, 1982) and the teacher rating of student behavior, AML (Cowen et al., 1973; Hopper & Kirschenbaum, 1985) has been described in detail in the previous section on the assessment of social skills. Briefly, the CPSI measures the student's perception of how comfortable they are in being assertive in various social situations with their peers; an example of a question is, "Some kids want to play a game. Asking them if you can play is ___ for you." Students would select one of the following choice: HARD!, hard, easy, EASY!.

The AML is an 11-item rating scale of various negative student behaviors (e.g., "Gets into fights or quarrels with other students."). The teacher selects from one of five choices (1 - Never, 2 - Seldom, 3 - Moderately often, 4 - Often, 5 - Most or all of the time) which best describes the frequency of the observed behavior. Each descriptor is accompanied by an explanation (e.g., Seldom - You have
observed this behavior more often than once a month but less than once a week.

The social skill training curriculum used in the study was adapted from the Social Skills Curriculum Guide, which lists 31 different skills (Shumaker et al., 1988). The skill entitled "Saying No" was selected based upon a previous study (Manos, 1988) which indicated that the skill was one of six of the 31 skills that both teachers and students felt the students most effectively and easily mastered. Thus it was felt that the "Saying No" skill could be reasonably learned over the three-session training period. While various scenarios were used during the training, the scenario used for the videotaped roleplays was limited to a confederate convincing a subject to steal the teacher's portable tape recorder.

Proper production of the "Saying No" skill, according to Shumaker et al. (1988) required the subject to engage in 10 skill steps: 1) face the person; 2) make eye contact; 3) use a serious voice tone; 4) have a serious facial expression; 5) have a straight body posture; 6) say something nice to the person; 7) say "No"; 8) give a reason for saying no; 9) suggest something else to do; and 10) if the person does not listen, say "No" again and leave.

A three-part behavioral coding system was constructed and piloted (Akamine, 1988) to analyze the videotaped roleplays. The first part of the coding system was composed
of the previously described five nonverbal categories: 1) overall posture (stiff, relaxed, fidgety); 2) head orientation (face directly, faced slightly away, faced completely away); 3) eye orientation (eye contact, look slightly away, look completely away); 4) facial expression (no emotion, serious/firm, smiling, giggling/chuckling), and 5) voice tone (monotone, pleasant, serious/firm, pleading, joking, other). These five categories were coded into 10-second intervals for 120 consecutive seconds.

The second part of the coding system consisted of four of the five verbal categories; coded according to their presence or absence during the roleplay. Skill step 10 was omitted since it was not considered likely that the subject would walk away given the two-minute length of the roleplay. However, this skill step was included in the training.

In the third section, transcripts were made of the videotaped roleplays. Statements were then categorized based upon Bierman's (1986) system. These four categories were self-expression (e.g., statements about oneself and statements of personal reference); questions and statements functioning as questions; leadership bids (e.g., suggestions, directives, invitations, or advice); talk (all other statements); and social noise (verbal but non-talk utterances).

For all three parts of the coding system, frequency scores by their categories were used as the basis of
analyses. After each videotaped roleplay, the subject and confederate filled out a 4-question, 4-point Likert-type scale. Two questions dealt with how realistic both the subject and confederate felt the subject performed, and the other two questions asked how realistic both the subject and confederate felt the confederate performed (e.g., "My partner would have acted the same way if the situation was real" - (1)"NO WAY!", (2) no way, (3) yes, (4) "YES!"). The first two questions were combined to give a realism score for the subject; similarly, the other two were combined to give a realism score for the confederate.

While all student training took place in the classroom with all students present, the videotaped sessions were either held in an empty classroom or a room set up to resemble a classroom with only the two involved participants and investigator present. During the videotaped sessions, participants were seated at a desk or table. A remote-controlled videorecorder was placed on a tripod approximately six feet away and directly faced the participants.

Two upper level undergraduate students (Japanese-American male and female) unfamiliar with the study's hypotheses coded the videotaped roleplays and transcripts. Training of the students consisted of an explanation of the coding system with videotaped roleplay examples of the various behavioral categories. Videotaped roleplays used
were from a pilot study (Akamine, 1988). The two students then practiced coding using several videotaped roleplays and roleplay transcripts until they felt comfortable with the procedure. They were then tested against the investigator's coding of a roleplay that had not been used in the practice sessions. A minimum agreement rate of 70% was set as the study requirement for the coders; both students met the required standard.

Inter-rater reliability data were obtained for 48%(12) of the study's roleplays with an average inter-rater reliability of Pearson's $r = .67$. Thus the data were deemed adequately reliable for further analysis.

**Predicted Measures.** Several factors have been indentified in the previous chapter as affecting the expression of social skills: gender, age, SES, academic achievement, self-confidence, and peer acceptance. Thus these factors need to be addressed in order to answer more precisely the study's major hypothesis, whether ethnicity is a significant mediating factor in the display of this particular social skill.

SES, academic achievement, self-confidence, and peer acceptance measured by an adapted version of the Hollingshead and Redlich scale, AML, CPSI, and a sociometric measure, respectively, were expected to be equivalent across the two ethnicities.
To test the hypothesis that Japanese-American boys will engage in less direct verbal and nonverbal behavior than will the Caucasian-American boys, behavior constructs referred to as "indirect verbal" and "indirect nonverbal" were developed. The "indirect verbal" behavior construct was formed by combining the "questions", "talk", and "no-talk" subscales of Bierman's scale (1986).

The "indirect nonverbal" behavior construct was formed by combining various scales of the behavioral coding system used for this study (Akamine, 1988; Shumaker et al., 1988): overall posture - fidgeting, stiff; head orientation - face slightly away, face completely away; eye orientation - eye away; affect - no, smiling, giggling/chuckling; voice tone - monotone, laughing/joking.

To test the hypothesis that Caucasian-American boys will engage in more direct verbal and nonverbal behavior than will Japanese-American boys, behavior constructs referred to as "direct verbal" and "direct nonverbal" were formed. The "direct verbal" behavior construct was developed by combining the "self-expression" and "leadership bids" subscales of Bierman's scale (1986).

The "direct nonverbal" behavior construct was formed by combining various scales of the behavioral coding system (Akamine, 1988; Shumaker et al., 1988): head orientation - face directly; eye orientation - eye to eye; affect - serious; voice tone - pleasant, serious/firm.
Hypotheses

Four corollary hypotheses and their predictions, based upon the overall study hypothesis that ethnicity is a significant mediating variable in the display of a social skill, are presented in this section.

**Corollary Hypothesis (1):** Japanese-American subjects will engage in more indirect verbal behavior than Caucasian-American subjects.

1) **Prediction:** Japanese-American subjects with social skill training will engage in significantly more indirect verbal behavior than Caucasian-American subjects.

2) **Prediction:** Japanese-American subjects without social skill training will engage in significantly more indirect verbal behavior than Caucasian-American subjects without social skill training.

3) **Prediction:** Japanese-American subjects with Japanese-American confederates will engage in more significantly indirect verbal behavior than Japanese-American subjects with Caucasian-American confederates.

**Corollary hypothesis (2):** Japanese-American subjects will engage in significantly more indirect nonverbal behavior than Caucasian-American subjects.
1) **Prediction:** Japanese-American subjects with social skill training will engage in significantly more indirect nonverbal behavior than Caucasian-American subjects with social skill training.

2) **Prediction:** Japanese-American subjects without social skill training will engage in significantly more indirect nonverbal behavior than Caucasian-American subjects without social skill training.

3) **Prediction:** Japanese-American subjects with Japanese-American confederates will engage in significantly more indirect nonverbal behavior than Japanese-American subjects with Caucasian-American confederates.

**Corollary hypothesis (3):** Caucasian-American subjects will engage in more direct verbal behavior than Japanese-American subjects.

1) **Prediction:** Caucasian-American subjects with social skill training will engage in significantly more direct verbal behavior than Japanese-American subjects with social skill training.

2) **Prediction:** Caucasian-American subjects without social skill training will engage in significantly more direct verbal behavior than Japanese-American subjects without social skill training.

3) **Prediction:** Caucasian-American subjects with Caucasian-American confederates will engage in significantly
more direct verbal behavior than Caucasian-American subjects with Japanese-American confederates.

**Corollary hypothesis (4):** Caucasian-American subjects will engage in significantly more direct nonverbal behavior than Japanese-American subjects.

1) **Prediction:** Caucasian-American subjects with social skill training will engage in significantly more direct nonverbal behavior than Japanese-American subjects with social skill training.

2) **Prediction:** Caucasian-American subjects without social skill training will engage in significantly more direct nonverbal behavior than Japanese-American subjects without social skill training.

3) **Prediction:** Caucasian-American subjects with Caucasian confederates will engage in significantly more direct nonverbal behavior than with Japanese confederates.
Chapter III

RESULTS

The results in this chapter are divided into three sections. First, predicted results are summarized. Second, results of major variables which could confound the interpretation of differences in social skill performance are presented; included are data on inter-rater reliabilities and the subjects' perception of the realism of the roleplays. Analyses of significant non-predicted findings are summarized in the third section. In addition, various descriptive and inferential statistics of the constructs and behavioral coding scales are presented in the Appendix.

Section One: Predicted Findings

Four corollary hypotheses and their predictions, based upon the overall study hypothesis that ethnicity is a significant mediating variable in the display of a social skill, are presented in this section. The $F$ ratios presented are from the overall effect of that factor or interaction. When means within an effect are compared the same $F$ ratio is presented.
Corollary Hypothesis (1): Japanese-American subjects will engage in more indirect verbal behavior than Caucasian-American subjects.

**Result:** $F(1,37) = 0.18, p = 0.67.$

**Conclusion:** prediction not supported.

1) **Prediction:** Japanese-American subjects with social skill training (JT) will engage in significantly more indirect verbal behavior than Caucasian-American subjects with social skill training (CT).

   **Result:** Mean (JT) = 0.35; Mean (CT) = 0.41;
   $F(1,37) = 0.04, p = 0.837.$

   **Conclusion:** prediction not supported.

2) **Prediction:** Japanese-American subjects without social skill training (JOT) will engage in significantly more indirect verbal behavior than Caucasian-American subjects without social skill training (COT).

   **Result:** Mean(JOT) = 0.54; Mean (COT) = 0.55;
   $F(1,37) = 0.04, p = 0.837.$

   **Conclusion:** prediction not supported.

3) **Prediction:** Japanese-American subjects with Japanese-American confederates (JJ) will engage in more significantly indirect verbal behavior than Japanese-American subjects with Caucasian-American confederates (JC).

   **Result:** Mean(JJ) = 0.34; Mean(JC) = 0.55;
\( F(1,37) = 3.36, p = 0.75. \)

**Conclusion:** Japanese-American subjects show a trend towards using more indirect verbal behavior with Caucasian confederates than with Japanese confederates, \( F(1,37) = 3.36, p = 0.075 \) (see Figure 1).

**Summary of Corollary hypothesis (1) findings:**
Japanese-American subjects did not engage in more indirect verbal behavior than Caucasian-American subjects. As results from Prediction (3) indicate, there in fact was a trend in the opposite direction, with Japanese-American subjects more likely to use indirect verbal behavior with Caucasian-American subjects than with Japanese-American subjects.

**Corollary hypothesis (2):** Japanese-American subjects will engage in significantly more indirect nonverbal behavior than Caucasian-American subjects.

**Result:** \( F(1,37) = 0.04, p = 0.845. \)

**Conclusion:** prediction not supported.

1) **Prediction:** Japanese-American subjects with social skill training (JT) will engage in significantly more indirect nonverbal behavior than Caucasian-American subjects with social skill training (CT).

**Result:** Mean(JT) = 14.53; Mean(CT) = 13.13;
\( F(1,37) = 0.48, p = 0.999. \)
Figure 1

Mean Comparisons of Subjects' Indirect Verbal Behavior by Subjects' Ethnicity

○ - Japanese subjects
△ - Caucasian subjects
Conclusion: prediction not supported.

2) Prediction: Japanese-American subjects without social skill training (JOT) will engage in significantly more indirect nonverbal behavior than Caucasian-American subjects without social skill training (COT).

Result: Mean(JOT) = 13.78; Mean(COT) = 14.91
\[ F(1,37) = 0.48, p = 0.999. \]

Conclusion: prediction not supported.


Result: Mean(JJ) = 14.67; Mean(JC) = 13.61;
\[ F(1,37) = 1.03, p = 0.316. \]

Conclusion: prediction not supported.

Summary of Corollary Hypothesis (2) findings: There were no findings to support the hypothesis that Japanese-American subjects would engage in significantly more indirect nonverbal behavior than Caucasian-American subjects.

Corollary hypothesis (3): Caucasian-American subjects will engage in more direct verbal behavior than Japanese-American subjects.
Result: \( F(1,37) = 0.03, p = 0.872. \)

Conclusion: prediction not supported.

1) **Prediction**: Caucasian-American subjects with social skill training (CT) engage in significantly more direct verbal behavior than Japanese-American subjects with social skill training (JT).

Result: Mean (CT) = 0.63; Mean (JT) = 0.64; \( F(1,37) = 0.00, p = 0.999. \)

Conclusion: prediction not supported.

2) **Prediction**: Caucasian-American subjects without social skill training (COT) will engage in significantly more direct verbal behavior than Japanese-American subjects without social skill training (JOT).

Result: Mean (COT) = 0.47; Mean (JOT) = 0.47; \( F(1,37) = 0.00, p = 0.999. \)

Conclusion: prediction not supported.

3) **Prediction**: Caucasian-American subjects with Caucasian-American confederates (CC) will engage in significantly more direct verbal behavior than Caucasian-American subjects with Japanese-American confederates (CJ).

Result: Caucasian-American subjects with Caucasian-American confederates did not engage in significantly more direct verbal behavior than Caucasian-American subjects with Japanese-American confederates; Mean (CC) = 0.64; Mean (CJ) = 0.52. However, Japanese-
American subjects were significantly more likely to engage in direct verbal behavior with Japanese confederates than with Caucasian confederates (JC); Mean(JJ) = 0.67; Mean(JC) = 0.43; F(1,37) = 6.60, p = 0.014 (Figure 2).

**Conclusion:** prediction not supported.

**Summary of Corollary Hypothesis (3) findings:**
Caucasian-American subjects were not significantly more likely to engage in direct verbal behavior than Japanese-American subjects. An unpredicted significant finding shows that Japanese-American subjects are more likely to use direct verbal behavior with members of their own ethnic group than with Caucasian-American subjects.

**Corollary hypothesis (4):** Caucasian-American subjects will engage in significantly more direct nonverbal behavior than Japanese-American subjects.

**Result:** F(1,37) = 0.07, p = 0.793.

**Conclusion:** prediction not supported.

1) **Prediction:** Caucasian-American subjects with social skill training (CT) will engage in significantly more direct nonverbal behavior than Japanese-American subjects with social skill training (JT).

**Result:** Mean(CT) = 20.39; Mean(JT) = 19.69; F(1,37) = 0.42, p = 0.521.

**Conclusion:** prediction not supported.
Figure 2

Mean Comparisons of Subjects' Direct Verbal Behavior by Confederates' Ethnicity

- Japanese subjects
- Caucasian subjects
2) **Prediction:** Caucasian-American subjects without social skill training (COT) will engage in significantly more direct nonverbal behavior than Japanese-American subjects without social skill training (JOT).

**Result:** Mean(COT) = 17.44; Mean(JOT) = 20.23

\[ F(1,37) = 0.42, \quad p = 0.521. \]

**Conclusion:** prediction not supported.

3) **Prediction:** Caucasian-American subjects with Caucasian confederates (CC) will engage in significantly more direct nonverbal behavior than with Japanese confederates (CJ).

**Result:** Mean(CC) = 18.11; Mean(CJ) = 20.13;

\[ F(1,37) = 0.88, \quad p = 0.353. \]

**Conclusion:** prediction not supported.

**Summary of Corollary Hypothesis (4) findings:** Caucasian-American subjects were not shown to engage in significantly more direct nonverbal behavior than Japanese-American subjects.

**Overall Summary:** Overall, the predicted results based upon the main study hypothesis, that ethnicity is a significant mediating variable in the display of a social skill for Japanese-American and Caucasian-American sixth-grade subjects, cannot be supported. Japanese-American subjects did not display significantly more indirect verbal and
skill for Japanese-American and Caucasian-American sixth-grade subjects, cannot be supported. Japanese-American subjects did not display significantly more indirect verbal and nonverbal behavior than Caucasian-American subjects; nor did Caucasian-American subjects display significantly more direct verbal and nonverbal behavior than Japanese-American subjects.

However, there were two noteworthy findings. Japanese-American subjects were significantly more likely to use direct verbal (assertive) behavior with Japanese confederates than with Caucasian subjects; and Japanese-American subjects showed a trend towards more indirect verbal (nonassertive) behavior with Caucasian subjects than with Japanese subjects.

Section Two: Confounding and Reliability

Results in this section suggest that differences in roleplay performances are not likely due to confounding variables or low reliability. One-way ANOVAs were conducted on the various social skill correlate variables: SES (socioeconomic status), AML (teacher rating of in-class behavior), CPSI (self-report measure of confidence in interpersonal situations), and SMR (peer rating of popularity), by the ethnicity of the confederates (Table 2) and subjects (Table 3). It was predicted that none of the variables would differ significantly by their ethnicity,
### Table 2

**Mean Comparisons of Social Skill Correlate Variables by Confederates' Ethnicity**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th></th>
<th>( F(1,11) )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Japanese (n=7)</td>
<td>Caucasian (n=6)</td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>2.14</td>
<td>2.67</td>
<td>4.45</td>
</tr>
<tr>
<td>AML</td>
<td>14.23</td>
<td>14.00</td>
<td>0.05</td>
</tr>
<tr>
<td>CPSI</td>
<td>70.80</td>
<td>66.00</td>
<td>0.55</td>
</tr>
<tr>
<td>SMR</td>
<td>4.11</td>
<td>3.90</td>
<td>2.02</td>
</tr>
</tbody>
</table>

* \( p < .05 \)

### Table 3

**Mean Comparisons of Social Skill Correlate Variables by Subjects' Ethnicity**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th></th>
<th>( F(1,43) )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Japanese (n=24)</td>
<td>Caucasian (n=21)</td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>2.08</td>
<td>2.24</td>
<td>2.04</td>
</tr>
<tr>
<td>AML</td>
<td>18.83</td>
<td>17.95</td>
<td>0.16</td>
</tr>
<tr>
<td>CPSI</td>
<td>62.33</td>
<td>69.24</td>
<td>5.57*</td>
</tr>
<tr>
<td>SMR</td>
<td>3.55</td>
<td>3.34</td>
<td>1.58</td>
</tr>
</tbody>
</table>

* \( p < .05 \)
ethnicity was significant, $F(1,43) = 5.57, p = 0.023$ (Table 3). Here Caucasian-American boys perceived themselves as more interpersonally effective than Japanese-American boys.

The ramification of a significant difference in the CPSI by ethnicity, suggests the possibility that Caucasian-American boys may be more likely to view their roleplay performances as more effective (i.e., that they convinced the confederate that they were not going to engage in an illegal act) than the Japanese-American boys. The converse could also be true, that is, Japanese-American boys would be less likely to view their roleplay performance as effective. This in fact turned out not to be the case, as both groups felt their performances to be convincing; concomitantly, no significant differences were found between self-perception of roleplay performance by subjects' ethnicity (Table 4).

**Inter-rater reliability.** The overall inter-rater reliability for the nonverbal behavioral coding scale was judged to be fair, Pearson's $r = .67$. The inter-rater percent agreement for the various categories ranged from 98 percent (voice tone - laughing/joking) to 33 percent (affect - no emotions) (see Table 5).

The effect of the variability in inter-rater agreement scores upon the results was limited to one non-predicted significant finding. The *Posture - relaxed* category
Table 4
Mean Comparisons of Subjects' Self-perception of Convincing Roleplay Performance by Ethnicity

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>( F(1,43) )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Japanese (n=24)</td>
<td>Caucasian (n=21)</td>
</tr>
<tr>
<td>CONVCONF</td>
<td>3.76</td>
<td>3.50</td>
</tr>
</tbody>
</table>

* \( p < .05 \)

revealed that subjects without social skills training were significantly more relaxed than those with training, \( F(1,37) = 6.02, p = 0.019 \); the inter-rater agreement score for this scale was 83 percent.

Roleplay performance evaluation. Overall, subjects and confederates perceived their own and their partners' roleplay performances to adequately reflect reality. When subjects were asked, "If someone had really asked you to steal a Walkman, you would have acted the same way.", 95.6% (n=43) answered either "YES!" or "mostly." When subjects were asked, "Your partner would have acted the same way if the roleplay had been real.", 80% (n=36) said either "YES!" or "mostly."

When confederates were asked, "If you were really asking someone to help you steal a Walkman, you would have acted the same way as in the roleplay.", 71.1% (n=32) said
Table 5

Inter-rater Percent Agreement for the Nonverbal Behavioral Scale Categories

<table>
<thead>
<tr>
<th>Categories</th>
<th>Percent Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Posture</strong></td>
<td></td>
</tr>
<tr>
<td>stiff</td>
<td>95</td>
</tr>
<tr>
<td>relaxed</td>
<td>83</td>
</tr>
<tr>
<td>fidgety</td>
<td>88</td>
</tr>
<tr>
<td><strong>Head Orientation</strong></td>
<td></td>
</tr>
<tr>
<td>direct</td>
<td>66</td>
</tr>
<tr>
<td>slightly away</td>
<td>72</td>
</tr>
<tr>
<td>completely away</td>
<td>89</td>
</tr>
<tr>
<td><strong>Eye Orientation</strong></td>
<td></td>
</tr>
<tr>
<td>eye to eye</td>
<td>74</td>
</tr>
<tr>
<td>look away</td>
<td>74</td>
</tr>
<tr>
<td><strong>Affect</strong></td>
<td></td>
</tr>
<tr>
<td>no emotions</td>
<td>33</td>
</tr>
<tr>
<td>serious/firm</td>
<td>72</td>
</tr>
<tr>
<td>smiling</td>
<td>40</td>
</tr>
<tr>
<td>giggling/</td>
<td>99</td>
</tr>
<tr>
<td>chuckling</td>
<td></td>
</tr>
<tr>
<td><strong>Voice Tone</strong></td>
<td></td>
</tr>
<tr>
<td>monotone</td>
<td>95</td>
</tr>
<tr>
<td>pleasant</td>
<td>72</td>
</tr>
<tr>
<td>serious/firm</td>
<td>92</td>
</tr>
<tr>
<td>laughing/joking</td>
<td>98</td>
</tr>
<tr>
<td>other</td>
<td>95</td>
</tr>
</tbody>
</table>
either "YES!" or "mostly." When asked, "Your partner would have acted the same way if the situation had been real.", 62.2% (n=28) of the confederates answered "YES!" or "mostly."

Summary. Results suggest that differences in social skill performance are not likely due to participants' SES, overall academic performance, nor peer popularity. Subjects' perception of interpersonal effectiveness was found to be significantly different by the ethnicity of the subjects. Caucasian-American boys viewed themselves as more interpersonally skilled than the Japanese-American boys. However, no significant differences by ethnicity were found by an objective measure of peer acceptance or popularity, suggesting that differences were more likely based on perception than actual behavior. It is suggested that the perceptual differences could be attributed to what is valued by the respective ethnic groups, that is, Caucasian-American boys prefer to endorse more assertive responses than Japanese-American boys. The difference in perception of interpersonal effectiveness increased the potential that roleplay subjects' responses may be skewed towards Caucasian-American boys overrating their performance and the Japanese-American boys underrating their performances. However, no significant differences were found when roleplay performance was evaluated by ethnicity.
However, no significant differences were found when roleplay performance was evaluated by ethnicity.

Overall, inter-rater reliability is fair with a wide range of percent agreement scores among the various nonverbal behavioral categories. Posture - relaxed was the only nonverbal behavioral scale found to be significant in later analyses. However, this category was unrelated to the study's hypotheses.

Lastly, roleplay performances were perceived by both subjects and confederates as adequately reflecting possible real life scenarios.

In summary, there is good reason to assume that any differences in roleplay performances cannot be attributed to confounding variables or low reliability.

Section Three: Non-Predicted Findings

Constructs. There were four behavior constructs developed for this study: direct nonverbal behavior, indirect nonverbal behavior, direct verbal behavior, and indirect verbal behavior. Analyses of non-predicted significant findings among the constructs revealed social skill training to be significant for both direct and indirect verbal behavior. That is, subjects who received social skill training were significantly more likely to use direct verbal (assertive) behavior than those who did not receive training, $F(1,37) = 7.25$, $p = 0.011$ (Figure 3).
Figure 3

Mean Comparisons of Subjects' Direct Verbal Behavior by Training

○ - Japanese subjects
△ - Caucasian subjects
(nonassertive) behavior than those who did not receive training, $F(1,37) = 6.18, p = 0.018$ (Figure 4).

**Scales of the constructs.** Various verbal and nonverbal scales were used in developing the constructs based upon the study's hypotheses. While unpredicted, significant findings were discovered among the various scale categories which comprised the constructs; these findings are presented here.

Subjects who underwent social skill training were significantly less likely to use question statements (one of the three categories of the indirect verbal behavior construct) than those who did not receive training, $F(1,37) = 4.16, p = 0.049$. Further analysis of this finding revealed a significant interaction between the ethnicity of the subjects and training, $F(1,37) = 4.59, p = 0.038$ (Figure 5). It was found that Japanese-American subjects without social skill training were significantly more likely to use question statements, in response to confederates asking them to steal the teacher's Walkman.

Subjects in general were significantly more likely to use talk statements (one of the three categories comprising indirect verbal behavior) with Caucasian confederates than Japanese confederates, $F(1,37) = 6.44, p = 0.016$.

Subjects could also be differentiated by self-expression statements (one of two categories of the direct verbal behavior construct). Subjects who received social
Figure 4
Mean Comparisons of Subjects' Indirect Verbal Behavior by Training

- Japanese subjects
- Caucasian subjects
Figure 5

Mean Comparisons of Subjects' Questioning Statements by Training

- Japanese subjects
- Caucasian subjects
skill training were significantly more likely to use self-expression statements in response to confederates asking them to steal the teacher's Walkman than those who had not receive training, $F(1,37) = 6.25, p = 0.0169$.

Japanese-American subjects were significantly more likely to use self-expression statements with Japanese confederates than with Caucasian confederates, $F = 6.71, p = 0.014$ (Figure 6). Comparisons of Figure 2 and Figure 5 reveal that self-expression statements (one-half of the direct verbal behavior construct) is the major contributing factor in the significant finding for the direct verbal behavior construct. Further statistical analyses revealed no other significant interactions within either of these findings.

One significant finding among comparisons not predicted by the hypotheses was that subjects without social skill training were significantly more likely to have a relaxed posture than subjects with social skill training, $F(1,37) = 6.02, p = 0.019$. 
Figure 6

Mean Comparisons of Subjects' Self-expressive Statements by Confederates' Ethnicity

- Japanese subjects
- Caucasian subjects
Summary. Non-predicted comparisons indicate a strong training effect. Subjects who received social skill training and then asked to help steal the teacher's portable taperecorder were more likely to refuse to engage in the illegal behavior by using direct verbal behavior (primarily self-expression statements). Trained subjects were also less likely to have a relaxed posture and less likely to use indirect verbal behavior (categories found significant within this construct: question and talk statements). Talk statements were significantly more likely to be used with Caucasian-American subjects rather than Japanese-American subjects; and Japanese-American subjects had a significantly greater preference for using self-expression statements with Japanese-American subjects than with Caucasian-American subjects.
Chapter IV
DISCUSSION

The objective of this study was to test the hypothesis that ethnicity is a significant mediating variable in the display of social skills. The rationale for the study was based upon a review of the social skills literature which revealed that most empirical studies involved primarily Caucasian subjects, thus making generalization of these studies to other ethnic groups questionable.

This chapter discusses the results of the findings in three sections: factors which could confound interpretation, predicted findings, and unpredicted findings. Lastly, the implications of this study are discussed.

Confounding Factors

There are two groups of factors which are potential confounding factors in the interpretation of the hypotheses: factors shown in previous research to confound social skills display and the perceived realism of the roleplays.

All subjects were initially assessed on six factors shown to mediate the display of social skills: gender, age, socioeconomic status, academic achievement, self-confidence, and peer acceptance. With one exception students did not differ significantly on these variables. The exception was the self-confidence measure which revealed that Caucasian-
American boys perceived themselves as more interpersonally effective than Japanese-American boys.

Two possible reasons were suggested for this finding. One, Caucasian-American subjects' perception of themselves as more interpersonally adept may in fact reflect their actual performance. Thus the finding could be seen as being in accord with previous research which has shown Caucasian-Americans to value autonomy and expressiveness (e.g., Billings & Moos, 1982; Devereux, Bronfenbrenner, & Rodgers, 1969; Russell, 1979). Conversely, Japanese-Americans prefer a group orientation, and consequently are more likely to behave in a deferential manner (Connor, 1976; Johnson, 1977; Staples & Mirande, 1980). Thus the CPSI, which assumes that assertive behavior is more "correct" (i.e., interpersonally effective), has reflected actual interpersonal behavioral difference, albeit this difference reflects cultural values.

Another reason is that Caucasian-American subjects may not be more interpersonally effective but that the CPSI (self-confidence measure) may reflect item-response preferences of the two ethnic groups (i.e., Caucasians responded more favorably toward items reflecting autonomy and expressiveness, and Japanese toward items reflecting deferential behavior); the CPSI assumes that assertive behavior is more "correct" (i.e., interpersonally effective). There appears to be support within the study for this explanation. The sociometric peer rating measure
(a measure of peer relational abilities that is considered to be a more accurate and objective measure) used in the study failed to find any differences between the two ethnic groups.

The significant finding on the self-confidence measure increased the likelihood that Caucasian-American subjects would be more likely to view their roleplay performances of the social skill as more effective than the Japanese-American subjects, or conversely, that Japanese-American subjects would be less likely to view their roleplay performances as effective. However, analysis of roleplay subjects' perception of the performance revealed that both groups felt their performances were convincing and no significant differences in performances were found between the two groups. Therefore, it is reasonable to conclude that self-confidence did not confound other results.

Secondly, a possible confounding factor could have been the perceived realism of the roleplay performances. One of the basic premises of this study was that roleplays were a valid analogue for the use of assertive-type behavior; this premise is supported in recent reviews (Hops & Hymel, 1988; Michelson & Wood, 1980; Van Hasselt et al., 1979). It was also assumed that participants could reasonably decide whether their and/or their partners performances were analogous to what might be expected to occur in a similar situation (i.e., a student being asked to participate in an
illegal act). Thus, if the roleplay participants felt the performances reflected what they might actually do given a similar situation, then the roleplays were deemed to be a valid analogue. However, if the roleplay participants did not feel their and/or their partners performances reflected what they might actually do given a similar situation, then results of the behavioral measures of the participants' performances would be meaningless, since the results would be based on performances not likely to reflect a probable scenario. Consequently, the results would not be generalizable to situations in which social skills would likely be used.

Fortunately, results indicated that roleplay performances were judged by subjects and confederates as reflecting possible real-life scenarios. Therefore, it is unlikely that any behavioral differences would be due to the uniqueness of the roleplay itself.

In summary, major factors which could confound the study's hypothesis were addressed. These include age, gender, socioeconomic status, academic achievement, peer popularity, self-perception of interpersonal effectiveness, inter-rater reliability, and perception of the realistic nature of the roleplays. Self-perception of interpersonal effectiveness was found to be significant by ethnicity, however, it is suggested that this difference was probably due to ethnic group tendencies rather than actual
differences in behavior. Finally, roleplays were felt by the participants to portray a probable scenario. In all, it is not likely that the significant findings in verbal and nonverbal behavior are due to the two groups of potential confounding factors.

Predicted Findings

The results of this study indicate that the overall hypothesis that ethnicity differentially mediates the expression of the social skill (resisting peer pressure) cannot be supported. Specifically, the sample of Japanese-American subjects were not found to use significantly more indirect interpersonal behavior than Caucasian-American boys. Neither were Caucasian-American subjects found to use more direct interpersonal behavior than Japanese-American subjects. The lack of significant predicted findings could be attributed to several factors: lack of real differences by ethnicity in the interpersonal behaviors that were studied, non-representative study sample, variability in inter-rater reliability, and the selection of the social skill; these factors are discussed below.

A possible, albeit unlikely, reason for the lack of significant predicted findings is that, in general, there are no behavioral differences between Caucasian-American and Japanese-American subjects by their ethnicity. However, Japanese-American subjects were selected for the study
because ethnic differences between Caucasian-Americans and Japanese-Americans were considered to be substantial (e.g., Arkoff, 1959; Connor, 1976; Johnson, 1977; Kitano, 1969; Staples & Mirande, 1980) and that these ethnic differences were not likely to be confounded with socio-economic status or academic achievement.

On the other hand, no data was obtained in this study on the generation of the Japanese-American boys. It is likely these boys are at least fourth generation Japanese-American; the studies cited in the previous paragraph are of Japanese-Americans from earlier generations. It is possible that the Westernization of the succeeding generation(s) may have contributed to the lack of significant predicted findings (i.e., that Japanese-Americans boys while in previous generations may have behaved significantly differently from Caucasian-Americans boys, now behave similarly due to acculturation).

Another reason for the lack of significant predicted findings could be that the study sample was not representative of the two ethnic groups. The study was limited to a sample of seven public elementary schools out of a possible one hundred and sixteen public elementary public elementary schools on Oahu; if the study had sampled other schools the results may have been different. The fact the sample was limited to sixth-grade boys made the sample obviously unrepresentative, in that girls as well as other
grade levels were not included. Possibly, the study's findings would have been different had other grade levels and/or girls been included. The selection of sixth-graders was based upon the fact that sixth-graders are likely candidates for social skills training (e.g., Harter, 1982; Hopper & Kirschenbaum, 1985; Manos, 1988) and the judgement that sixth-graders would readily understand both the written aspect of the assessment battery and social skill training curriculum, as well as quickly learn the concepts and skill steps of the particular social skill. The study sample was limited to boys since previous research suggest that boys have significantly more behavioral problems than girls (e.g., Dodge et al., 1985; Ford, 1982; Gottman et al., 1975; Selman et al., 1986); thus the subjects were selected so that the results of the study could be generalized to a population that was appropriate for social skill intervention. An effort was also made to select the sample from various locations: rural, suburban, and urban areas, making the sample more representative of settings in which these boys reside.

In summary, while the sample was not truly representative of Caucasian-American and Japanese-American students who might utilize social skills training, the sample appears to represent adequately those who were likely to be potential candidates for social skills training.
Another set of factors which could have masked significant findings was the fair inter-rater reliability (Pearson's $r = .67$) and the variability in inter-rater percent agreement scores. Reasons for the fair reliability and percent agreement variability may lie in the relative newness of the nonverbal behavioral coding scale and the exacting nature of the coding process. The coding system had previously been tested only once (Akamine, 1988), albeit the coding system was adapted from previous research (Shumaker et al., 1984). However this study, unlike Shumaker et al.'s study, focused on interpersonal behavioral differences by ethnicity, a relatively unexplored area. Nonetheless, fourteen of the eighteen nonverbal behavioral categories had percent agreement scores greater than 70 (see Table 5).

A related factor possibly contributing to the fair reliability and variability of the percent agreement scores may have been the nature of the coding process. Coders were instructed to view each videotaped roleplay (120 seconds in length) and select the nonverbal behavior category that most frequently occurred in each of the twelve 10-second intervals. Each roleplay took approximately 15-20 minutes to code with each coder having either 28 or 29 roleplays to assess (45 total roleplays, plus six reliability checks for each coder). Coding was completed over a six week period at the coders' convenience, which in most cases occurred late
in the evening. Thus the demands of the coding process may have increased the likelihood that concentration was compromised, which in turn may have decreased the inter-rater reliability score and increased the variability in the percent agreement scores.

The lack of significant predicted findings could also be the result of the selection of the particular social skill, resisting peer pressure; in the case of Japanese-Americans and Caucasian-Americans, there may be no differences in the display of this particular social skill. Another possibility may be that although this skill may be displayed similarly by Japanese-Americans and Caucasian-Americans, other social skills may reveal behavioral differences. However, the skill was selected because it was thought that the confrontive nature of the skill would maximize the interpersonal differences. The research basis for assuming that Japanese-Americans would be less likely to engage in direct behavior and more likely to engage in indirect behavior suggested that they highly value interdependent behavior (Arkoff, 1959; Conner, 1976; Kitano, 1966; Meredith & Meredith, 1966); consequently they may be more likely to minimize behaviors which could accentuate differences, such as directly disagreeing. While Caucasian-Americans, preferring autonomous and expressive behaviors (Billings & Moos, 1982; Devereux, Bronfenbrenner, & Rodgers, 1969; Russell, 1979) would be more comfortable expressing
their needs directly. Given these assumptions, it was thought that the social skill, resisting peer pressure, would increase the likelihood of finding significant behavioral differences by ethnicity.

In summary, several factors were considered in explaining the lack of significant predicted findings: lack of real differences in the interpersonal behaviors by ethnicity that were studied, a non-representative study sample, fair inter-rater reliability score and variable percent agreement scores, and selection of the social skill. It was concluded that failure to find significance was probably not due to lack of differences by ethnicity, non-representative study sample, or poor selection of social skill; fair inter-rater reliability and variability in inter-rater percent agreement scores suggest the possibility that significant predicted findings may have been masked.

**Unpredicted Findings**

Although the study hypotheses could not be supported, significant unpredicted findings did occur and, since the findings were unpredicted, experimenter bias was minimized. The study predicted that Japanese-Americans would use indirect behavior with both Japanese-Americans and Caucasian-Americans. Instead Japanese-Americans were found to be significantly more likely to use direct verbal behavior with Japanese confederates than with Caucasian-
American subjects. Japanese-Americans also showed a trend toward using more indirect verbal behavior with Caucasian-Americans than with Japanese-Americans.

A suggested explanation for these findings may lie in previous research which has shown that black and white students prefer same-race peers as friends (Bartel et al., 1973; Gerard et al., 1975; and Shaw, 1973). Although studies have not been conducted on the friendship patterns among Japanese-Americans, an analogous phenomenon may have occurred in the use of direct and indirect verbal behavior. That is, given that friends are more likely to freely express themselves to each other, Japanese-American boys may have felt less verbally constricted in resisting peer pressure from peers of their own ethnic group (i.e., expressing direct verbal behavior) than they would with peers from another ethnic group. This finding, that interpersonal behavior may differ by the ethnicity of the partners, suggests a more complex interaction than had been hypothesized (i.e., that the ethnicity of the subjects would be a sufficient predictor of behavior).

The strongest finding in this study has been the effect of social skill training. That is, irrespective of the subjects' ethnicity, trained subjects were significantly more likely to use direct verbal behavior and significantly less likely to use indirect verbal behavior in refusing to engage in an illegal behavior.
Trained subjects, however, were also significantly less likely to have a relaxed posture than untrained subjects. One possible explanation as to why relaxed posture was found to be significantly affected by training was that trained subjects may have felt that a relaxed posture was incompatible with direct verbal behavior and adjusted their posture appropriately.

In summary significant findings were found, albeit unpredicted. Findings suggest that Japanese-American subjects behave differently depending upon the ethnicity of the roleplaying partner. Japanese-Americans are significantly more likely to use direct verbal behavior with subjects from their own ethnic group and exhibit a tendency to use indirect behavior with Caucasian-American partners. It was suggested that this finding may be analogous to previous research showing that friendship, thus candor, is more likely to occur with same-race peers. Training was found to significantly increase direct behavior and decrease indirect behavior. However, training was also found to decrease the use of a relaxed posture. A possible explanation of this finding was that the coding system may not have included a posture compatible with direct verbal behavior.
Implications of the Study

As results of this study indicate, no definitive statement can be made as to whether ethnicity is a mediator of this particular social skill; neither can any definitive statement be made as to whether social skills research using primarily Caucasian subjects can be generalized across ethnicities. Nonetheless, there were two findings in particular which suggest that improvements in the current study may reveal a clearer picture of the role of ethnicity in the mediation of social skills, and one finding which suggests that implementation of social skills training may prove to be useful.

First, further revisions of the relatively untested nonverbal behavior scale may help to unmask ethnic differences. Already, seventy-eight percent of the categories had inter-rater percent agreement scores greater than 70, thus attention should focus on those categories having percent agreement scores less than 70. As an example of a revision, more intensive training in helping coders identify the various subcategories of the affect category (no emotions = .33; serious/firm = .72; smiling = .40; and giggling/chuckling = .99) could increase the overall reliability of the nonverbal behavior coding scale.

Secondly the finding that, at least for Japanese-American subjects, the ethnicity of their partner changes their verbal behavior, suggests that future studies could
focus on specifically identifying the dyadic ethnic combinations as well as the necessary behaviors to successfully implement specific social skills. For example, future research may find that Japanese-American boys trying to resist peer pressure from a same-ethnic group and same-gender peer, may need to exhibit direct verbal and nonverbal behavior to successfully resist. In contrast, if they try to resist peer pressure from Caucasian boys, Japanese-Americans may be most successful if they maintain circumlocutory behavior.

The strong effects of training, which in this study proved to be more significant than ethnicity, support the effectiveness of social skills training. Much of the impetus (and support) for this study came from the Center for Youth Research at the University of Hawaii, where the Youth Development Project (YDP) was developed. The YDP was initially a five-year longitudinal social skills-based study to prevent delinquency in elementary school students (Manos, 1988). Given the encouraging results of the YDP study (e.g., decreased absenteeism and tardiness, reduced disciplinary referrals, improved teacher-student relationships) the project has now been expanded to numerous elementary schools in Hawaii. The results of this study support the continuing implementation of this project.

Hopefully, future studies looking at behavioral differences by ethnicity combined with research such as the
YDP study could further enhance the social skills training curriculum. For example, should future studies replicate the finding that Japanese-American boys use direct behavior with peers from their own ethnic group to effectively resist peer pressure and use indirect behavior with Caucasian-American peers to effect the same result, then training could improved by reflecting this finding. The enhancement of resisting-peer-pressure training could include Japanese-American boys being taught to directly say no in a firm voice tone, maintain eye contact, and use an erect posture, when dealing with peers from their own ethnic group. In contrast, when confronting Caucasian-American boys, Japanese-American boys would be taught to resist peer pressure by asking multiple questions in a giggling/chuckling manner, refraining from eye contact, and using a shifting posture.

No doubt that there is a role for training elementary school students to be more socially adept. In light of the presence of social problems that students confront today: gang-related criminal behavior, illicit drugs, and sexually-transmitted diseases, helping elementary school students gain social skills such as resisting negative peer pressure may prove not only socially enhancing, but life-saving as well.
APPENDIX A

Student Demographic Information

NAME _________________________ AGE ______

SCHOOL ________________________

TEACHER _________________________

How many years have you lived in Hawaii? ______

RACE OF MOTHER _____________________________
(eg., Hawaiian, Chinese, Japanese, Caucasian)

RACE OF FATHER _____________________________
(eg., Hawaiian, Chinese, Japanese, Caucasian)

What does your father do for a living (eg., lawyer, carpenter)?

What does your mother do for a living (eg., housewife, teacher)?
PLEASE NOTE

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

126-127

University Microfilms International
APPENDIX C

Sociometric Scale

Peer Scale

1. Cross your name out in the list below.
2. Read the 1 - 5 rating scale below.
3. Based on the rating scale, place a number in the blank which best fits your feelings next to each name.
4. Be as honest as possible and work quickly.
5. Your answers are private and will not be shared with anyone.
6. Do not show or discuss your answers with anyone.

1. I really wish s/he weren't in my 2. I kind of wish s/he weren't in my 3. I don't have feelings either way 4. I feel happy about him/her being in my class 5. I feel really happy about him/her being in my class
APPENDIX D

Teacher Evaluation Form

Please rate each student on every item based upon your impressions.

I have included Point designators (explanations) for each scale anchor points.

<table>
<thead>
<tr>
<th>Point</th>
<th>Term</th>
<th>Point designators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Never</td>
<td>You have literally never observed this behavior in this child.</td>
</tr>
<tr>
<td>2</td>
<td>Seldom</td>
<td>You have observed this behavior once or twice in the last 2 months.</td>
</tr>
<tr>
<td>3</td>
<td>Moderately often</td>
<td>You have observed this behavior more often than once a month but less than once a week.</td>
</tr>
<tr>
<td>4</td>
<td>Often</td>
<td>You have seen this behavior more often than once a week but less often than daily.</td>
</tr>
<tr>
<td>5</td>
<td>Most or all of the time</td>
<td>You have seen this behavior with great frequency, averaging once a day or more often.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Observed behavior</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
</tr>
<tr>
<td></td>
<td>(1)</td>
</tr>
<tr>
<td>1. Gets into fights or quarrels with other students</td>
<td>( )</td>
</tr>
<tr>
<td>2. Has to be coaxed or forced to work or play with other pupils</td>
<td>( )</td>
</tr>
<tr>
<td>3. Is restless</td>
<td>( )</td>
</tr>
<tr>
<td>4. Is unhappy or depressed</td>
<td>( )</td>
</tr>
<tr>
<td>5. Disrupts class discipline</td>
<td>( )</td>
</tr>
<tr>
<td>6. Becomes sick when faced with a difficult school problem or situation</td>
<td>( )</td>
</tr>
<tr>
<td>7. Is obstinate</td>
<td>( )</td>
</tr>
<tr>
<td>8. Feels hurt when criticized</td>
<td>( )</td>
</tr>
<tr>
<td>9. Is impulsive</td>
<td>( )</td>
</tr>
<tr>
<td>10. Is moody</td>
<td>( )</td>
</tr>
<tr>
<td>11. Has difficulty learning</td>
<td>( )</td>
</tr>
</tbody>
</table>
APPENDIX E

Confederate's Evaluation Form

School _____________
Helper Name _____________
Subject Name _____________

ROLEPLAY

HELPER EVALUATION

1. If you were really asking someone to help you steal a Walkman, you would have acted the same way as in the roleplay.

   1 YES!  2 mostly  4 hardly  5 NO WAY!

2. Your partner would have acted the same way if the situation had been real.

   -1 YES!  2 mostly  4 hardly  5 NO WAY!

3. You convinced your partner to help you steal the walkman.

   1 YES!  2 mostly  4 hardly  5 NO WAY!

4. Your partner convinced you that he wasn't going to steal the walkman.

   1 YES!  2 mostly  4 hardly  5 NO WAY!
APPENDIX F

Subject's Evaluation Form

Helper Name ______________
Subject Name ______________
ROLEPLAY

SUBJECT EVALUATION

1. If someone had really asked you to steal a Walkman, you would have acted the same way.

   1 YES!  2 mostly  4 hardly  5 NO WAY!

2. Your partner would have acted the same way if the role-play had been real.

   1 YES!  2 mostly  4 hardly  5 NO WAY!

3. You convinced your partner that you weren't going to help him steal the walkman.

   1 YES!  2 mostly  4 hardly  5 NO WAY!

4. Your partner convinced you to help him steal the walkman.

   1 YES!  2 mostly  4 hardly  5 NO WAY!
APPENDIX G

Nonverbal Coding Form

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>GROUP</th>
<th>HELPER</th>
<th>SUBJECT</th>
</tr>
</thead>
</table>

**INTERVAL (10 sec)**

**Beginning Time:**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Facial Expression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Head Position</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arm/Hand Movement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Look at / Look Away</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocal Range</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: The table is incomplete and some entries are missing.*
APPENDIX H

Verbal Coding Form

<table>
<thead>
<tr>
<th>STATEMENT CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELF-EXPRESSION (statements about oneself and statements of personal reference)</td>
</tr>
<tr>
<td>QUESTIONS (questions and statements functioning as questions)</td>
</tr>
<tr>
<td>LEADERSHIP BIDS (suggestions, directives, or advice)</td>
</tr>
<tr>
<td>TALK (all other statements)</td>
</tr>
<tr>
<td>NON-TALK UTTERANCES (singing, hooting, and other verbal but nontalk utterances)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CODE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>positive - involves agreement, praise, compliance questions for clarification</td>
</tr>
<tr>
<td>2</td>
<td>negative - if response involves insult, deprecation neg. toned disagreement, ignoring, or failure to comply with question or request</td>
</tr>
<tr>
<td>3</td>
<td>neutral - if response falls into neither of the above</td>
</tr>
<tr>
<td>4</td>
<td>no response</td>
</tr>
</tbody>
</table>
APPENDIX I

Coding Procedure

I. Overview of Procedure

A. 2 raters will be used in study

B. each rater to meet reliability criterion for nonverbal behavior code and code 1/2 + 10% (reliability check) of videotaped roleplays

C. each rater to meet reliability criterion for verbal behavior code, using transcripts of videotaped roleplays and code 1/2 of videotaped roleplays

D. minimum acceptable inter-rater reliability, Pearson's $r = .70$

II. Nonverbal Coding Procedure

A. Brief explanation of coding system

B. Guidelines
   1. every category must be coded per interval (10 sec)
   2. if multiple behaviors occur within a category during an interval, code behavior that has the longest duration during 10 sec. interval

C. Rater criterion procedure
   1. view various categories of behaviors from pilot study videotaped roleplays
   2. both raters and investigator view together roleplay (R1) (pilot study)
   3. discuss rater questions
   4. view R1 again, practice coding
   5. compare and discuss against criterion code for R1 ($r = .70$)
   6. show roleplay 2 (R2) and code
   7. score and discuss against criterion code for R2 ($r = .70$)
      a. rater accepted at $r = .70$ w/ criterion
   8. if minimum criterion unmet
      a. review steps 1-7
      b. code R3
      c. compare and discuss against criterion code for R3
      d. rater accepted at $r = .70$
      e. rater dismissed if min. criterion unmet at R3

II. Verbal Behavior Coding Procedure

A. Brief explanation of coding system

B. Guidelines
   1. review coding sheet
   2. special situations
      a. interjections are to be coded as a separate statement only if not immediately followed by another statement.
      b. if subject does not respond w/in 10 sec., response is considered to be Non-talk Utterance: non response
      c. multiple statements w/in a subject's exchange are to be coded as separate statements

C. Rater criterion procedure
   1. give examples of statement categories
   2. look over and discuss transcript of R1
   3. practice coding w/ R1
4. discuss and compare against criterion
5. rater to code R2
6. compare against criterion
7. rater accepted at $r = .70$
8. if criterion unmet at R2
   a. review steps 1-7
   b. code R3
   c. compare against criterion code
   d. rater dismissed if min. criterion unmet at R3
APPENDIX J

Social Skill Training Procedure

SESSION 1
1. INTRODUCTION OF SELF AND RATIONALE FOR LEARNING SKILL [5 MIN]
2. BREAK INTO GROUPS OF 3-4 [3 MIN]
3. INTERVIEW PARTNER (pass out Interview Your Partner sheet) [5 MIN]
4. PUBLIC INTERVIEW OF PARTNER using Interview sheet [15 min]
5. COMPLIMENTING GROUP MEMBERS (pass out Saying Positives sheet and having each group member write one compliment about each member on each member's sheet [15 MIN]
6. CLOSING COMMENTS [2 MIN]

SESSION 2
1. INTRODUCTION OF AGENDA FOR SESSION [2 MIN]
2. BREAK INTO SAME GROUPS [2 MIN]
3. INTRODUCTION OF SAYING NO SKILL (pass out Saying No sheet and go over rationale and steps) [10 MIN]
4. ROLEPLAY WITH TEACHER [5 MIN]
5. ROLEPLAY WITH GROUP MEMBERS (using examples at bottom of sheet) [10 MIN]
6. PUBLIC DEMONSTRATION OF PRACTICED ROLEPLAYS (each volunteer gets The Good Feeling Award) [15 MIN]
7. CLOSING COMMENTS (collect Saying No sheets) [1 MIN]

SESSION 3
1. INTRODUCTION OF AGENDA [2 MIN]
2. BREAK INTO SAME GROUPS (pass out Saying No sheets) [3 MIN]
3. INTRODUCTION OF DEVELOPING ROLEPLAY SCRIPTS (demonstrate roleplay script) [3 MIN]
4. GROUP MEMBERS PAIR UP AND DEVELOP OWN SCRIPT [15 MIN]
5. PUBLIC SHARING OF SCRIPTS (each volunteer gets The Good Feeling Award) [15 min]
6. CLOSING COMMENTS [15 MIN]
## APPENDIX K

Saying No Steps Coding Form

<table>
<thead>
<tr>
<th>BASIC STEPS</th>
<th>PRESENT?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAYS SOMETHING NICE TO THE PERSON</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SAYS &quot;NO&quot;</td>
<td></td>
</tr>
<tr>
<td>GIVES A REASON FOR NOT DOING THE ACTIVITY</td>
<td></td>
</tr>
<tr>
<td>SAYS &quot;NO&quot; AT LEAST ONCE MORE AND ATTEMPTS TO LEAVE IF PARTNER DOESN'T LISTEN</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>HELPER</th>
<th>SUBJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>------</td>
<td>------</td>
<td>--------</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>------</td>
</tr>
</tbody>
</table>
Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.
APPENDIX M

Interview Your Partner Form

INTERVIEW YOUR PARTNER #2

1. Our team name is ________________________________

2. My partner's name is ________________________________

3. She/he is ________ years old, and was born in __________________

ASK YOUR PARTNER THESE QUESTIONS:

4. What is your favorite food? ________________________________

5. What Saturday morning cartoon do you like best? ________________

6. What is the name of your favorite rock group? ________________

7. What sport do you play after school? ________________________________

8. What is your middle name? ________________________________

9. If you could telephone any one person, anywhere in the world today, who would you call? ________________________________

10. Who is your favorite comedian? ________________________________
SAYING POSITIVES

(Name of person to your left.)

1. 2. 3. 4. 5.

Pass this paper to your right.
APPENDIX O
The Good Feeling Award Form

THE GOOD FEELING AWARD

TO: ____________________________

FOR: ____________________________

_____________________________

_____________________________
APPENDIX P
Roleplay Script Illustration

1

MARTY

SNEAKY

2

3
APPENDIX Q

Roleplay Script Example

WRITTEN EXAMPLE OF MY ROLEPLAY

SNEAKY: Hey, Marty. Howzit going?
MARTY: Alright, what about you?
SNEAKY: I have a good idea, instead of going to the field where we always go for recess, let's go behind the bathroom by the baseball park and do some stuff?
MARTY: Do what?
SNEAKY: I have some cigarettes that my friend gave me. And we can go and smoke it.
MARTY: No way and we going get busted and then what?
SNEAKY: Nah, don't worry no one will find us. It's cool cuz we're 6th graders.
MARTY: Still, its stupid to smoke. Its bad for your health, you can get cancer and your clothes all stink. Sneaky, I know you, you always generous. I tell you what, I'll share with you some Halloween candy, just you and me.
SNEAKY: Well ....
MARTY: LET'S GO.
APPENDIX R

Variable Descriptions of Abbreviations
Used in Appendix T to Z (I)

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Sample size</td>
</tr>
<tr>
<td>ETHN</td>
<td>Ethnicity</td>
</tr>
<tr>
<td>1</td>
<td>Japanese-American</td>
</tr>
<tr>
<td>2</td>
<td>Caucasian-American</td>
</tr>
<tr>
<td>TRN</td>
<td>Training Received</td>
</tr>
<tr>
<td>0</td>
<td>No training</td>
</tr>
<tr>
<td>1</td>
<td>Training</td>
</tr>
<tr>
<td>ETHLP</td>
<td>Ethnicity of Confederate</td>
</tr>
<tr>
<td>1</td>
<td>Japanese-American</td>
</tr>
<tr>
<td>2</td>
<td>Caucasian-American</td>
</tr>
<tr>
<td>ROLREAL</td>
<td>Self-report of realistic performance</td>
</tr>
<tr>
<td>PARTREAL</td>
<td>Report of realistic performance of partner</td>
</tr>
<tr>
<td>POSTIFF</td>
<td>Posture - stiff</td>
</tr>
<tr>
<td>POSRELX</td>
<td>Posture - relaxed</td>
</tr>
<tr>
<td>POSFIGHT</td>
<td>Posture - fidgety</td>
</tr>
<tr>
<td>FACEDIR</td>
<td>Head orientation - face partner directly</td>
</tr>
<tr>
<td>FACESL</td>
<td>Head orientation - face partner at angle</td>
</tr>
<tr>
<td>FACECAW</td>
<td>Head orientation - face away from partner</td>
</tr>
<tr>
<td>EYEEYE</td>
<td>Eye orientation - look partner in eye</td>
</tr>
<tr>
<td>EYEAWY</td>
<td>Eye orientation - look away from partner</td>
</tr>
</tbody>
</table>
Variable Descriptions of Abbreviations
Used in Tables T to Z (II)

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFNO</td>
<td>Affect - no visible</td>
</tr>
<tr>
<td>AFSE</td>
<td>Affect - serious</td>
</tr>
<tr>
<td>AFSM</td>
<td>Affect - serious</td>
</tr>
<tr>
<td>AFGC</td>
<td>Affect - giggling</td>
</tr>
<tr>
<td>VCEMONO</td>
<td>Voice tone - monotone</td>
</tr>
<tr>
<td>VCEPLSE</td>
<td>Voice tone - pleasant</td>
</tr>
<tr>
<td>VCESF</td>
<td>Voice tone - serious/firm</td>
</tr>
<tr>
<td>VCELJ</td>
<td>Voice tone - laughing/joking</td>
</tr>
<tr>
<td>VCEPLED</td>
<td>Voice tone - pleading</td>
</tr>
<tr>
<td>VCEOTHR</td>
<td>Voice tone - other</td>
</tr>
<tr>
<td>SELFEXP</td>
<td>Type of statement - self-referent</td>
</tr>
<tr>
<td>QUESTN</td>
<td>Type of statement - questioning</td>
</tr>
<tr>
<td>LDBID</td>
<td>Type of statement - leadership bid</td>
</tr>
<tr>
<td>TALK</td>
<td>Type of statement - talk</td>
</tr>
<tr>
<td>NOTALK</td>
<td>Type of statement - no talk</td>
</tr>
<tr>
<td>SAYNO</td>
<td>Whether subject said &quot;No&quot;</td>
</tr>
<tr>
<td>INDNVBEH</td>
<td>Indirect nonverbal behavior</td>
</tr>
<tr>
<td>INDVEBEH</td>
<td>Indirect verbal behavior</td>
</tr>
<tr>
<td>DIRNVBEH</td>
<td>Direct nonverbal behavior</td>
</tr>
<tr>
<td>DIRVEBEH</td>
<td>Direct verbal behavior</td>
</tr>
</tbody>
</table>
APPENDIX T

Grand Means (I)

<table>
<thead>
<tr>
<th>ETHN</th>
<th>TRN</th>
<th>N</th>
<th>POSTIFF</th>
<th>POSRELX</th>
<th>POSFIGT</th>
<th>FACEDIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>11</td>
<td>0.00</td>
<td>11.64</td>
<td>0.36</td>
<td>8.27</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>1.00</td>
<td>9.31</td>
<td>1.62</td>
<td>7.31</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>8</td>
<td>0.00</td>
<td>12.00</td>
<td>0.00</td>
<td>7.88</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>13</td>
<td>0.00</td>
<td>9.08</td>
<td>1.85</td>
<td>7.46</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>FACESL</th>
<th>FACECAW</th>
<th>FACEAWT</th>
<th>EYEYEYE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>11</td>
<td>2.18</td>
<td>1.55</td>
<td>1.82</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>4.08</td>
<td>0.77</td>
<td>3.62</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>8</td>
<td>3.88</td>
<td>0.25</td>
<td>2.88</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>13</td>
<td>2.23</td>
<td>0.38</td>
<td>2.46</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>EYEAWY</th>
<th>AFNO</th>
<th>AFSE</th>
<th>AFSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>11</td>
<td>8.27</td>
<td>1.45</td>
<td>2.91</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>7.08</td>
<td>4.69</td>
<td>2.15</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>8</td>
<td>8.63</td>
<td>5.00</td>
<td>1.88</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>13</td>
<td>7.31</td>
<td>4.54</td>
<td>3.23</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>AFGC</th>
<th>VCEMONO</th>
<th>VCEPLSE</th>
<th>VCESF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>11</td>
<td>0.00</td>
<td>0.00</td>
<td>9.09</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>0.23</td>
<td>0.00</td>
<td>9.00</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>8</td>
<td>0.00</td>
<td>1.00</td>
<td>8.50</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>13</td>
<td>0.00</td>
<td>0.85</td>
<td>8.85</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>VCELJ</th>
<th>VCEPLED</th>
<th>VCEOTH</th>
<th>SELFEXP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>11</td>
<td>0.90</td>
<td>0.00</td>
<td>1.64</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>0.31</td>
<td>0.31</td>
<td>0.85</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>8</td>
<td>0.38</td>
<td>0.00</td>
<td>2.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>13</td>
<td>0.00</td>
<td>0.00</td>
<td>0.69</td>
</tr>
</tbody>
</table>
### Appendix U

#### Grand Means (II)

<table>
<thead>
<tr>
<th>ETHN</th>
<th>TRN</th>
<th>N</th>
<th>QUESTN</th>
<th>LDBID</th>
<th>TALK</th>
<th>NOTALK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>11</td>
<td>0.29</td>
<td>0.03</td>
<td>0.23</td>
<td>0.01</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>0.14</td>
<td>0.04</td>
<td>0.21</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>8</td>
<td>0.15</td>
<td>0.04</td>
<td>0.28</td>
<td>0.13</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>13</td>
<td>0.15</td>
<td>0.07</td>
<td>0.26</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAYNO</th>
<th>INDNVBEH</th>
<th>INDVEBEH</th>
<th>DIRNVBEH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>11</td>
<td>5.09</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>5.31</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>8</td>
<td>5.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>13</td>
<td>5.15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIRVEBEH</th>
<th>ROLREAL</th>
<th>PARTREAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>13</td>
</tr>
</tbody>
</table>
### APPENDIX V

**Grand Means (III)**

<table>
<thead>
<tr>
<th>ETHN</th>
<th>ETHLP</th>
<th>N</th>
<th>POSTIFF</th>
<th>POSRELX</th>
<th>POSFIGT</th>
<th>FACEDIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>0.00</td>
<td>10.77</td>
<td>1.15</td>
<td>6.62</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>11</td>
<td>1.18</td>
<td>9.91</td>
<td>0.91</td>
<td>9.09</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>12</td>
<td>0.00</td>
<td>9.83</td>
<td>1.67</td>
<td>8.17</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>9</td>
<td>0.00</td>
<td>10.67</td>
<td>1.11</td>
<td>6.89</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ETHN</th>
<th>ETHLP</th>
<th>N</th>
<th>FACESL</th>
<th>FACECAW</th>
<th>FACEAWT</th>
<th>EYEYEYE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>3.69</td>
<td>1.85</td>
<td>3.62</td>
<td>4.15</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>11</td>
<td>2.64</td>
<td>0.28</td>
<td>1.82</td>
<td>4.82</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>12</td>
<td>1.75</td>
<td>0.17</td>
<td>1.25</td>
<td>5.33</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>9</td>
<td>4.33</td>
<td>0.56</td>
<td>4.44</td>
<td>2.44</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ETHN</th>
<th>ETHLP</th>
<th>N</th>
<th>EYEAWY</th>
<th>AFNO</th>
<th>AFSE</th>
<th>AFSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>7.85</td>
<td>3.62</td>
<td>2.62</td>
<td>5.69</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>11</td>
<td>7.34</td>
<td>2.73</td>
<td>2.36</td>
<td>7.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>12</td>
<td>6.67</td>
<td>5.17</td>
<td>2.08</td>
<td>5.75</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>9</td>
<td>9.33</td>
<td>4.11</td>
<td>3.56</td>
<td>4.22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ETHN</th>
<th>ETHLP</th>
<th>N</th>
<th>AFGC</th>
<th>VCEMONO</th>
<th>VCEPILSE</th>
<th>VCESF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>0.15</td>
<td>0.00</td>
<td>9.31</td>
<td>1.38</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>11</td>
<td>0.09</td>
<td>0.00</td>
<td>8.73</td>
<td>1.45</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>12</td>
<td>0.00</td>
<td>1.42</td>
<td>8.50</td>
<td>0.58</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>9</td>
<td>0.00</td>
<td>0.22</td>
<td>9.00</td>
<td>1.44</td>
</tr>
</tbody>
</table>
APPENDIX W

Grand Means (IV)

<table>
<thead>
<tr>
<th>ETHN</th>
<th>ETHLP</th>
<th>N</th>
<th>VCELJ</th>
<th>VCEPLED</th>
<th>VCEOTH</th>
<th>SELFEXP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>0.31</td>
<td>0.31</td>
<td>0.69</td>
<td>0.63</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>11</td>
<td>0.09</td>
<td>0.00</td>
<td>1.82</td>
<td>0.41</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>12</td>
<td>0.00</td>
<td>0.00</td>
<td>1.50</td>
<td>0.46</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>9</td>
<td>0.33</td>
<td>0.00</td>
<td>0.78</td>
<td>0.59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QUESTN</th>
<th>LDBID</th>
<th>TALK</th>
<th>NOTALK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>0.21</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>11</td>
<td>0.21</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>12</td>
<td>0.16</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>9</td>
<td>0.13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAYNO</th>
<th>INDNVBEH</th>
<th>INDVEBEH</th>
<th>DIRNVBEH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
<td>5.23</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>11</td>
<td>5.18</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>12</td>
<td>5.33</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>9</td>
<td>4.78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIRVEBEH</th>
<th>ROLREAL</th>
<th>PARTREAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>
APPENDIX X

Grand Means (V)

<table>
<thead>
<tr>
<th>ETHN</th>
<th>TRN</th>
<th>ETHLP</th>
<th>N</th>
<th>POSTIFF</th>
<th>POSRELX</th>
<th>POSFIGT</th>
<th>FACEDIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>0.00</td>
<td>11.80</td>
<td>0.20</td>
<td>5.40</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0.00</td>
<td>11.50</td>
<td>0.50</td>
<td>10.67</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>0.00</td>
<td>10.13</td>
<td>1.75</td>
<td>7.38</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>2.60</td>
<td>8.00</td>
<td>1.40</td>
<td>7.20</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>0.00</td>
<td>12.00</td>
<td>0.00</td>
<td>9.00</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>0.00</td>
<td>12.00</td>
<td>0.00</td>
<td>6.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>0.00</td>
<td>8.29</td>
<td>2.00</td>
<td>7.57</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>0.00</td>
<td>10.00</td>
<td>1.67</td>
<td>7.33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FACESL</th>
<th>FACECAW</th>
<th>FACEAWT</th>
<th>EYEEYE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EYEAWY</th>
<th>AFNO</th>
<th>AFSE</th>
<th>AFSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>
### APPENDIX Y

#### Grand Means (VI)

<table>
<thead>
<tr>
<th>ETHN</th>
<th>TRN</th>
<th>ETHLP</th>
<th>N</th>
<th>AFGC</th>
<th>VCEMONO</th>
<th>VCEPLSE</th>
<th>VCESF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>0.00</td>
<td>0.00</td>
<td>10.20</td>
<td>1.60</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0.00</td>
<td>0.00</td>
<td>8.17</td>
<td>0.83</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>0.25</td>
<td>0.00</td>
<td>8.75</td>
<td>1.25</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>0.20</td>
<td>0.00</td>
<td>9.40</td>
<td>2.20</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>0.00</td>
<td>1.20</td>
<td>8.00</td>
<td>0.20</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>0.00</td>
<td>0.67</td>
<td>9.33</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>0.00</td>
<td>1.57</td>
<td>8.86</td>
<td>0.86</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>0.00</td>
<td>0.00</td>
<td>8.83</td>
<td>2.17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VCELJ</th>
<th>VCEPLED</th>
<th>VCEOOTH</th>
<th>SELFEXP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>0.38</td>
<td>0.50</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>0.20</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1.00</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
# APPENDIX Z

**Grand Means (VII)**

<table>
<thead>
<tr>
<th>ETHN</th>
<th>TRN</th>
<th>ETHLP</th>
<th>N</th>
<th>QUESTN</th>
<th>LDBID</th>
<th>TALK</th>
<th>NOTALK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>0.32</td>
<td>0.06</td>
<td>0.12</td>
<td>0.00</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0.28</td>
<td>0.00</td>
<td>0.33</td>
<td>0.01</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>0.15</td>
<td>0.03</td>
<td>0.13</td>
<td>0.00</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>0.13</td>
<td>0.05</td>
<td>0.34</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>0.12</td>
<td>0.03</td>
<td>0.27</td>
<td>0.21</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>0.19</td>
<td>0.06</td>
<td>0.29</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>0.20</td>
<td>0.08</td>
<td>0.22</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>0.10</td>
<td>0.05</td>
<td>0.30</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAYNO</th>
<th>INDNVEH</th>
<th>INDVEBEH</th>
<th>DIRNVEBH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIRVEBEH</th>
<th>ROLREAL</th>
<th>PARTREAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
REFERENCES


