

**DETERMINANTS OF PEER ACCEPTABILITY  
OF EXCEPTIONAL CHILDREN**

**DETERMINANTS OF PEER ACCEPTABILITY  
OF EXCEPTIONAL CHILDREN**

By

ROBERTA K.B. HEAVEN, B.A. (Hons.)

A Thesis

Submitted to the School of Graduate Studies  
in Partial Fulfilment of the Requirements  
for the Degree  
Doctor of Philosophy

McMaster University

February, 1988

DOCTOR OF PHILOSOPHY (1987)  
(Psychology)

McMASTER UNIVERSITY  
Hamilton, Ontario

TITLE: Determinants of Peer Acceptability  
of Exceptional Children

AUTHOR: Roberta K.B. Heaven, B.A. (Hons.) (McMaster University)

SUPERVISOR: Dr. Ellen B. Ryan

NUMBER OF PAGES: xiii, 244

## **ABSTRACT**

Review of available research yields contradictory findings as to the degree of peer acceptance or rejection which exists for learning disabled children. The majority of peer acceptability studies have focused on interpersonal behaviour. These studies emphasize the complexities of peer socialization and the inadequacies of present levels of understanding. An examination of the methodologies of these studies indicates that a number of potential confounds may hinder the identification of factors which may significantly influence peer acceptability. Learning disabled children can be typically identified by some deficit in the areas of academic, social and athletic functions, according to the most common characteristics reported in the literature, however, little research has specifically examined these factors.

The primary objectives of this research program were threefold. The first objective was to determine whether or not learning disabled children would be significantly less well accepted by their normal peers in grades 4, 6 and 8 when described on the basis of these three characteristics. The second objective was to systematically examine the relative importance of each of the three characteristics identified

collectively in the initial research. The final objective was to assess whether or not an intergroup perspective in contrast to the interpersonal perspective utilized so widely was applicable to the issue of peer acceptance of learning disabled children and whether this approach provided new information to the understanding of these issues.

Results indicated that learning disabled characters described on the basis of three characteristics were reliably rated significantly less favourably than normal or handicapped characters on sociometric ratings and intergroup measures. Further systematic evaluation of each factor and combination of factors indicated that while all three were important in determining peer acceptability ratings, academic competence information was the most important, followed closely by social competence information and finally athletic competence information. These findings could be generalized to children in grades 4, 6 and 8. In addition, learning disabled children were found to respond in a similar manner to that of their normal peers. These results are consistent with much of the available literature and provide new information concerning the salience of three key characteristics associated with learning disabled children as a group.

Further, Social Identity Theory, the intergroup theory selected for use in these studies, was found to be applicable, consistent with the results obtained and was able

to predict outcome in these experiments. Hence, it is concluded that examining peer acceptability of exceptional children from an intergroup perspective contributes to the present understanding of these issues.

## **ACKNOWLEDGEMENTS**

During my years at university, I have been fortunate to have experienced the opportunity of working with a number of outstanding individuals. My research supervisor, Dr. Ellen Bouchard Ryan, is of the highest calibre. She provided me with constructive guidance when required but allowed me to pursue and satisfy my own research interests. She has both challenged and inspired me, for which I will always be grateful.

My association with my committee members has also been valuable. Dr. Denys de Catanzaro, a valued advisor, enabled me to obtain a thorough grounding in research methodology and stimulated much of my interest in research. Dr. Linda Siegel encouraged my interests in the field of learning disabilities and provided me with my first opportunities to study this area. Dr. Richard Bourhis has shared his knowledge and enthusiasm of the study of intergroup relations and I have benefited from many insightful discussions. I must also acknowledge the members of the department who have fostered an atmosphere conducive to productive research and I am thankful for innumerable discussions and support.

Most importantly, I gratefully acknowledge the enduring love and support of my husband and my family whose encouragement gave me the strength to continue and the opportunity for this accomplishment.

This research was funded by a grant from the Ontario Ministry of Health.



## TABLE OF CONTENTS

		<u>Page</u>
CHAPTER 1	Children's Attitudes Toward Exceptional Peers .....	1
1.1	Introduction .....	1
1.2	Peer Relations of Children with Learning Disabilities .....	4
1.3	Attitudinal Research Involving Children's Attitudes Toward Exceptional Peers .....	7
1.3.1	Overview .....	7
1.3.2	Peer Nomination and Peer Rating Scales .....	22
1.3.3	Direct Observation Studies .....	24
1.3.4	Hypothetical Peer Ratings .....	25
1.4	Summary .....	30
CHAPTER 2	Social Categorization and Intergroup Behaviour .....	31
2.1	Introduction .....	31
2.2	Social Identity Theory: A Synopsis .....	33
2.3	Developmental Ethnic Attitude Research ....	40
2.4	An Alternative Approach to the Study of Peer Relations .....	43
2.5	Summary .....	44
CHAPTER 3	Rationale, Research Plan and Statement of Research Goals .....	46
3.1	Area of Research Focus .....	46
3.2	Approach to Research .....	47
3.3	Research Plan .....	50
3.3.1	Vignettes .....	53
3.3.2	Sociometric Questionnaire .....	56
3.3.3	Social Discrimination Matrices .....	57
3.3.4	Self Concept Measure .....	58
3.3.5	Participants .....	59
3.4	Research Goals .....	62

**TABLE OF CONTENTS (continued)**

	<u>Page</u>
CHAPTER 4	General Methodology ..... 68
4.1	Introduction ..... 68
4.1.1	Selection of Subjects ..... 68
4.2	Experimental Materials ..... 69
4.2.1	Vignettes ..... 69
4.2.2	Sociometric Questionnaire ..... 70
4.2.2.1	Selection of Scale ..... 71
4.2.2.2	Validation of Scale ..... 72
4.2.3	Comparison Ratings ..... 75
4.2.4	Social Discrimination Matrices ..... 75
4.2.5	Self Concept Scale ..... 79
4.2.6	Presentation ..... 80
4.3	Procedures ..... 81
4.4	Statistical Analyses ..... 82
4.4.1	Sociometric Questionnaire ..... 82
4.4.2	Social Discrimination Matrices ..... 84
4.4.3	Self Concept Scale ..... 85
CHAPTER 5	Study 1: An Examination of "Normal", "Learning Disabled" and "Handicapped" Vignette Manipulations on Perceptions of Peer Acceptability ..... 86
5.1	Specific Rationale and Predictions ..... 86
5.2	Method ..... 89
5.2.1	Subjects ..... 89
5.2.2	Materials ..... 89
5.2.3	Procedure ..... 92
5.3	Results ..... 93
5.3.1	Sociometric Questionnaire ..... 93
5.3.2	Comparison Ratings ..... 96
5.3.3	Social Discrimination Matrices ..... 97
5.3.4	Self Concept Questionnaire ..... 102
5.4	Discussion ..... 102
CHAPTER 6	Study 2: Replication of Study 1 and Evaluation of the Role of Social Information on Vignette Ratings ..... 112
6.1	Introduction ..... 112
6.1.1	Specific Rationale and Predictions ..... 113
6.2	Method ..... 114
6.2.1	Subjects ..... 114
6.2.2	Materials ..... 114
6.2.3	Procedure ..... 115

**TABLE OF CONTENTS (continued)**

	<u>Page</u>
6.3 Results .....	115
6.3.1 Sociometric Questionnaire .....	115
6.3.2 Social Discrimination Matrices .....	117
6.4 Discussion .....	119
 CHAPTER 7	
Study 3: The Relative Salience of Academic, Athletic and Social Factors on Perceptions of Peer Acceptability .....	121
7.1 Introduction .....	121
7.1.1 Specific Rationale and Predictions ..	121
7.2 Experiment 3A .....	126
7.2.1 Method .....	126
7.2.1.1 Subjects .....	126
7.2.1.2 Materials .....	127
7.2.1.3 Procedure .....	128
7.2.2 Results .....	128
7.2.2.1 Sociometric Questionnaire ..	128
7.2.2.2 Social Discrimination Matrices .....	130
7.3 Experiment 3B .....	134
7.3.1 Method .....	134
7.3.2 Results .....	135
7.3.2.1 Sociometric Questionnaire .	135
7.3.2.2 Social Discrimination Matrices .....	138
7.4 Discussion .....	141
 CHAPTER 8	
Study 4: Further Replication and Examination of Developmental Trends .....	148
8.1 Introduction .....	148
8.1.1 Specific Rationale and Predictions .	148
8.2 Method .....	150
8.2.1 Subjects .....	150
8.2.2 Materials .....	151
8.3 Results .....	151
8.3.1 Sociometric Questionnaire .....	152
8.3.2 Self Concept Scale .....	152
8.4 Discussion .....	154

**TABLE OF CONTENTS (continued)**

Page

CHAPTER 9 Study 5: Learning Disabled Children's Perceptions of Peer Acceptability .....158

9.1 Introduction .....158

9.1.1 Specific Rationale and Predictions .160

9.2 Method .....162

9.2.1 Subjects .....162

9.3 Results .....162

9.3.1 Sociometric Questionnaire .....162

9.3.2 Social Discrimination Matrices .....164

9.3.3 Self Concept Scale .....169

9.4 Discussion .....169

CHAPTER 10 General Discussion .....173

10.1 Research Evaluation .....173

10.2 Future Research .....178

10.3 Implications for Exceptional Children and Education .....181

10.4 Limitations .....184

10.5 Summary and Conclusions .....187

APPENDICES .....190

Appendix 1: Sample Vignettes .....191

Appendix 2: Sociometric Scale .....205

Appendix 3: Social Discrimination Matrices .....207

Appendix 4: Self Concept Questionnaire .....215

Appendix 5: Abbreviated Scoring Procedures for the Social Discrimination Matrices ..217

Appendix 6: Graphic Summary of Results for Study 1 through Study 5 .....220

REFERENCES .....227

**LIST OF TABLES**

		<u>Page</u>
TABLE 1	Summary of Acceptance and Attitude Studies with Learning Disabled Children .....	15
TABLE 2	Summary of Factor Analysis of the Sociometric Questionnaire .....	74
TABLE 3	Mean Sociometric Ratings of Normal, Learning Disabled and Handicapped Target Groups in Study 1 .....	95
TABLE 4	Mean Scores of Strategies Used on the Social Discrimination Matrices for Two Target Group Comparisons in Study 1 .....	98
TABLE 5	Pearson Product Correlations Among Social Discrimination Strategies and Sociometric Ratings for the Learning Disabled Target Group in Study 1 .....	101
TABLE 6	Self Concept Ratings for Respondents in Study 1 .....	103
TABLE 7	Mean Sociometric Ratings of Normal, Learning Disabled and Handicapped Target Groups in Study 2 (without Social Information) .....	116
TABLE 8	Mean Scores of Strategies Used on the Social Discrimination Matrices for Two Target Group Comparisons in Study 2 (Without Social Information) .....	118
TABLE 9	The Experimental Design for the Vignette Descriptions in Study 3 .....	126
TABLE 10	Mean Sociometric Ratings of Target Groups Varying in Academic, Social and Athletic Competence in Study 3A .....	129
TABLE 11	Mean Scores of Strategies Used on the Social Discrimination Matrices for Three Target Group Comparisons with a Standard in Study 3A .....	131

**LIST OF TABLES (Continued)**

	<u>Page</u>
TABLE 12 Mean Sociometric Ratings of Target Groups Varying in Academic, Social and Athletic Competence in Study 3B .....	136
TABLE 13 Mean Scores of Strategies Used on the Social Discrimination Matrices for Three Target Group Comparisons with a Standard in Study 3B .....	138
TABLE 14 Mean Sociometric Ratings of Target Groups Varying in Academic, Social and Athletic Competence in Study 4 .....	153
TABLE 15 Self Concept Ratings of Respondents in Study 4 .....	155
TABLE 16 Mean Sociometric Ratings of Normal, Learning Disabled and Handicapped Target Groups in Study 5 Analyzed by Group Affiliation .....	163
TABLE 17 Mean Scores of Strategies Used on the Social Discrimination Matrices for Two Target Group Comparisons in Study 5 Analyzed by Group Affiliation .....	165
TABLE 18 Self Concept Ratings for Respondents in Study 5 .....	170

## CHAPTER 1

### CHILDREN'S ATTITUDES TOWARD EXCEPTIONAL PEERS

#### 1.1 Introduction

Studies examining aspects of social development as it relates to peer interaction have received growing attention in recent years from developmental psychologists, social psychologists and even sociobiologists. The main findings of this research emphasize the complexities of peer socialization and the inadequacies of current levels of its understanding. With the trend towards mainstreaming in the schools and the implementation of integration legislation in the United States (PL - 142) and in Ontario (Bill 82), educators and researchers alike have necessarily become concerned with peer acceptance, relations, and self esteem among the various groups of children forming one class. Of particular interest is the largest subgroup of exceptional children who are involved in the mainstreaming process, the learning disabled.

This legislation establishes the right of the child to be educated in the least restrictive environment regardless of each child's ability (or disability). It has been argued repeatedly by proponents of integration that the least restrictive environment, for example, the regular class

setting, will enable disabled children to benefit through observing and interacting with their non disabled peers. It is argued that potential benefits include: that they will experience a variety of academic and social benefits; that their social status amongst nonhandicapped peers will be enhanced; and they will benefit from increased sensitivity and more positive attitudes from nonhandicapped peers (Sabornie, 1985).

This view has been subsequently challenged by others who argue that there is scant evidence to suggest that disabled children do benefit from mainstreaming with regard to peer relations. For example, Gresham (1981a, b, 1982a, b) has argued that good peer relations are not fostered simply by the act of integration; rather, disabled children tend to remain socially rejected and isolated by their regular stream peers. The majority of available studies have demonstrated that nonhandicapped children interact relatively little with integrated disabled peers (Bruininks, Rynders & Gross, 1974; Gottlieb, 1975; Gottlieb & Budoff, 1973; Gottlieb, Semmel & Veldman, 1978). Studies which have examined implications of poor peer relations on later development have indicated, for example, that peer rejection is a more powerful indicator of psychiatric maladjustment later in life than teacher ratings, test data or professional opinion (Cowen, Pederson, Babigian, Izzo & Trost, 1973).



It is clear that if successful integration is to be achieved, further understanding of factors contributing to peer acceptability must be ascertained.

A review of the studies completed to date which address peer acceptability issues reveals a number of observational or simple questionnaire studies, many of whose results are limited by a variety of methodological problems or confounds (eg. Dudley-Marling & Edmiaston, 1985). Consequently, few advances in the understanding of these peer relations can be clearly outlined.

Evidently, there is a need for further reconsideration and evaluation of developmental and social models and assessments of peer interaction. In addition, the introduction of new techniques to address the issues of peer interaction and factors affecting acceptability, which avoid some of the methodological difficulties encountered by other procedures, may provide useful information regarding the understanding of peer socialization.

Many unique problems are apparent among the various groups of disabled children who are candidates for integration. However, consideration of all the available disability literature, regardless of the apparent distinctiveness of these groups, may be useful to lead to further understanding of aspects of acceptability common to all, or at the very least narrow down areas which remain to be explored in the understanding of peer acceptability.

## 1.2 Peer Relations of Children With Learning Disabilities

As previously acknowledged, peer interactions and socialization are very complex and are at best rudimentarily understood. What is clear is that they are very important to a child's development and are powerful indicators of adjustment later in life (Cowen et al, 1973; Hartup, 1979; Roff, Sells & Golden, 1972).

The importance of peer relationships to many aspects of cognitive and social development has long been stressed by researchers such as Piaget (1926). He proposed that peer interactions provided the opportunity to experience reciprocal relations, peer conflict and ultimately compromise. Piaget discussed how peer interactions helped to enable the child to break out of his or her egocentric perspective and facilitate advancement to a higher stage of reasoning ability. These views have received some support through experimental investigations (eg. Iannotti, 1978; Miller & Brownell, 1975). Similarly, Sullivan (1953) argued that sensitivity, respect and co-operation were important consequences of peer interaction and friendships. Hartup (1979) has emphasized the importance of peer relations in child development. He has argued that peer relations strongly influence a child's ability to relate to others, and that they substantially contribute to a child's emotional development and cognitive style. Further, he has stressed that these aspects of child development cannot be adequately

accomplished through adult-child relations alone, as there is a qualitative difference in these relationships (Hartup, 1979).

In order to examine how these peer relationships differ when disabled children are involved, several approaches can be taken. A researcher can explore peer interactions, attitudes and behaviour of normal peers towards other normal peers, or towards various disabled peers to see how they may be comparatively similar or different. Alternatively, one can examine disabled peers' attitudes and behaviours to assess what differences, if any, exist and how these differences may influence the behaviour of normal peers. Ultimately, direct observation of normal and disabled childrens' interactions would be necessary to put into perspective and to clarify any differences or factors identified in isolation. Before this can be meaningfully accomplished, however, it is useful to identify individual factors and study how they can influence behaviour removed from the complexity of actual peer interactions.

Some evidence suggests that normal peers hold negative attitudes toward various disabled peers in general, and in addition, that they alter their usual behavioural repertoires when in contact with these peers (Bender, 1980; Kleck, 1969). This may well serve to limit the opportunities for positive peer interactions for disabled

children and put them at a distinct disadvantage in the mainstreamed classroom.

Several studies have directly examined the behavioural repertoires of learning disabled children to ascertain how they differ from their normal peers (Bryan, 1978, 1982; Bryan & Bryan, 1978; Sainato, Zigmond & Strain, 1983; Slate & Saudargas, 1986). These investigations have identified several differences characteristic of learning disabled children which have been proposed to account for some of the negative peer interactions. For example, it has been reported that learning disabled children initiate more negative interactions (Bryan, 1978; Sainato, Zigmond & Strain, 1983), give fewer reinforcing statements, and initiate fewer positive interactions than their normal peers (Bryan, 1978; Cartledge, Stupay & Kaczala, 1986; Sainato, Zigmond & Strain, 1983). In addition some studies have reported that learning disabled children receive more rejection statements and more frequently fail to respond to peers (Bryan & Bryan, 1978).

It is difficult to assess from these studies whether these behavioural differences are causes or consequences of attitudes toward this peer group. Several researchers have argued strongly that this observed behaviour could be a consequence of poor peer relations and lack of acceptance (Renshaw & Asher, 1984). Therefore these reported differences can only be considered contributory factors to

learning disabled children's peer acceptability status.

One of the important differences between learning disabled children's interactions with normal peers and other "special" groups is that most other groups such as physically handicapped, mentally retarded, obese, or ethnic groups, are visibly different from the "normal" peer group. For the most part, learning disabled children look like "normal" peers, and only differ on behavioural dimensions. This may have important effects on the interactions of normal and learning disabled children.

### 1.3 Attitudinal Research Involving Children's Attitudes Toward Exceptional Peers

#### 1.3.1 Overview

Within the rapidly growing literature concerning learning disabilities, reports of learning disabled children commonly suffering poor peer relations and peer acceptance are becoming increasingly frequent (Bryan, 1974a, b, 1975, 1976; La Greca & Mesibov, 1982; Sutherland, Algozzine, Ysseldyke & Freeman, 1983). Similar concerns regarding peer acceptability and children's attitudes have previously been reported for mentally and physically handicapped children (Bender, 1980; Gottlieb and Gottlieb, 1977; Gottlieb and Switzky, 1982; Siperstein and Gottlieb, 1977; Rosenbaum, Armstrong & King, 1986; and Voeltz, 1980) and regarding peer perceptions toward ethnic groups (Aboud, 1984; Aboud &

Skerry, 1984; Kalin, 1984). The findings of these studies provide strong evidence for the early development of children's differential attitudes toward certain subgroups of their peers.

Several studies have examined the social status of mainstreamed mentally retarded children (Gottlieb, 1974, 1975; Gottlieb and Gottlieb, 1977; Gottlieb, Semmel and Veldman, 1978; Gottlieb and Switzky, 1982; Johnson, 1950). Considerable information can be gained from examining the peer acceptability literature on mentally and physically handicapped children. Several researchers have made significant contributions to the understanding of handicapped children's acceptability among normal peers (Bak & Siperstein, 1987a, b; Bender, 1980; Goodman, Richardson, Dornbusch & Hastorf, 1963; Gottlieb, 1974; Gottlieb, 1975; Gottlieb & Budoff, 1973; Gottlieb, Semmel & Veldman, 1978, Siperstein & Bak, 1987a).

Review of studies investigating the acceptability of mentally retarded peers has shown that, although there is a strong tendency for negative attitudes, there is some variability in these findings. This has led to the examination of factors which may influence these attitudes. In particular, Gottlieb and his associates and Siperstein and his colleagues have recently attempted to examine which characteristics of mentally retarded children influence peer acceptance and rejection.

Some studies examined the effect of labels on educable mentally retarded peer's acceptability. Gottlieb (1974) reported that the label "mentally retarded" was not as strong a negative influence as poor academic performance of an educable mentally retarded child. A subsequent study (Gottlieb, Semmel & Veldman, 1978) also provided evidence for the importance of academic competence. Siperstein, Budoff and Bak (1980) found the label "retard" led to a more negative rating on peer acceptance measures than did the label "mentally retarded", particularly when the target child was normal in appearance. This could yield some insight for the learning disabled condition as learning disabled children are generally normal in appearance while most other disabled groups are visibly different.

Siperstein & Gottlieb (1976) reported that physical attributes associated with mental retardation and poor academic performance were strongly associated with negative peer ratings. Reaves & Roberts (1983) examined the effects of three types of information, appearance (fat/normal) individual preferences (similar/dissimilar), and character information (positive/negative) on children's ratings of target peers. All three factors were found to have a significant effect with character information having the greatest influence. Subsequent studies have indicated that social competence can positively influence ratings, while

poor social behaviour has a negative effect on peer acceptability ratings of mentally retarded children (Gottlieb, Semmel & Veldman, 1978; Siperstein & Bak, 1987a). These researchers have argued that one reason that children demonstrate negative attitudes toward handicapped peers is simply because retarded children are perceived as being different (Siperstein & Bak, 1980).

It has been argued that one of the more reliable findings in the social development literature is that perceptions of similarity across a variety of aspects is associated with acceptance and friendship in children (Rubin, 1980; Siperstein & Chatillon, 1982).

Siperstein and Chatillon (1982) examined the potential influence of perceived similarity on the typically negative ratings assigned to mentally retarded children. They found that when information regarding interests of retarded characters which was similar to normal peers' interests was provided, children rated these characters more positively than when neutral or no information was provided.

Bak and Siperstein (1987b) examined the influence of similarity on attitudes toward mentally retarded peers. In particular, 80 children in grades 4 through 6 viewed videotape vignettes of normal, mild or moderately retarded peers. Similarity information was provided to the respondents such that the vignette characters were shown discussing some of their interests. Retarded peers were



rated more negatively than normal peers, but information regarding the retarded peer's interests positively affected attitude ratings and children who perceived themselves to be similar in these respects to the retarded peers gave the more positive ratings.

This finding has led these researchers to resurrect Newcomb's (1956) cognitive consistency theory, which essentially states that if a child perceives another child as similar to himself in appearance or behaviour, or in an attitude to a third object, he or she will respond more positively to that child (Bak & Siperstein, 1987b). Bak and Siperstein argue that the cognitive consistency theory holds for peer acceptability of educable mentally retarded children. This poses an interesting question for the learning disabled group as these children do appear similar to their normal peers and yet are still rated negatively on measures of social acceptance.

In summary then, the results of studies examining mentally retarded peers' acceptability have indicated that mentally retarded children are generally less well accepted than their normal peers, that these acceptance ratings can be negatively influenced by labels, physical stigmata, poor academic performance and social incompetence, and that they can be positively influenced by academic and social competence and in some cases by perceived similarities.

Several researchers have examined nonhandicapped children's attitudes toward physically disabled children (Goodman, Richardson, Dornbusch & Hastorf, 1963; Harper, Wacker & Cobb, 1985, 1986; Richardson, Hastorf, Goodman & Dornbusch, 1961; Rosenbaum, Armstrong & King, 1986). These studies generally have indicated that normal children demonstrate a preference for non-handicapped children. Some evidence has suggested that preference for various disabilities in decreasing order consist of a child with a leg brace, a child in a wheelchair, an amputee, a facially disfigured child, and an obese child. However, as Harper et al (1986) have argued, these preference ratings are highly response dependent on such variables as choice of disabilities in the rankings, social context, type of questions asked, and sample of children assessed.

Some studies have compared ranking of physically disabled and mentally retarded peers and have either reported more favourable ratings for the physically disabled child or no difference between the two (Gottlieb & Siperstein, 1976, Wisely & Morgan, 1981). Particularly useful contributions of this line of research include the hypothetical peer drawing preference rankings developed by Richardson et al (1961) and more recently a well designed and psychometrically sound attitude questionnaire used to assess children's cognitive, affective and behavioural intention attitudes toward disabled peers (Rosenbaum, Armstrong & King, 1986).

Hence, valuable information gained from the study of physically handicapped children's acceptability by their normal peers includes the finding that physically handicapped children are generally rated less favourably than other normal peers, but more favourably than mentally retarded peers. In addition, normal children seem to alter their behaviour in a negative fashion in the presence of disabled peers which could restrict opportunities that disabled children would have to learn new social behaviours (Bender, 1980).

Further, evidence from both these areas of research indicates that increased contact alone does not necessarily improve social acceptance (Goodman, Gottlieb & Harrison, 1972; Gresham, 1982). In fact, some evidence suggests that attitudes toward handicapped children in segregated classes among normal peers are more positive than are those held toward mainstreamed disabled peers (Gottlieb & Budoff, 1973; Goodman, Gottlieb & Harrison, 1972).

Several important differences exist between learning disabled children and those who are mentally retarded and physically handicapped. Learning disabled children are normal in appearance, there is a greater proportion of them in integrated classrooms and the frequency of learning disabilities is higher than for these other groups. This makes the learning disabled an important group for

consideration.

A number of research studies which have examined peer attitudes and acceptability of learning disabled children have appeared in the last fifteen years. These are summarized in Table 1. Studies by Bryan and her colleagues (Bryan, 1974a, 1974b, 1976; Bryan & Wheeler, 1972; Bryan & Bryan, 1978; Bryan & Perlmutter, 1978; Bryan, Bryan & Sonnefeld, 1982) have predominated in the learning disabled acceptability literature and have provided several important findings. Bryan (1974a, 1976; Bryan & Bryan 1978) utilized the peer nomination procedure along with a Guess-Who technique which entailed items such as "Who can't sit still in class?" to compare perceptions of social acceptability and rejection of normal and learning disabled children. These studies indicated that the learning disabled children received significantly fewer votes for acceptance and significantly more for rejection. Further, Bryan reported that learning disabled girls were more likely to be rejected. While this was supported by another study utilizing similar procedures (see Scranton & Ryckman, 1979), closer evaluation of these studies suggests that this particular finding was based upon a misinterpreted interaction from the statistical analyses (Dudley-Marling & Edmiaston, 1985).

TABLE 1: SUMMARY OF ACCEPTANCE AND ATTITUDE STUDIES WITH LEARNING DISABLED CHILDREN

STUDY	TARGET GROUP	SAMPLE SIZE	GRADES	MEANS OF EVALUATION	NEG. ATTITUDES TOWARD LD
Ackerman & Howes (1986)	LD	28LD	1 - 8	Peer Rating Scale	Yes
Bruininks (1978a)	LD	16LD, 16N	1 - 5	Peer Acceptance Scale (forced choice rating scale)	Yes
Bruininks (1978b)	LD	23LD, 23N	1,2,4,5	Peer Acceptance Scale (forced choice rating scale)	Yes
Bruck & Hebert (1982)	LD	20LD, 20N	2 - 4	Parent & Teacher Checklist	No
Bryan & Wheeler (1972)	LD	10LD, 10N	K - 6	Observation	No
Bryan (1974a)	LD	84LD, 84N	3 - 5	Peer Nomination-2 scales "Guess Who" Acceptance/Rejection	Yes
Bryan (1974b)	LD	5LD, 5N	3	Observation quantity/quality	No/Yes
Bryan (1976)	LD	25LD, 25N	4 - 5	Peer Nomination-2 scales "Guess Who" Acceptance/Rejection	Yes
Bryan & Bryan (1978)	LD	25LD, 25N	4 - 5	Peer Nomination -2 scales Observation	Yes
Bryan & Perlmutter (1978)	LD	10LD, 10N	2 - 4	Videotape Vignettes Rating scale	Yes
Bryan, Werner & Pearl (1982)	LD	23LD, 27N		Subjects estimated their # of friends	No
Bursuck (1983)	LD	12LD, 12N	3- 4	Peer Nomination Peer Rating	No Yes
Cohen & Zigmond (1986)	Nonintegrated LD	43LD, 194N	3 - 5	Peer Nomination Peer Rating	Yes Yes
Deshler et al (1980)	LD	234LD 222 low ave 215N	1 - 8	Peer Nomination Peer Rating Parent Rating	No No
Garrett & Crump (1980)	LD	100LD, 100N	4 - 6	Peer Nomination-2 scales Peer Rating	Yes Yes
Gresham & Reschly (1986)	LD	100LD, 100N	1 - 8	3 short Peer Rating Scales Parent & Teacher Behaviour Evaluation	Yes

TABLE 1 (Cont'd)

STUDY	TARGET GROUP	SAMPLE SIZE	GRADES	MEANS OF EVALUATION	NGG. ATTITUDES TOWARD LD
Gottlieb et al (1986)	LD	37LD, 37N	3 - 5	Peer Rating Scale Observation	Yes
Hagen (1980)	All Disabled	232N	2 - 6	SCAIE Rating Scale of Character drawings	Yes
Horowitz (1981)	LD	29DL, 29N	3 - 4	Peer Nomination-2 scales Acceptance/Rejection	Yes
MacMillan & Morrison (1980)	EMR EH	222 EMR 65 EH	An elementary	Teacher and Peer Rating Scale	Yes
Markoski (1983)	LD	15LD, 15N	1 - 5	Observation	No
McKinney et al (1982)	LD	22LD, 22N	2 - 4	Observation	No
Miller (1984)	All Disabled	331N	2 - 6	SCAIE Rating Scale of Character Drawings	Yes
Perlmutter et al (1983)	LD	55LD, 107N	9 - 12	Peer Rating Scale	Yes
Prillaman (1981)	LD	28LD, 334N	1 - 6	Peer Nomination 1 scale - acceptance	No
Sabornie & Kauffman (1986)	LD	46LD, 46N	9 - 11	Peer Rating Scale (Ohio Social Accept. Scale)	No
Sainato et al (1983)	LD	7LD, 80N	3 - 5	Peer Acceptance Scale (forced choice rating Scale) Observation	No
Schumaker et al (1982)	LD	47LD, 47N	7 - 9	Observation	No
Scranton & Ryckman (1979)	LD	42LD, 42N	1 - 3	Peer Nomination Acceptance/Rejection	Yes
Sheare (1978)	LD	41LD, 41N	3 - 5	Peer Rating Scale Piers-Harris Self Concept Scale	Yes
Siperstein, Bopp & Bak (1978)	LD	22LD, 155N	5 - 6	Peer Nomination 1 Scale - Acceptance	Yes
Strain (1984)	LD	140	(Preschool Not Yet identified)	Observation	No

Bryan has also utilized observational techniques (Bryan, 1974b; Bryan & Wheeler, 1972; Bryan & Bryan, 1978) in some of her research with mixed results. An initial study entailed observing a small sample of normal and learning disabled children interact in the classroom setting for approximately one hour. A simple frequency count was made of each child's interactions with peers and teachers. No differences were found between the two groups in this study (Bryan & Wheeler, 1972). A subsequent study (Bryan, 1974b) observed a smaller number of learning disabled children over several months. While no differences were observed between the two groups with respect to quantity of interactions, she did report a difference in quality, namely, that learning disabled children were less likely to have their verbal initiations responded to by peers. This was supported and elaborated upon in another study aimed at identifying specific communication patterns which separated the two groups (Bryan & Bryan, 1978). Several other studies have employed similar observational techniques, some of these support Bryan's general conclusions (Gottlieb et al, 1986; Skrtic, 1980, cited in Dudley-Marling & Edmiaston, 1985), while others do not (Markoski, 1983; McKinney et al, 1982; Sainato et al, 1983; Schumaker, Wildgen & Sherman, 1982; Strain, 1984). Bryan and her colleagues also employed several other techniques, such as having normal and learning disabled children estimate their number of friends (Bryan,

Werner & Pearl, 1982).

However, reports of a number of similar studies utilizing peer nomination procedures have supported the main findings that learning disabled children are less well accepted and more often rejected by their normal peers (Coben & Zigmond, 1986; Garrett & Crump, 1980; Horowitz, 1981; Scranton & Ryckman, 1979; Siperstein, Bopp & Bak, 1978).

Siperstein, Bopp and Bak (1978) examined three aspects of acceptability of learning disabled children: academic ability, physical appearance and athletic ability. Using a peer nomination procedure with elementary school children, they found that while no learning disabled children were nominated on the academic question, some were nominated on the other two scales (although fewer than "normal" nominations). There was a tendency for the highest rated learning disabled children to be athletic (Siperstein et al., 1978). This was interpreted to indicate that athletic competence can offset the negative effect of poor academic ability or physical appearance.

Garrett and Crump (1980) compared learning disabled and normal peers in grades 4 through 6 on a peer nomination measure which combined the acceptance and rejection scores usually obtained separately using this technique. While they still reported significant differences between the two groups, their method remains somewhat questionable with



regard to the reliability of their adaptation. Horowitz (1981) also used a peer nomination procedure which assessed acceptance and rejection separately. He too reported significant differences between the two groups, although he qualified his findings by acknowledging that these effects disappeared if intelligence of the two groups was controlled for in the analysis.

Several other peer nomination studies did not indicate support for learning disabled children's lowered peer acceptability and increased rejection (Bursuck, 1983; Deshler et al, 1980; Prillamen, 1981). Prillamen (1981), for example, examined perceptions of peer acceptability of over 300 students ranging from grades 1 through 6. He reported no significant differences for any age group. His measures, however, consisted of only one peer nomination question, concerning whom a child would like best to sit beside at school, and accepted 3 rank-ordered choices. The use of only one question seems a questionable methodology for the study of peer acceptability. Bursuck (1983) also noted no significant differences using a single peer nomination procedure, but reported significance with the same sample using a rating scale format. In addition, he used "low achieving" peers as opposed to identified learning disabled children as the comparison group (Dudley-Marling & Edmiaston, 1985).

A number of studies have employed peer rating scales to assess perceptions of peer acceptance among elementary school children. Bruininks (1978a, 1978b) utilized a forced-choice rating scale to determine if learning disabled children were less well accepted than normal peers. Using this technique, which ensures that all children will be rated, she reported that the learning disabled children were rated significantly less favourably. This finding has been replicated in several other studies using a variety of rating scales (Ackerman & Howes, 1986; Bursuck, 1983; Coben & Zigmond, 1986; Garrett & Crump, 1980; Gottlieb et al, 1986; Hagen, 1980; Miller, 1984; Perlmutter et al, 1983; Sheare, 1978). For example, Sheare (1978) compared the peer ratings of learning disabled and normal children at the beginning and end of a school year by the class and found that, while all ratings improved over the year, the learning disabled children received consistently lower ratings. Some studies have reported significant findings with peer rating scales but not peer nomination techniques (eg. Bursuck, 1983).

In spite of all the supporting studies, there are some contradictory findings in the literature using peer rating scale techniques. Sabornie and Kauffman (1986) failed to detect any significant differences in acceptance ratings between normal and learning disabled high school students, even though significant differences between these two groups were obtained in another recent high school sample

(Perlmutter et al, 1983). In addition, Sainato et al (1983) failed to obtain any difference in acceptability ratings for elementary school children utilizing the same scale as did Bruininks (1978 a,b).

Several studies have attempted to use parent and teacher questionnaires of peer interactions to ascertain behavioural differences between normal and learning disabled children which could account for differences in acceptability ratings. Examples of these are Bruck and Hebert, (1982) and Deshler, Schumaker, Warner, Alley and Clark (1980). These studies have generally reported few if any demonstrated differences between the two groups.

Coben and Zigmond (1986) recently examined the perceived acceptability of learning disabled children who are not primarily integrated but who spend most of their time in a segregated classroom. Utilizing both peer nomination and a peer rating scale, these authors reported that this group of children also suffers lower peer acceptability and more peer rejection than do non learning disabled peers.

Similarly, Gottlieb et al (1986) combined a peer rating scale measure with direct observation and reported lower acceptability in ratings and through observation of actual interactions, suggesting that these two techniques are assessing the same constructs. Furthermore, they concluded that peer ratings are a reasonably valid indicator of peer

behaviour.

An alternative study designed to compare the findings of peer rating scales with parent and teacher scales examined three short peer rating scales in relation to parent and teacher rated behaviour evaluations. Again it was found that learning disabled children were rated less favourably on the peer rating scales and that these findings corresponded to the parent and teacher behaviour ratings (Gresham & Reschly, 1986).

Recently, Ackerman & Howes (1986) examined the relationship between in school sociometric status and after-school activity in a sample of learning disabled children. Sociometric status was assessed using both a peer nomination (or popularity) measure, and a peer rating (or general acceptability) measure. After school activity was assessed through parental questionnaires of structured and informal activities. Results indicated that both sociometric measures were significantly related to after-school informal activities.

### 1.3.2 Peer Nomination and Peer Rating Scales

In order to better evaluate the discrepancies in the peer attitude literature, a review of the methodology used in these studies must be considered. In most of the studies assessing peer acceptance and attitudes, sociometric measures were employed. There are two main types of sociometrics, the

peer nomination procedure and the peer rating procedure (Foster & Ritchey, 1979; Millich & Landau, 1982). The peer nomination technique has been widely used, and half of the studies listed in Table 1 utilized that procedure. Generally, children are asked to name whom they would like to sit beside the most, or whom they would not want to play with. Often three positive questions thought to measure acceptance, and three negative (or rejection) questions are asked (e.g., Scranton, et al., 1979). However, numerous difficulties exist with this procedure. These include the large number of peers who may be accepted, but are not the "best" friend and therefore not rated on the nomination question. Can we infer lack of acceptance just because they were not the most popular? Similarly, an unidentified group exists for rejection questions of peers (Millich & Landau, 1982; Sainato, et al., 1983). Interestingly, most studies listed in Table 1 which used the peer nomination technique reported that learning disabled children were rated more negatively than normal peers. Test-retest reliability has been reported for this technique over short periods (Scranton, et al., 1979) as well as long-term (Bryan, 1974, 1976).

The peer rating procedures have been utilized more recently in studies examining peer attitudes and acceptance. This procedure correlates fairly well with the nomination technique and shares its reasonable psychometric properties,

but it also differs in several ways (Millich & Landau, 1982). Rating scales involve rating every child in the class on a Likert-type scale for a number of items. This removes the possibility of forgetting someone, as could occur with a nomination procedure (Foster & Ritchey, 1979). In addition, the rating scale allows a differentiation among degrees of acceptance and rejection whereas nominations are simply dichotomous (Millich & Landau, 1982). Further, peer rating scales may be more stable over time than nominations, as some evidence suggests (Asher et al., 1979). Some studies, however, which report using the rating scale technique in Table 1 have had inconsistent findings even among those using the same scale (see Bruininks, 1978a, b; Sainato et al., 1983; Sheare, 1978). It seems plausible that many of the inconsistencies reported in these studies are due to variation in questions asked on these measures.

### 1.3.3 Direct Observation Studies

In addition to sociometric measures, several studies have reported using observation techniques (Bryan & Wheeler, 1982; Bryan, 1974b; Bryan & Bryan, 1978; Gottlieb et al, 1986; McKinney et al, 1982; Markoski, 1983; Sainato et al., 1983; Schumaker et al, 1982; Strain, 1984). Of these studies, the majority did not report significant findings using this technique. There are several difficulties associated with direct observation. First it is difficult to

observe regular peer interactions unobtrusively (Millich & Landau, 1982). Second, it is difficult to observe all interactions accurately; so much is overlooked (Asher & Hymel, 1981; Foster & Ritchey, 1979; Millich & Landau, 1982). Thirdly, some interpretation of children's behavioural interactions to infer acceptability may be erroneous (Dudley-Marling & Edmiaston, 1985). In addition, a lot of behaviours under investigation have not been adequately operationally defined and most of them are recorded out of context (Dudley - Marling & Edmiaston, 1985). This can lead to many discrepant findings. While these techniques may be very useful as one of a number of measures, they are tenuous as a sole indicator of peer acceptability.

#### 1.3.4 Hypothetical Peer Ratings

All the above mentioned procedures, (peer nominations, peer ratings and observation) are hampered by several difficulties. Whenever children are involved in rating their actual peers, there emerge ethical concerns of the possible heightening of awareness of these relationship difficulties and the use of labels (Freeman & Algozzine, 1980; Siperstein et al, 1980; Sutherland et al, 1983). In addition, physical appearance, teacher behaviour, other peer's attitudes or "special" status based on extra teacher help (Asher & Hymel, 1981; Foley, 1979; Foster & Ritchey, 1979; Freeman & Algozzine, 1980; Gottlieb, 1975) may

influence a child's ratings and cannot be separated from these techniques (Sutherland et al, 1983). Therefore, information which may lead to identifying factors which are largely responsible for the perceived lack of acceptance, may not be available, and therefore can be of little help in alleviating the difficulty, or in promoting successful integration in the mainstreamed classroom.

Recently, several studies have attempted to control for some of these variables by utilizing videotapes or photographs of children systematically portrayed as either normal or learning disabled (eg. Bryan & Perlmutter, 1978; Bryan & Sherman, 1980). Much of the research using these techniques originated in the study of mentally retarded peers (eg. Gottlieb, 1974, 1975; Siperstein et al, 1976). Advantages of these techniques include the ease with which the experimenter can control for possible effects of teacher and other peer behaviours. These techniques should be considered still somewhat limited, however, in that individual characteristics of the targets, such as physical appearance, may still strongly affect these ratings.

Simple line drawings of disabled targets were developed for the now classic Richardson (Goodman et al, 1963; Richardson et al, 1961) studies of physical disability preference. The utility of this technique is twofold. First, the subjects are responding to the stimulus of



interest, the visible physical abnormality. Individual variables are essentially eliminated. Secondly, this technique can be easily manipulated by the experimenter. It is readily acknowledged that there is a trade-off involved with such procedures. The trade-off is that the potentially modifying effects of individual characteristics on attitudes cannot be measured. It can be argued, however, that it is difficult at best to interpret the complex interaction of many factors if it is not understood how a single factor can affect behaviour.

Richardson's technique has been successfully used by other researchers although they have acknowledged the context effects of the range of disability choices available on rank order preferences (Harper et al, 1985; 1986). Also, through the study of mentally and physically handicapped children, another line drawing and vignette rating scale was developed that included a learning disabled target along with mentally retarded, blind, hearing impaired and wheelchair target children (Hagen, 1980, Miller, 1980). This questionnaire termed the SCATE was first utilized by Hagen (1980). It requires children to make forced-choice ratings about stickman drawings with brief contextual descriptions. This technique always compares the target child to a normal target in each context. In this research, the learning disabled target was rated lower than normal and vision-impaired targets, as well as hearing impaired, mentally retarded and

physically handicapped targets (Hagen, 1980). In another study conducted by Miller (1984) using the same measure, the learning disabled target was rated less favourably than the normal target but more favourably than all other targets. The advantages of this technique are that it avoids most of the difficulties associated with other sociometric techniques, however, the contradictory findings reported with its use raises questions about the reported reliability measures (Miller, 1984). A close examination of this measure reveals that the items deal largely with verbal interactions. In addition, the learning disabled child is very specifically described as having a math problem ("has trouble", "is slow") (Miller, 1984). No other aspects of typical learning disability characteristics are mentioned.

The indication from the available research, in spite of these discrepancies, is that low social acceptance is relatively common among learning disabled children (Bryan & Bryan 1978a; Bryan, Donahue & Pearl, 1981; Gresham 1982; Pearl & Cosden, 1982; Wong & Wong, 1980). In recent years, several investigators have attempted to identify possible causes for the low social status of learning disabled children. Several of these studies have observed various behavioural deficits characteristic of learning disabled children including academic ability, athletic ability, social skills and social awareness, nonverbal communication

deficits, and difficulties with language skills (Dudley-Marling & Edmiaston, 1985).

In the search for possible causal factors of low status, particular attention has been paid to verbal interactions. Several researchers have observed that learning disabled children make more "nasty" statements, receive and give more rejection statements, are less verbally responsive, do not compliment as much and tend to make more hostile and inconsistent statements (Bryan & Bryan, 1978a, Bryan, Wheeler, Felcan & Henek, 1976; Gable, Strain & Hendrickson, 1979; Richey, Miller & Lessman, 1981; Wong & Wong, 1980).

As previously indicated, many of these behavioural differences have been identified on the basis of observational studies, often out of context. The question remains whether or not these observed differences in behaviour are the cause of learning disabled children's low social acceptance or rather the consequence. Some have argued strongly that this could be consequential (Renshaw & Asher, 1984).

It would appear, then that factors which influence peer acceptability are not well understood. Clearly, the many aspects of interindividual factors such as physical appearance, age, gender, race, educational background, socioeconomic status, geographic region, social skills, language ability, etc., all play a role in influencing peer

acceptability. What remains elusive is the specific nature of the influence these components have and the possible importance of factors more specific to learning disabled children as a group, such as academic, athletic and social competence factors have in determining peer acceptability.

#### 1.4 Summary

A review of the available research generally indicates that learning disabled children are less well accepted and that they are more apt to be rejected by their nonhandicapped peers. The considerable amount of contradictory findings reported in the literature, particularly among studies which have attempted to identify factors which influence this acceptability, necessitates that further research be conducted to clarify the issues.

## CHAPTER 2

### SOCIAL CATEGORIZATION AND INTERGROUP BEHAVIOUR IN CHILDREN

#### 2.1 Introduction

"By categorizing or conceptualizing our experiences we are able to analyze them and to respond selectively to some aspects of experience while ignoring others ... to see the world as orderly. Indeed, without categories one could not think at all in a sophisticated human sense." (Lindesmith & Strauss, 1968, p. 44).

Much has been written concerning the concept of social categorization. From a developmental perspective, it seems as natural a process as thought itself, and indeed, from infancy children are taught to categorize things together to learn about them, to compare and presumably to foster their understanding and knowledge about them. Piaget (1932) considered a child's categorization ability to reflect levels of cognitive development.

Social categorization is a widely observed phenomenon. Closely related to social categorization is the study of intergroup perceptions as it entails the major areas of attitudes, person perceptions and group dynamics (Turner, 1984; Wilder, 1986). This includes attitudes toward others (prejudice), beliefs about others (stereotypes) and behaviours directed at others (discrimination) (Wilder, 1986). While most of the intergroup relations research has

been conducted with adults, much of it has roots in the child literature for example, Sherif, (1966). Sherif's now classic summer camp studies entailed assessing the effects of social categorization and competition for scarce resources on the subsequent development of negative attitudes (Sherif, 1966).

Recent developments in the assessment of intergroup attitudes suggest that this may provide an alternative framework and procedures for addressing the issues of peer attitudes and acceptability of exceptional children. This is not a novel proposal. Moreno (1934) and later, Jennings (1959) focused their research concerning peer popularity on aspects of the peer group itself. They examined group structure and the nature of the roles assigned to group members. They reported that unpopular children occupied marginal group roles. Whether this was cause or consequence for peer popularity, however, remained unclear. Much of the more recent research concerning peer relations has focused on interindividual characteristics (Renshaw & Asher, 1984). It can be easily argued that an alternative perspective may provide useful information to the understanding of peer relations. The areas of current interest are Social Identity Theory research (Brown, 1986; Tajfel, 1978; Tajfel & Turner, 1979; Vaughan, 1978; Vaughan et al, 1981; Wetherell, 1982) and the area of developmental ethnic attitudes (Aboud, 1984; Aboud & Skerry, 1984; Kalin, 1984; Milner, 1984). The appropriateness of this paradigm is easily supported. With

respect to the study of children's peer relations, Hartup (1985) acknowledges the important contribution of Sherif's (1966) summer camp studies which provided valuable information regarding boys' intergroup behaviour and later served to fuel the development of Social Identity Theory, which itself was founded on the study of school boys' interrelations (Tajfel, 1970).

## 2.2 Social Identity Theory: A Synopsis

Social Identity Theory (Tajfel, 1978; Tajfel & Turner, 1979) was developed in an endeavour to explain the complex behavioural interactions of groups, and to strive to balance the subjective influences of intergroup behaviour with the more objective cultural, social or historical influences of these interactions. One of the central assumptions of this theory is that individuals actively pursue a positive self-image. According to Social Identity Theory, self image is comprised of both a personal identity and a more expansive group-based social identity. Factors which influence this self-image are closely tied to an individual's knowledge of his membership in various social groups and the emotional weighting placed on these groups. Thus an individual's social identity will be largely the result of the subjective status of the groups to which he belongs (Brown, 1986; Tajfel, 1978; Tajfel & Turner, 1979). Tajfel (1978) discussed this in terms of a continuum on which

a person can act socially as an individual at one end and as a group member at the other end. His view holds that sometimes people react to, or are reacted to as members of a group or category whether or not this was the intention. Much research has focused on interindividual social behaviour, however, Tajfel's theory focuses on the other end of this continuum, where people behave socially as members of various groups. Essentially, this theory "suggests that in many intergroup situations, people seek positive distinctiveness for their own group to protect and enhance their self esteem" (Sachdev & Bourhis, 1984, p. 278).

It follows from this concept of self image that favourable social comparisons between the groups to which an individual belongs and selected other groups is an important factor in the maintenance of a positive social identity. It is assumed that an individual can endeavour to enhance his self image by striving to improve either personal identity or social identity (Brown, 1986). In the latter case, comparisons are made on various salient or valued characteristics such as wealth, skin colour, intelligence or achievement. A further assumption of this theory is that group members will engage in various strategies to achieve a positive definition of themselves with respect to other groups.



Tajfel (1978) outlines a number of strategies which aid in the attainment and maintenance of this positive "distinctiveness". These "distinctiveness" strategies include: 1) individual mobility, in which an individual endeavours to move to a higher status group, providing intergroup boundaries are flexible; 2) social competition, in which a direct competition is made on the basis of relevant valued dimensions of comparison; 3) social creativity, in which aspects of comparison are redefined in an effort to improve social identity, for example, by reinterpreting a negatively valued characteristic in a positive way (Tajfel, 1978; Tajfel & Turner, 1979). While Social Identity Theory is far more complex than described here, this brief synopsis, along with the results of several studies utilizing this theory, provide an alternative framework to examine peer interactions of exceptional children. Many of the assumptions held by Tajfel's theory are also supported by other researchers (See Brewer, 1979; Wilder, 1986).

Over fifteen years of research based on Social Identity Theory has demonstrated the utility of a technique using choice matrices to identify strategies and degrees of discrimination associated with a particular outgroup of interest (Aschenbrenner & Schaefer, 1980; Bourhis & Sachdev, 1986; Tajfel, 1981a, b, 1982a, b). The major findings concerning this technique support the sensitivity, reliability and validity of this procedure to measure

individual's social orientations (Bourhis & Sachdev, 1986).

In the classic studies on which Social Identity Theory is founded, Tajfel and his colleagues (Tajfel, 1970; Tajfel Flament, Billig & Bundy, 1971) examined the minimal conditions necessary for the occurrence of intergroup discrimination. In these experiments school boys were arbitrarily assigned to a group on the basis of a trivial task. They were then instructed to allocate points to boys, other than themselves, in their group and to boys in the other group although they would not know the boys' actual identities. These participants used point allocation matrices devised to measure the use of several possible distribution rules. These resource distribution orientations included parity, maximum ingroup profit, maximum differentiation, maximum joint profit and outgroup favouritism. The results of these studies indicated that the boys favoured ingroup members over outgroup members in their allocation, thus showing a preference for members of their own group (even though the identity of these group members was unknown) (Tajfel 1970; Tajfel et al, 1971). Two grouping factors were involved in these early experiments, the categorization of subjects into two arbitrary groups defined by the experimenter and the apparent similarity of the two groups based on their preferences. Further examination of these factors demonstrated that apparent similarity per se

did not account for the results obtained and that the grouping was sufficient to trigger discriminatory behaviour. Discrimination, expressed as ingroup favouritism in the minimal group experiments has been shown to contribute to a more positive social identity amongst group members (Brown, 1986, Oakes & Turner, 1983, Lemyre & Smith, 1985). Hence, the motivation for positive evaluation was achieved by using these contrived categories in a discriminatory way. According to Brown (1986), the fundamental claim of Social Identity Theory "is that when people are assigned to a group, any group, they immediately, automatically and almost reflexively think of that group, an ingroup for them, as better than the alternative, an outgroup for them, and do so basically because they are motivated to achieve and maintain a positive self-image" (p. 551). This appears to hold true whether the groups are based on real life categories or are made up of imposed ad hoc minimal groups.

This observed discrimination based on mere categorization of people into groups has been demonstrated to be reliable across a wide variety of subjects varying in age, sex and nationalities and using a number of dependent measures (Bourhis & Sachdev, 1986; Brown, 1986; Brown, Tajfel & Turner, 1980; Tajfel, 1982). Much of the research regarding Social Identity Theory and the associated response matrices, have explored aspects of the minimal group paradigm. A number of studies, however, have examined many

other aspects of very real intergroup behaviour, including bargaining and negotiation between groups (Stephenson, 1984). For example, Brown (1978) examined intergroup relations of three groups of factory workers, those in production and those in development. He reported the response matrices provided meaningful measures of both intergroup perceptions and behaviours. Similarly, Bourhis and Hill (1982) examined intergroup relations between college and university professors using the response matrices developed by Tajfel and his colleagues. In both of these studies the matrices were modified to represent salient salary scales and successfully assessed intergroup relations in real life contrasting groups.

There has been some debate in the literature and a number of criticisms have been raised, suggesting that these findings may be confounded by specific aspects of the tasks or materials (Bornstein, Cruw, Whittenbraker, Haring, Insko & Thibault, 1983a, b). These claims have been satisfactorily refuted, however, in that the ingroup preference observed in these studies cannot be explained by experimenter expectancies, demand characteristics or subject characteristics (Brown 1986; Bourhis & Sachdev, 1986; St. Claire & Turner, 1982; Turner, 1983a, b).

Recently, a few studies have reported adapting the Tajfel matrices for use with younger children and while the

matrices were greatly simplified, they still yielded significant results (Vaughan, 1978; Vaughan, Tajfel & Williams, 1981; Wetherell, 1982). With regard to children, similar findings have been reported with a wide range of children as young as 7 years of age and with a variety of cultural backgrounds including British, European and Polynesian children, although some cross cultural differences existed (Vaughan, 1978; Vaughan et al., 1981; Wetherell, 1982). For example, Wetherell (1982) discovered that grade 2 children demonstrated ingroup favouritism and outgroup discrimination in the minimal group paradigm among groups of unfamiliar peers who had been arbitrarily assigned to either a red or a blue group. She further demonstrated similar ingroup favouritism - outgroup discriminations in a real life situation amongst various ethnic group children in New Zealand.

The dependent measures associated with Tajfel's theory of Social Identity are a set of social discrimination matrices commonly referred to as Tajfel's Matrices (Turner et al, 1979). These matrices entail respondents' point allocations to ingroup and outgroup members simultaneously. Four basic distribution strategies can be assessed with the Tajfel matrices. These include parity (or fairness), in which equal points are awarded to both the ingroup and outgroup members; maximum joint profit, in which the maximum total combined number of points to both the ingroup and

outgroup members is chosen; maximum ingroup profit (or absolute favouritism), in which the highest absolute number of points is chosen for the ingroup member regardless of the number of points awarded to the outgroup member; and finally, maximum differentiation (or relative favouritism) in which the choice which maintains the largest difference in favour of the ingroup is selected at the cost of higher total available points (Turner et al, 1979).

In summary, Social Identity Theory provides a useful theoretical framework and a set of reliable techniques for assessing intergroup perceptions and behaviours among both real life and ad hoc or contrived groups.

### 2.3 Developmental Ethnic Attitudes

The research regarding the development of ethnic attitudes has provided evidence that attitudes develop early in life and that they can be formed on the basis of only a few characteristics (Aboud & Skerry, 1984; Kalin, 1984). The concepts of peer discrimination and prejudice in children have also received empirical support in the social developmental literature on ethnocentrism (Aboud, 1984; Aboud & Skerry, 1984; Kalin, 1984; Milner, 1984).

The study of developmental ethnic attitudes has also provided some interesting findings with children. For example, studies have shown that children can demonstrate strong preferences based solely on one dimension such as doll

"colour" (Kalin, 1984).

Allport (1954) proposed that children's attitudes toward various ethnic groups were initially very negative, that they peak about age eleven and then later decrease with age. Other researchers have supported this trend but have argued for earlier peaks, around 8 years of age (Kalin, 1984). Own group preference has been observed in Canadian children as early as age 5 (Aboud, 1984).

Two main perspectives have arisen from the developmental attitude literature. The first argues that the child begins life void of any prejudice and that these are learned, while the alternative argues that these categorizations and subsequent attitudes are a natural part of thinking. The latter seems to be held most prevalently at the present time. "The current thinking in social psychology is that categorization (of things as well as people) and stereotyping are characteristic of the thinking of all people" (Kalin, 1984, p. 121). The only difficulty to be explained in this perspective is why more tolerance is observed as a function of increasing age.

Some partial explanations for the observed developmental trends in attitudes can be drawn from Piaget's (1932) stages of development. He described both quantitatively and qualitatively different types of thought as age increases, from totally egocentric to the ability to

exhibit perspective taking. This stage theory supports the idea that until children are old enough to take other perspectives, they will likely perceive differences from their views or actions as less favourable. Similarly, Kohlberg's (1969) theory of moral reasoning argues that at young ages, immature moral reasoning reflects self centeredness and an inability for perspective taking. Katz (1976) utilized these theoretical perspectives in proposing an explanation of racial attitudes in children. Essentially this explanation proposed that attitudes would be initially very negative and then would diminish with increasing age.

The developmental ethnic literature circles back to Tajfel's work in an endeavour to further understand social categorization. Tajfel (1978) argued that social categorization has affective and behavioural consequences as well as cognitive ones, and that the main examples of this are ingroup favouritism, negative attitudes towards outgroups and discrimination against the outgroups.

Vaughan (1978) reported on studies with young children using this paradigm. He used samples of young British and New Zealand children in his research and reported that even young children were sensitive to this procedure. In a study of 96 British school children ranging from 7 to 11 years of age, two situations were compared using a much simplified version of the response matrices. The first situation entailed a minimal group procedure assigning kids



to red or blue groups supposedly based on their preferences for a set of pastel drawings. The other situation entailed asking the subjects to think of their best friend in class and someone whom they did not like. For both situations, the children assigned chips or coins to the two members. Vaughan (1977) discovered that discrimination responses toward the outgroup in the minimal group categorization were just as strong as the response to the outmember of a meaningful personal relationship. He also did not find any age or sex differences in responses. This evidence suggests that even ad hoc group categorizations can be as meaningful to group members as real life groups.

#### 2.4 An Alternative Approach to the Study of Peer Relations With Exceptional Children

The study of peer acceptability of exceptional children has usually been evaluated from an interpersonal perspective (Dudley-Marling & Edmiaston, 1985, Renshaw & Asher, 1984). In particular, research in this vein has been dominated by studies emphasizing individual social status and social competence (Asher, 1978; Asher & Taylor, 1981; Asher & Hymel, 1981; Bak & Siperstein, 1987b; Bruck & Heber, 1982; Dodge, 1983, 1985; Gresham & Reschley, 1986). Clearly, evidence exists that many aspects of peer acceptability are influenced by interpersonal characteristics (Gresham, 1981a; Gresham, 1982b; La Greca & Mesibov, 1979, 1982).

While much has been gained from interpersonal research endeavours, there are many discrepant findings reported in the literature and many aspects of peer acceptability remain to be satisfactorily understood. It seems valid therefore to examine the issue of peer acceptability of exceptional children from an intergroup perspective as well, in the endeavour to maximize our knowledge and understanding of the complex functioning of peer acceptability. It is also of interest to examine peer acceptance of exceptional children from an intergroup perspective as it will increase the comparability of this research area with the developmental literature on ethnocentrism.

## 2.5 Summary

Social Categorization is an integral part of human behaviour. The study of intergroup perceptions is closely associated to social categorization as it entails the study of attitudes, person perceptions and group dynamics. Much emphasis has been placed on the interindividual aspects of social behaviour, however there is cause to also investigate the other end of this continuum, the intergroup aspects of social interactions. A well known theory in the social psychology of intergroup behaviour is Social Identity Theory (Tajfel, 1978; Tajfel & Turner, 1979). The essence of this theory states that group members strive to achieve a positive

social identity, and to this end they actively engage in a variety of strategies including discrimination, in order to compare favourably on valued dimensions with respect to other groups. Over fifteen years of research using this theory and its accompanying dependent measures, has provided useful information across a variety of real and ad hoc groups and situations, including research with children's groups. It is proposed that this perspective, and specifically Social Identity Theory, may provide a useful framework in which to further explore issues pertaining to peer acceptability of exceptional children.

## CHAPTER 3

### RATIONALE, RESEARCH PLAN AND STATEMENT OF RESEARCH GOALS

With regard to the discussion of current learning disability literature concerning peer attitudes and acceptability, a research plan was developed based on the following rationale:

#### 3.1 Area of Research Focus

In spite of the increased interest in peer interaction research during the past decade with learning disabled children, relatively few findings are clearly established and underlying factors which influence this acceptance have yet to be identified. Although it is fairly well documented that mentally and physically handicapped children are perceived more negatively than normal peers (Gottlieb & Gottlieb, 1977; Gottlieb, Semmel & Veldman, 1978; Gottlieb & Switzky, 1982; Rosenbaum, Armstrong & King, 1986; Siperstein & Bak, 1980; 1985; Siperstein & Chatillon, 1982), there is some inconsistency as to whether or not learning disabled peers are perceived more negatively than normal peers (refer back to Table 1). As well, findings regarding the relative acceptance of learning disabled versus other exceptional children are even more tenuous (eg. Hagen, 1980; Miller, 1984).

With the influx of mainstreaming in the schools, the issue of peer acceptance of exceptional children is necessarily of increasing importance for successful integration and adjustment. Positive peer relations have been stressed by several researchers and theorists as being tantamount to successful social development (Piaget, 1929; Sullivan, 1953; Youniss, 1980). Further, peer acceptability has been identified as a significant predictor of not only school achievement, but of later mental health and adjustment (Cowen et al, 1973; Roff, Sells & Golden, 1972; Wanless & Prinz, 1982).

Among exceptional children, the largest subgroup who are involved in regular class integration or mainstreaming are the learning disabled. Clarification of peer perception of this group of children is therefore warranted on both academic and clinical grounds. Further investigation is required to elucidate the conflicting results evident in the current literature. In addition, these endeavours are needed to provide information that will aid in the successful integration of a tremendous number of children.

### 3.2 Approach to Research

Currently there are a number of complicating or confounding factors reported in the peer attitude literature. Included among these are the ethical concerns of children actually rating their own peers, as this may serve to

emphasize these groups and the use of labels in the classroom (Sutherland, Algozzine, Yoseldyke & Freeman, 1983). In addition, considerable difficulty exists in teasing apart which of a number of factors actually influence peer acceptability (Bryan & Bryan, 1978, Renshaw & Asher, 1984). Further, there are confounding effects of a number of factors including physical appearance, socio-economic status, other peers' attitudes, labels, and the "special" status of going to a resource teacher on ratings of peer acceptance (Bruininks, 1978; Sutherland et al, 1983).

Consequently, after evaluating the available studies, several research questions arose. The primary question which has served as the foundation for the present research concerned whether or not learning disabled children, removed from potentially confounding effects of physical appearance and other peer and teacher behaviour, would still be perceived less favourably by normal peers. Hence, it was reasoned that a research approach which could examine aspects of peer acceptability, while controlling for these possible confounding factors, could provide some clarification of the current understanding of learning disabled childrens peer status.

It is reasonably clear from the literature reviewed that many aspects of interindividual factors, such as physical appearance, gender, ethnicity, educational background and socio-economic status, all play a role in

determining peer acceptability. What remains unclear, however, is the degree to which characteristics reported as being common to learning disabled children as a whole influence peer acceptance. It is argued as a rationale for the present research that there is merit in considering isolated factors which are characteristic of learning disabled children as a group, such as academic, social, and athletic competence levels, removed from the complexity of inter-individual characteristics which have made interpretation in previous investigations difficult.

It is not the premise of this research that these isolated characteristics are the sole determinants of peer acceptability, but rather that these characteristics, examined in the absence of highly individual features, will serve to illustrate the importance of these factors to peer acceptability. The major thrust in peer relations research as a whole has been at the interindividual level (Hartup, 1983; Renshaw & Asher, 1984; Rubin, 1984). Examination of intergroup behaviour has received considerably less attention (Renshaw & Asher, 1984). The same can be said for research pertaining specifically to learning disabilities (Dudley-Marling & Edmiaston, 1985).

There is some evidence available that exceptional children are rated significantly less favourably than their normal peers whether these exceptional children are well

known to the raters, only acquainted or even unknown (Bryan, 1974a; Bryan & Perlmutter, 1978; Perlmutter, 1986). This raises concerns about which features, characteristic of learning disabled children as a whole, may serve to negatively influence peer acceptability ratings. This evidence is consistent with the proposal that sometimes individuals react to or are reacted to as members of a group or category whether or not this reaction was intended (Tafjel, 1978; 1982). Little information is available concerning this issue in children's peer relationships, particularly with respect to exceptional children (Renshaw & Asher, 1984; Vaughan, 1978).

For these reasons, and on the basis of the arguments presented in the previous chapter, consideration of peer acceptance issues of exceptional children from an intergroup perspective may provide a valuable alternative framework for the study of peer acceptability. Again, it is not proposed that an intergroup orientation alone can adequately account for peer interactions and specifically peer status, but rather that this approach may provide further information which will lead to a more comprehensive understanding of peer interactions and acceptance.

### 3.3 Research Plan

The primary research interest concerned whether or not learning disabled children would be less well accepted



than their normal peers when a number of potentially confounding factors were eliminated. Furthermore, if learning disabled children were rated less favourably than their normal peers, it was of particular interest to examine which factors or combination of factors influenced the peer acceptability ratings.

Several secondary research questions were subsequently developed relating to the reliability and extensiveness of the findings of the primary investigations and whether participant variables significantly influenced the results obtained. Some evidence is suggestive of participant effects, posing that factors such as gender, grade level and self esteem of the respondent may influence acceptability ratings (Bryan, 1974a, Miller, 1984; Scheare, 1978; Siperstein, Bop & Bak, 1978).

Another question concerned the perceptions of learning disabled children themselves and whether or not these children respond to other learning disabled peers in the same manner as normal peers.

The following plan was devised to address these research questions. An initial study was devised to determine whether or not lower peer ratings would be obtained for learning disabled children as opposed to their normal peers based on isolated characteristics. In addition, this initial study included normal, learning disabled, and another exceptional group to assess relative comparisons. A second

study was then conducted primarily to assess the reliability of the findings obtained in the first study. The third study examined which of the factors or combinations of factors used in the initial studies were the most salient in influencing peer ratings. After replicating these results, a final study was conducted to determine if learning disabled peers held similar perceptions of exceptional children as their normal peers. Integrated in this research plan were provisions to study various participant effects including aspects of gender, grade level and self concept on the observed results.

On the basis of the overview presented in chapter 1, commonly reported characteristics of learning disabled children were selected for study. These characteristics pertained to academic, athletic and social competence (Bryan, 1974a; Dudley-Marling & Edmiaston, 1985; Siperstein, Bopp & Bak, 1978). Other characteristics have been reported in the literature. However, as noted previously, many are associated with verbal interactions of individuals and may not be specific to learning disabled children as a distinct group.

In order to examine factors in isolation which may affect peer acceptability of exceptional children, a procedure which would allow for ready manipulation of the chosen factors while controlling for potential confounds was needed. Several studies have reported successful use of

hypothetical peer ratings of vignettes or drawings presented in booklet form (Gottlieb et al, 1976; Hagen, 1980; Miller, 1984). This procedure was adopted for this research as it allowed for quick and simple administration and it enabled the examiner to manipulate some factors while controlling for others readily.

Dependent measures to assess perceived peer status were then selected. The strong psychometric properties reported for sociometric rating scales and their ease of administration led to the adoption of this type of measure. In addition, the interest in examining an intergroup perspective with regard to peer status of learning disabled children led to the assimilation of dependent measures used in this paradigm.

The specifics of the rationale for the techniques adopted in this research plan are detailed in the following pages. Subsequently, specific research goals and hypotheses are delineated.

### 3.3.1 Vignettes

Written vignettes were chosen as the means of stimulus presentation for this research program. Vignettes provide a simple, well controlled measure which can be easily manipulated by the experimenter. Several studies have reported the successful use of this technique (eg. Gottlieb et al, 1975). Vignettes also avoid the potentially

confounding factors of children responding to labels, physical appearance, teacher or other peer behaviour toward the target child, which have hampered interpretation of findings in previous research (see Sutherland et al., 1983). In addition, ethical concerns regarding the emphasis of subgroups of children within the classroom, which could highlight existing difficulties in social acceptance, are disbursed by using this hypothetical target group. Finally, the vignette procedure provides the opportunity for systematic consideration of several characteristics (individually and collectively) and how these factors influence peer perceptions.

In order to minimize the effects of overlooked or misunderstood information, it was reasoned that the content of the vignettes should be brief and comprised of vocabulary and grammar well within the range of the youngest participant as judged by teachers and standardized reading test norms.

As some evidence suggests that learning disabled girls are more negatively perceived than learning disabled boys (Bryan, 1974a; Bryan & Bryan, 1978; Scranton & Ryckman, 1979), both sexes were described in the vignettes. The characters were described as being the same age as the participants to increase similarity and to emphasize a "peer" status. In addition, it was reasoned that presenting some background information (including name, hair and eye colour, the character's neighbourhood and means of getting to school)

would provide a sense of validity or reality of the character, and allow for some dimensions that the participants could identify with, therefore increasing similarity. Perceived similarity has been proposed to lead to more favourable acceptance ratings among some children (Bak & Siperstein, 1987; Newcomb, 1956). All this background information was carefully controlled for in the experimental design. If all characters had been identical in every respect, it would have served to exaggerate emphasis on the characteristics of interest as well as to confuse the reader who would be viewing several stories.

The vignettes were described as "average", "learning disabled", and in some experiments "handicapped", based on the main areas of difficulty experienced by learning disabled children as reported in the literature. These include three main dimensions of school functioning. The first is academic functioning, where problems with speed and accuracy, work completion, and ability to answer questions in class are commonly reported (Bryan, 1974a; Dudley, Marling & Edmiaston, 1985; Perlmutter et al, 1983). The second is social functioning, where lack of friends, lack of participation in social or in structured situations, and poor social skills are generally reported (Bryan, 1974a, 1976; Bryan & Bryan, 1978; Gresham & Reschley, 1986). Finally, the third is athletic functioning, where clumsiness, poor team

participation and lack of athletic competence are frequently reported (Siperstein, Bopp & Bak, 1978) in the elementary grades. The vignettes were created to vary on only three main characteristics. This was done to see if relatively subtle differences in story presentation (on these key characteristics) would serve to elicit differential responding to the target groups. While more blatant description of these character types might elicit stronger responses, the findings might be confounded by the obvious nature of the task and subsequent socially desirable responding that might follow.

Handicapped vignettes were included in some studies (1, 2 and 5) for several reasons. Inclusion of this alternative "exceptional" peer group provided a method of comparison and an opportunity to consider relative measures of attitudes as opposed to only having the regular/exceptional dichotomy. In addition, there has been some controversy concerning whether handicapped children are more or less accepted than their learning disabled peers (eg. Hagan, 1980; Miller, 1984).

### 3.3.2 Sociometric Questionnaire

There are several reasons for selecting a sociometric questionnaire as one of the dependent measures. Sociometric rating scale questionnaires are quick to administer, and have been used extensively in interpersonal attraction research,

and thus allow for some comparison between studies (Asher & Taylor, 1981). In addition, the psychometric properties of these rating scales have been shown to demonstrate high reliability, particularly among elementary school students (Oden & Asher, 1977; Roff, Sells & Golden, 1972), as well as predictive and concurrent validity (Asher & Taylor, 1981; Foster & Ritchey, 1979; Hartup, Glazer & Charlesworth, 1967).

### 3.3.3 Social Discrimination Matrices

Most of the research has focused on interpersonal aspects of peer acceptability and few have considered it from an intergroup paradigm. Social Identity Theory (Tajfel, 1978; Tajfel & Turner, 1979) was selected as one possible alternative or contributory framework to examine peer acceptability of exceptional children. The standard evaluation techniques which often accompany research concerning this theory were selected as a reasonable means of evaluating this theory's applicability to the target groups in question. Utilizing the same response techniques allowed comparability of findings with the available research on other target groups (eg. Vaughan, 1978; Wetherell, 1982).

In addition, as many of the discrepant findings existent in the literature can be attributed to the measures used, an alternative technique which assesses attitudes in a different manner, and which also may provide new information by tapping strategies used in responses, may add qualitative

as well as quantitative information to peer acceptance understanding.

It was reasoned that to ensure that the participants were understanding and utilizing the response matrices properly, several checks should be included. To verify which "group" each respondent was identifying with when completing the response matrices, two questions were included, assessing perceived similarity and group membership (i.e. which story character was more like themselves and which story character would they include in their group of school friends). The question regarding perceived similarity also was included to aid in the evaluation of an interindividual theory of peer acceptability, the Cognitive Consistency Theory (Newcomb, 1956). This theory has been recently applied to peer acceptability of the mentally retarded with some success (Bak & Siperstein, 1987).

#### 3.3.4 Self Concept Measures

Two subscales of the Piers-Harris Self Concept Questionnaire were selected for use in some studies (studies 1,4,5). In particular, the Popularity subscale and the Intellectual and School Status subscale were adopted for this research. This was mainly done as several investigators have discussed the potential effects of respondents' self esteem on perceived acceptance ratings (eg. Scheare, 1978). Specifically, it has been reported that lowered self esteem



may result in significant differences in acceptance ratings (Bak & Siperstein, 1987b, Scheare, 1978). In addition, the model of intergroup behaviour being considered in this research makes predictions of response patterns based on self esteem levels (see Chapter 2).

It was therefore reasoned that inclusion of some measure of self concept may aid in the comparability of findings as well as provide a more thorough evaluation of the models being considered.

#### 3.3.5 Participants

Elementary school children were selected to participate in these studies for several reasons. First, children in the elementary grades have the most exposure to mainstreamed classrooms and have the most contact with learning disabled children. Therefore they provide a realistic and valuable source of information regarding these peer relations. In addition, most research studies to date have focused in the grades 2-6 range (refer to Table 1), so utilizing some of this age group would aid in the comparability of findings. Relatively few studies have examined peer acceptability of exceptional children above the grade six level. In an endeavour to add to the growing knowledge in this field, it was decided to add an advanced grade, that was still contained in the elementary system, because as we have noted previously, less integration occurs

at the secondary school level. In order to be sensitive to potential developmental differences, participants were selected from grades two levels apart. Some developmental differences have been reported in the literature (Miller, 1984). Ultimately, participants were chosen from grades 4, 6 and 8. These grade levels ensured that the children were well able to understand and utilize the various rating scales, and children of these groups are known to have well established attitudes (Aboud, 1984; Kalin, 1984). Both boys and girls were included in these experiments as some discrepant findings regarding sex differences in acceptability ratings have been reported in other studies (Bryan, 1974a; Scranton & Ryckman, 1979).

It was determined that participants for all studies would be selected from the local separate school board. There were several reasons for utilizing this school system for the present research. The particular board which participated in this study had a very clear philosophy concerning exceptional children. This provided a well-controlled environment in which to assess children's attitudes toward exceptional peer characters. The selected board's philosophy, called "Each Belongs", is based on principles of integration, normalization and personalization (HWSSB, 1984). Specifically, this board practices full mainstreaming, with less than 3/4 of 1% of students being served in segregated, self-contained classrooms. The few

classrooms of this type which do exist are located in regular schools, and even these children are integrated with normal peers for some periods. The emphasis of this board is on belonging, no labeling and no segregation. Each teacher is deemed responsible for the provision of suitable programming geared to each individual's needs regardless of disability (physical, mental, academic, behavioural).

In addition to mainstreaming, the Board also does not believe in labelling children as learning disabled or handicapped. They feel that this is detrimental to the child. Indeed, evidence supports this view (Freeman & Algozzine, 1980; Sutherland et al, 1983). Instead it is argued that every child has strengths and weaknesses and it is their job to meet each child's learning needs. Because the board does not advocate labelling, the overt use of labels in the classroom is therefore minimized with these children, whereas such terms are frequently used in other boards.

Therefore, this board provided good opportunities for participant children to be familiar and have contact with a variety of exceptional children, while at the same time experiencing less emphasis on labelling and segregation of exceptional children in these classrooms. It was felt that this environment could provide a conservative estimate of peer rejection towards exceptional children, and therefore

it was believed to be the most appropriate sample from which to look for peer attitudes.

Another advantage of choosing this board of education was that it was a large school board which provided a large cross section of urban and suburban schools to allow more representative samples to be chosen.

### 3.4 Research Goals

Drawing on the previous discussion the present research program had three major objectives which can be summarized as follows.

The primary objective was to determine whether or not learning disabled children were perceived less favourably than their normal peers on measures of peer acceptability in the absence of a number of potentially confounding factors. Translated to the specifics of these studies, this goal was to determine whether or not significant differences exist between the "normal" and "learning disabled" vignettes based on sociometric and matrix ratings.

The second major objective was to determine which of the chosen factors or combinations of factors were the most salient in determining the peer acceptability ratings. To explore this issue, the specific goal was to determine if significant differences exist between vignettes systematically depicted as possessing one or more of these characteristics based on sociometric and matrix ratings.

The third main objective was to assess the applicability of an intergroup perspective in predicting and interpreting the observed findings. In order to assess this aspect it was necessary to determine if this paradigm could interpret findings adequately. Furthermore, it was of interest to determine the relationship between the dependent (matrix) measures associated with this perspective and the sociometric ratings.

In addition to these three main goals, several secondary objectives were identified which pertained to participant effects. The first of these objectives was to determine whether there was a gender effect of either the respondents or the target characters on the obtained findings. In addition, this objective included an evaluation of whether there were grade effects with respect to the results. For example, do younger children respond to different factors or in a different manner than older children? Also, it was of interest to determine if the observed patterns hold for older children who have not been adequately represented in the literature. A further secondary objective was to determine whether respondents self esteem levels account for variability in observed peer ratings.

In addition, another of these objectives was to determine whether or not learning disabled peers respond to the learning disabled vignette characters in a similar manner

as their normal counterparts.

Finally, it was of interest to determine the utility of the materials and procedures developed. This included whether the vignettes were an appropriate procedure, whether the sociometric was sensitive to differences among vignette types, and whether the matrices could be easily used by children participating in the study.

On the basis of these objectives, several general hypotheses were developed. For the initial investigations, the Null hypothesis was that there were no differences between the means for normal versus learning disabled versus handicapped vignettes on any of the dependent measures.

1) It was anticipated (Hypothesis 1) that the "learning disabled" children would be perceived less favourably than the "normal" children in terms of ratings on the sociometric questions and matrix ratings regardless of which factors or combination of factors described three characters. The predictions are based on evidence in the learning disability literature which has found learning disabled peers to be perceived less favourably on peer rating scales than their normal classmates (Bryan, 1974, 1976; Miller, 1984; Scranton & Ryckman, 1979; Siperstein, Bopp & Bak, 1978).

The particular strategy reflected in the matrices would generally reflect: a) Ingroup favouritism of subjects

identifying with normal characters and; b) outgroup discrimination towards the learning disabled (or handicapped characters) c) This outgroup discrimination as indicated by matrix choices would generally be more severe, reflecting stronger discrimination towards the learning disabled than the handicapped group where applicable.

2) It was also anticipated (Hypothesis 2) that the "handicapped" vignette characters would be perceived differently and less favourably than the normal characters, based on higher sociometric and matrix ratings for the "normal" vignettes. This prediction was based largely on the work of Gottlieb (Gottlieb & Gottlieb, 1977; Gottlieb et al., 1978; Gottlieb & Switzky, 1982) and Rosenbaum et al, (1984) which have consistently found a less favourable perception of handicapped children as compared to normal children.

3) It was further hypothesized (Hypothesis 3) that "learning disabled" vignette characters would be perceived more negatively than the "handicapped" ones as indicated by lower sociometric ratings and stronger discrimination ratings on the matrices. This was expected to be more evident on some aspects than others. For example, it was hypothesized that the learning disabled children would be rated as having fewer friends, not trying in school, or being less intelligent. However, the handicapped characters may receive lower ratings in fewer areas, such as those judging their ability to do things on their own. Even though these types

of children will not be directly compared in the matrix judgments, stronger discrimination strategies toward the learning disabled characters than the handicapped characters could be interpreted as suggesting this relationship.

There is, however, little strong evidence to support this hypothesis as handicapped children have been reported to be both more favoured (Hagan, 1980) and less favoured (Miller, 1984) when compared to their learning disabled peers.

4) It was also anticipated (Hypothesis 4) that significant differences would be obtained depending on which factors or combination of factors depicted each learning disabled vignette. The pattern of differences was expected to generally reflect increasingly more negative ratings with increased number of negative characteristics depicting the vignettes.

5) It was anticipated (Hypothesis 5) that there would be a relationship between sociometric ratings and the relative strength of discrimination strategies utilized on the social discrimination matrices. Specifically, it was expected that an inverse relationship would exist. The higher the sociometric ratings, the lower the value (or strength) of the discrimination strategies.

6) It was anticipated (Hypothesis 6) that there would be some significant participant effects. Specifically,



it was expected that the younger the respondent, the more negative the ratings of exceptional characters.

7) Finally it was anticipated (Hypothesis 7) that learning disabled peers would respond to the learning disabled characters in a similar fashion as their normal peers. Although the social categorization effect would predict that both normal and learning disabled respondents would favour their own group status differential studies (i.e. Sachdev & Bourhis, 1987) have shown that low status groups demonstrate outgroup favouritism. The learning disabled typically receive lower status ratings than their normal peers and therefore it was depicted that learning disabled children would also give more negative ratings to the learning disabled characters on sociometric and matrix ratings.

## CHAPTER 4

### GENERAL METHODOLOGY

#### 4.1 Introduction

Within the context of the aforementioned rationale, a general methodology for the study of these questions was developed. Because this methodology was utilized with slight variations for the five studies conducted, it is described in detail in this section and will only be briefly discussed with regard to specific variations in subsequent chapters.

##### 4.1.1 Selection of Subjects

Participants for all studies were selected from the local Separate School Board. The reasons for utilizing this school system were delineated in the previous chapter. Upon receiving permission to work within this Board of Education, 12 schools, which represented both urban and suburban areas, were invited to participate. Principals were contacted and permission letters briefly describing the project were sent home to parents. Subsequent participants consisted of those children, enrolled in regular mainstreamed classrooms, who met specific age requirements, and who received parental consent. Each child who received this permission was then invited to participate, and only children who expressed interest were included. Depending on the specific study,

children who were functioning within the average range of ability were selected.

(Children meeting Learning Disability criteria, as identified by standardized measure in school records, were participants in Study 5 (See Chapter 9)).

## 4.2 Experimental Materials

All of the experimental materials were presented in booklet form consisting of the following segments.

### 4.2.1 Vignettes

Written vignettes were used as the stimulus material in all of the studies conducted for reasons previously discussed in detail. While some variation in these vignettes existed across these studies, they can be generally described as follows. Each vignette was presented as a short paragraph, centered on an 8 1/2 x 11 inch page. A vignette consisted of 6-7 sentences averaging 65 words in length, and was constructed of simple vocabulary well within the grade 4 reading level as assessed by standardized reading tests (eg. DRS: Spache, 1981) and classroom teachers. The vignettes themselves were very similar. The target character was described as a school child (boy or girl) in the respondent's grade, and was depicted as either average or exceptional (learning disabled or handicapped) on the basis of three stereotypic characteristics relating to academic, athletic and social skill as identified in the literature. There was

no explicit use of labels of any sort in the vignettes.

Each vignette briefly described a child, (their name, age, hair and eye colour), and their neighbourhood and method of getting to school. All this information was systematically varied to control for the possible effects this information could have on responding. Following this, the vignette provided some academic information, indicating whether the described child found school easy or hard and whether they could complete work on time or answer questions in class. Following this, some information regarding athletic ability and activity level was included, namely whether the child participated well in gym class and was good in sports or not. Finally, social information was provided concerning activity/inactivity at lunch time with peers. Examples of the vignettes used in this research are provided in Appendix 1.

#### 4.2.2 Sociometric Scale

A twelve-item sociometric questionnaire using a 5-point Likert-type response scale comprised the primary dependent measure in the five studies conducted. All twelve items were presented on one 8 1/2 x 11 inch page. (Refer to Appendix 2).

#### 4.2.2.1 Selection of the Scale

As discussed in the evaluation of existing scales, many methodological flaws exist in the available measures. For the purposes of the present research, a sociometric rating scale which was fairly brief and easily completed was considered important as subjects would be completing it several times. If the scale had been too lengthy or tedious, chances of random or inaccurate responding as well as omissions increased. Therefore, a questionnaire with items that simply had to be checked off was developed. In addition, the scale was developed with items conceptually reflecting three subscale themes, perceived happiness and competence as well as social distance. The scale developed for use in the majority of these experiments was modelled after the CATCH (Chedoke-McMaster Attitudes Toward Children with Handicaps, Armstrong, 1986; Rosenbaum & Armstrong, 1984; Rosenbaum, Armstrong & King, 1986). The CATCH, a 36-item scale, was designed to assess children's attitudes toward physically handicapped children. It has proven sound psychometric properties (Armstrong, 1986). Some relevant questions were adapted from this scale and were supplemented with questions shaped to the content of the vignettes. The present scale consisted of 12 items which were rated on a 5-point scale assessing peer perception of likability including items reflecting happiness, competence and social distance. For example, "Mark needs a lot of help doing things" and "I

would like to make friends with Mark" are two items on the scale. Both positive and negative questions were included to control for pattern responding. For each statement, the respondent simply put a checkmark in the box that best reflected his perception ranging from strongly agree, agree, don't know, disagree to strongly disagree.

#### 4.2.2 Validation of the Scale

The sociometric questionnaire was comprised conceptually of three subscales, reflecting happiness, social distance and competence items. A factor analysis of Study 1 data was conducted to see if in fact three subscales existed and if these scales were comprised of the items originally felt to reflect these perceptions. Results are presented in Table 2. The factor analysis is described in detail in Section 4.4.1. The results indicated that three factors emerged in the sociometric data. While the actual item loading was not exactly as predicted, there was considerable overlap. In comparison with the Factor Analyses of the CATCH (Rosenbaum et al., 1986), it was clear that similar loadings could be interpreted to reflect the dimensions of cognitive knowledge or beliefs about the target children, affective statements or feelings about the target children, and statements of behavioural intent. This three dimensional model of attitudes used by Rosenbaum et al (1986) was originally proposed by Triandis (1971). Superimposing this

framework on the original subscales, the cognitive component encompassed both the happiness and competence subscales, whereas the affective and behavioural intent components divided up the subscale of in and out of school social distance components. One item loaded on two scales.

Consequently, a second factor analysis was completed, specifying two factors. Results of this analysis indicated an equal division between the twelve scale items. The first factor, the "cognitive" factor emerged, which accounted for 39.5 percent of the variance, and a second factor, combining all the social distance items accounted for 21.3 percent of the variance. For the purposes of subscale analyses, only the factor analytic ones were considered.

TABLE 2. Summary of Factor Analysis of the Sociometric Questionnaire

Item No.	Sociometric Statement	Predicted Loadings (Happiness, Competence Social Distance - in and out of school)	(Cognitive, Affective, Behavioural Intent)	Actual Factor Loadings	Forced 2 Factor Loadings
1	Mark is a happy boy	H	C	2	1
5	Mark is often sad	H	C	2	1
7	Mark feels sorry for himself	H	C	2	1
2	Mark has many friends	H	C	2	1
4	Mark needs a lot of help doing things	C	C	2	1
9	Mark is a smart guy	C	C	2	1
6	I wouldn't feel good doing a school project with Mark	SD-In	A	1	2
3	I would like to make friends with Mark	SD-In	A	1,3	2
8	In class, I wouldn't sit next to Mark	SD-In	BI	1	2
10	I would invite Mark to my birthday party	SD-Out	BI	3	2
11	I would not play with Mark at lunchtime	SD-Out	BI	3	2
12	After school, I would invite Mark to my house	SD-Out	BI	3	2



#### 4.2.3 Comparison Rating

A comparison rating between the two vignettes was included prior to the social discrimination matrices. There were two questions in which the respondent was required to state which vignette character was most like themselves and which character would be included in their social group of friends at school.

#### 4.2.4 Social Discrimination Matrices

For reasons delineated previously, the present research was designed partially to assess the applicability of an intergroup theory, namely Social Identity Theory, on peer acceptability of exceptional children. In order to do this, an adaptation of the dependent measures used in conjunction with this theory to examine response strategies was devised for use with children.

The Tajfel matrices based on the allocation of points by participants in group experiments were employed to assess the relative strength (or "pull") of several behavioural intergroup response strategies.

Some criticisms have arisen in the literature concerning possible misinterpretation of results due to inappropriate or inaccurate scoring and analyses (See Bornstein, 1983a, 1983b). However, a number of papers have sufficiently replied to these concerns (Turner, 1983a, 1983b, Brown, 1986) and recent publication of explicit scoring

information has alleviated some of this confusion (See Bourhis & Sachdev (1986), for detailed scoring procedures). The statistical procedures involved in determining which strategies exert significant pulls are too lengthy and complicated to discuss in the context of this thesis. For a more thorough presentation, see Bornstein, et al., (1983a, 1983b) and Turner (1983). Methodological and scaling issues are also presented extensively in Brown et al. (1980).

The response matrices have been used widely by researchers working within this paradigm for over 15 years. These social discrimination matrices, as they will be referred to here, were adapted for use with children under the supervision of experimenters experienced in their use (Bourhis and Sachdev, 1984, personal communications). The usual matrix size (number of response alternatives) was systematically reduced to half of the usual size, to ensure that the response matrices were easy to understand and to use correctly. Similar reductions and adaptations of these techniques have been successfully done for use with very small children which provided support for the revision and the use of this technique (Vaughan, 1978, Vaughan et al, 1981; Wetherell, 1982).

According to Turner (1978; Turner et al, 1979) response strategies can be defined as follows: 1) Parity (P, or fairness, which allocates equal numbers of points to each recipient; 2) Maximum Ingroup Profit (MIP) or ingroup

favouritism, which allocates the highest absolute number of points to the ingroup member; 3) Maximum Differentiation (MD) or relative ingroup favouritism, in which points are allocated in such a way as to maximize the difference in points awarded to each recipient, the difference being in favour of the ingroup member at the expense of possible absolute points; and 4) Maximum Joint Profit (MJP) or generosity, which allocates the maximum combined total number of points to both recipients. The actual term Ingroup Favouritism (FAV) describes an allocation which combines both maximum difference and maximum ingroup profit. This strategy is of particular interest in this research.

Three strategies in particular, are considered to be discrimination strategies (see Bourhis and Sachdev, 1986). These strategies are FAV on P, MD on MIP; and FAV on MJP. These discrimination strategies are: a) the strength of ingroup favouritism responses which allot the most possible points to the ingroup and at the same time maximize the differential between points to the ingroup and the outgroup, as pitted against fairness choices, which would allot equal points to both; b) the strength of maximum difference, which the sole aim is to maximize the point differential between the two groups even at the cost of sacrificing the highest possible points for the ingroup as compared to choosing the most available points for the ingroup and for the outgroup

combined; and c) the strength of ingroup favouritism (as described above) pitted against maximum joint profit, the most available points for both groups.

The Social Discrimination matrices used in this thesis were comprised of the following. The matrix "set" contained three types of choice matrices, each type being presented once in its original form and once in its reverse form (in accordance with Tajfel & Turner 1979; Turner et al, 1979; Sachdev, 1985; Bourhis & Sachdev, 1986), for a total of six matrices per set. The three types of choice matrix included in this research consisted of those comparing the strength or "pull" of the strategy 1) Ingroup Favouritism (FAV - Maximum Ingroup Profit (MIP) + Maximum Difference (MD) versus Maximum Joint Profit (MJP); Parity (P) versus Ingroup Favouritism (FAV = MIP + MD); 3) Maximum Difference in favour of the ingroup (MD) versus a combination of absolute Ingroup Favouritism (MIP) and Maximum Joint Profit (MJP). In accordance with Bourhis and Sachdev (1986), each matrix itself consisted of seven pairs of numbers, scaled down from a 13-pair set used in several studies with children. The arrangement of these numbers can be seen in Appendix 3 where an example of the matrix set is presented. One matrix was presented per page. The six matrices were presented in randomized order to control for possible ordering effects.

Details of scoring procedures are too lengthy to provide here although an abbreviated version can be found in

Appendix 5 and more detailed description can be obtained in Bourhis & Sachdev, 1986).

For each of the three matrix types, two pull scores were calculated; for example, for the first matrix type listed above, a pull of FAV on MJP and a pull of MJP on FAV can be derived. In this research, pull scores could range from -6 to +6, with positive pulls reflecting a strategy in favour of the ingroup.

The respondents were required to allocate points to each of the two vignette characters they had read about (one of which represented their own social group, the other, an outgroup) by selecting a pair of values which they felt was most appropriate based on their impression or knowledge of each vignette character. To respond, the child merely had to circle one pair of numbers per matrix. As a check to see if the children remembered the two stories, they were required to fill in the characters names on the rating sheets.

#### 4.2.5 Self Concept Scale

The Intellectual and School Status, and the Popularity Subscales of the Piers-Harris Self Concept Questionnaire (Piers, 1984) were included in several studies. These subscales were chosen so as to provide a shortened, more feasible length questionnaire which would accompany other tasks and because these two subscales referred specifically to the school environment which was the

situation of focus. The questionnaire entailed 28 short statements such as "It is hard for me to make friends", each followed by a yes or no option. All 28 statements fit onto one 8 1/2 x 11 inch paper. The Piers-Harris Scale is considered to possess reasonable normative data, standardization and psychometric properties. (Piers, 1984) Test-retest reliability for normal and learning disabled children samples in grade 6 across several months are reported at .77 and .68 respectively. Internal consistency for the same groups is reported at .88 and .89. An example of the subscale items is provided in Appendix 4.

#### 4.2.6 Presentation

All the described materials were presented in booklet form. Generally, the ordering was as follows:

##### Procedure Outline

1. Vignette A
2. Sociometric questionnaire
3. Vignette B
4. Sociometric questionnaire
5. Comparison ratings for A and B
6. Point allocations to A and B (series of 6 matrices)
7. Vignette C
8. Sociometric questionnaire
9. Vignette D

10. Sociometric questionnaire
11. Comparison Ratings for C and D
12. Point allocations to C and D (Series of 6 matrices)
13. Self Concept questionnaire

#### 4.3 Procedure

The majority of studies were conducted in small groups, with booklets designed for individual self-paced administration. The children were given a short, standardized verbal instruction explaining the experimenter's interest in how children read and answer questions and how easy or difficult they find these tasks to be. Examples of how to respond to the sociometric format as well as examples of using matrix ratings were illustrated on a blackboard to ensure that children understood how to use them properly. The children were instructed to work at their own pace, that everyone's booklet was different and that they could ask for clarification if they did not understand a task. In addition, it was stressed that there were no "correct" answers and that the experimenter was just interested in boys' and girls' opinions (adapted from Rosenbaum et al, 1986).

The entire procedure averaged 30 minutes in length and was completed in one session. At the end of the session, children were thanked for their participation.

#### 4.4 Statistical Analyses

All scoring and calculations were completed by computer.

Generally, independent measures included sex and grade of the respondent, sex of the vignette and vignette conditions. The dependent measures consisted of three types. The sociometric questionnaire (a total score, and 2 subscale scores), the social discrimination matrix responses (6 pull scores) and the self concept questionnaire (2 subscale scores).

A significance level of .01 was adopted for this research.

##### 4.4.1 Sociometric Questionnaire

The following statistical techniques were conducted on the Sociometric Questionnaire data.

###### 1) Factor Analysis

The SPSSX subprogram Factor Analysis (SPSS Inc, 2nd Ed, 1986) was used to factor analyze the sociometric questionnaire data in Study 1. A principal component analysis with varimax rotation of the factors was conducted. Only those factors with eigen values greater than 1.0 were retained. Items were assigned to the factor on which they had the highest loading. Only those items with loadings  $>.3$  were included.



## 2) Cronbach Alpha Reliability

The SPSSX subprogram Reliability (SPSSX Inc., 2nd Ed., 1986) was utilized to calculate Cronbach alpha reliability coefficients for the sociometric scale total score and the conceived and factor analyzed subscale scores.

## 3) Analysis of Variance

### a) Repeated Measures Analysis of Variance

The SPSSX subprogram MANOVA (SPSS Inc. 2nd Ed, 1986) and the BMDP program 4V (Dixon et al, Eds., 1983) were utilized to run the repeated measures analyses of variance performed in this research. Repeated Measures ANOVA's were performed on the total sociometric scale scores. When significance of  $p < .01$  was obtained then appropriate follow up analysis of variance was conducted.

The SPSSX Subprogram MANOVA (SPSSX, 2nd Ed, 1986) and BMDP 4V (Dixon et al, Eds., 1983) were used to analyze the sociometric subscale scores. When significance was obtained, appropriate univariate analyses of variance were conducted and subsequently, relevant post hoc analyses were also conducted (Procedures followed in accordance with Streiner, 1987 personal communication, and Bray and Maxwell, 1982). When t-tests were used, the Bonferroni procedure was employed to control for Type I error. Proportion of variance accounted for was calculated using the eta square statistic as outlined in Cohen (1977) and Cohen & Cohen (1983).

#### 4) Pearson Product-Moment Correlation

The SPSSX subprogram Pearson Corr (SPSSX Inc., 2nd Ed., 1986) was employed to examine the relationship of the sociometric subscales and the social discrimination matrix strategy "pull" scores.

#### 4.4.2 Social Discrimination Matrix Analyses

The following statistical procedures were conducted on the Social Discrimination Matrix Strategy data.

Within treatment condition analyses:

##### 1) t-tests

The SPSSX subprogram t-test (SPSSX Inc, 2nd Ed, 1986) was used to aid in the calculation of "pull" scores for the matrix data. Wilcoxin matched pairs tests are usually performed on this data but as the n's were so large, the distribution approaches the normal distribution, so accordingly, t-tests were employed (Bourhis & Sachdev, 1986; Harnett, 1975).

Between treatment condition analyses:

##### 2) Analysis of Variance

##### a) Multivariate Repeated Measure Analysis of Variance

The SPSSX Subprogram MANOVA (SPSSX, 2nd Ed, 1986) and BMDP 4V (Dixon et al, Eds., 1983) were used to analyze the significance of the target conditions on the matrix strategy "pull" scores. When significance was obtained, appropriate univariate analyses of variance and subsequently, relevant

post hoc analyses were also conducted (Procedures followed in accordance with Streiner, 1987 personal communication, and Bray and Maxwell, 1982). When t-tests were used, the Bonferroni procedure was employed to control for Type I error. Where applicable a Student's Newman Keuls test was employed (Bruning & Kintz, 1977).

#### 4.4.3 Self Concept Questionnaire

Analysis of variance was conducted on the means of self concept scores for both subscales. In addition, relative high and low self concept scores were determined and were used as a variable in repeated measures analysis of sociometric and matrix findings.

## CHAPTER 5

### STUDY 1: A COMPARISON OF "NORMAL", "LEARNING DISABLED" AND "HANDICAPPED" VIGNETTES ON PERCEPTIONS OF PEER ACCEPTABILITY

#### 5.1 Rationale and Specific Objectives

The initial study was designed to assess the utility of the written vignette procedure in conjunction with the sociometric questionnaire and the social discrimination matrix measures in examining perceived acceptability ratings of exceptional characters. Vignettes describing "normal", "learning disabled" and "handicapped" characters were developed and administered to grade six and grade eight students.

Within the context of the previous discussions, Study 1 had several objectives. The primary objective was to determine if significant differences exist between the perceptions of "normal" and "learning disabled", and the "normal" and "handicapped" vignettes based on sociometric and matrix ratings. It was anticipated (hypothesis 1.1) that the learning disabled children would be perceived less favourably than the average children in terms of lower ratings on the sociometric questions and matrix ratings (particularly matrix ratings of favouritism and maximum difference).

It was also anticipated (hypothesis 1.2) that the handicapped characters would be perceived less favourably than the normal characters, based on sociometric and matrix ratings. Further, it was predicted that the learning disabled children would be perceived less favourably than the handicapped children (hypothesis 1.3) to be rated as having fewer friends, not trying in school, being unintelligent, etc. However, the handicapped child vignettes could have received lower ratings on items judging their ability to do things on their own, etc. Even though these types of children would not be directly compared in the matrix judgements, stronger discrimination strategies toward the LD vignettes than the handicapped vignettes were interpreted as indicating that learning disabled characters were perceived less favourably.

The particular strategy utilized in the matrices was expected generally to reflect: a) ingroup favouritism of average children normal subjects (identifying with "normal" characters) and b) outgroup discrimination of these subjects towards learning disabled and handicapped characters; c) this outgroup discrimination as indicated by matrix choices would generally be more severe toward the learning disabled, reflecting stronger discrimination towards this group than the handicapped group.

Further it was anticipated (hypothesis 1.4) that there would be a relationship between positive ratings on the

sociometric questions and the number of points allocated on the matrix ratings. This would be particularly true on the subscale reflecting social distance. A further objective was to determine if the patterns observed for children in grade 6 would hold for older (grade 8) children who have not been adequately represented in previous studies.

As some evidence suggests that negative attitudes peak in severity around age 10 (Allport, 1954; Kalin, 1984), it was predicted that grade eight students should demonstrate more moderate responding on sociometric and matrix measures (hypothesis 1.5).

Finally, there may be some individual differences in responding. A child may identify with either the learning disabled or handicapped vignette as his/her ingroup (in which case the subject may be a member of one of those groups and/or may have a low self esteem). As Social Identity Theory evidence suggests, members of low status or minority groups, or those with low self esteem may respond with outgroup favouritism (Sachdev & Bourhis, 1987; Wetherell, 1982).

For this reason, two subscales of the Piers-Harris Self Concept questionnaire were included in the study, as self concept in the classroom may affect the manner in which children perceive their peers or in this case vignettes of peers. Some evidence suggests that self concept may affect

peer relations among school children (Aboud, 1984; Aboud & Skerry, 1984; Miller, 1984). Thus these two subscales were included to examine whether the respondent's own level of self esteem is a significant factor in ratings of peer acceptability. It was therefore predicted that differences in ratings between relatively high and low self esteem would exist (hypothesis 1.6).

## 5.2 Method

### 5.2.1 Subjects

A total of 123 grade 6 children (56 boys, 67 girls; CA 11.6 to 12.6 years, M = 11.8 yrs.) and a total of 115 grade 8 children (58 boys, 57 girls; CA 13.6 to 14.6 years, M = 13.9 yrs.) enrolled in mainstream elementary classrooms participated in this study. These children were selected from four suburban schools in the local Separate School Board.

### 5.2.2 Materials:

All of the experimental materials were presented in booklet form consisting of the following segments.

#### 1) Vignettes

Each booklet contained four short vignettes which briefly described a school child, either a boy or a girl, in the respondents' grade. The vignettes themselves were very similar. The target child was depicted as either average, learning disabled or physically handicapped on the basis of

three stereotypic characteristics relating to academic, athletic and social skill as identified in the literature, without using any direct mention of these labels. These vignettes are described in detail in Section 4.2.1. Each of the eight characters (4 male, 4 female) described in the vignettes was depicted in each of the conditions (normal, learning disabled, physically handicapped) to control for possible effects of name and introductory description. The vignette sets consisted of two types, one type depicting boys and the other set depicting girls. Each child read four stories, a normal and learning disabled pair, and a normal and handicapped pair. Eight ordering conditions of story type served to control for any possible order effects of story presentation.

### 2) Sociometric Questionnaire

Included in the booklet after each vignette was a set of twelve sociometric questions concerning the child depicted in the vignette. These items were rated on a five-point scale assessing peer evaluation of likability including happiness competence and social distance. (The Sociometric is described in detail in Section 4.2.2).

### 3) Comparison Rating

After reading and answering two stories and questionnaires, each child was required to state which vignette character was most like themselves and which



character would be included in their social group of friends at school.

#### 4) Adaptation of the Tajfel Matrices

A set of point allocation matrices referred to here as social discrimination matrices based on the Tajfel Matrices (Tajfel, 1978; Turner et al., 1979) required the participants to allocate points to each of the two characters (one of which represents their own social group, the other, an "out group") by selecting a pair of values which they felt was most appropriate based on their impression or knowledge of each story character. As a check to see if the children remembered the two stories, they were required to fill in the characters' names on the rating sheets. The matrices selected for this study were scaled down versions of those used in several other studies (Bourhis and Sachdev, 1984; Sachdev and Bourhis, 1985; Turner et. al., 1979).

The three types of choice matrix included in this study consisted of those comparing the strength of "pull" of the strategy: 1) ingroup favouritism (FAV = maximum ingroup profit (MIP) + maximum differences (MD)) with maximum joint profit (MJP); 2) parity (P) with ingroup favouritism (FAV = MIP + MD); 3) maximum difference in favour of the ingroup (MD) with a combination of absolute ingroup favouritism (MIP) and maximum joint profit (MJP; MIP + MJP). Two pull scores were calculated for each matrix type; for example, for the first matrix type listed above, a pull of FAV on MJP and a

pull of MJP on FAV can be derived. In this study each pull had a range from -6 to +6. The social discrimination matrices are described in detail in Section 4.2.4.

#### 5) Self concept questionnaire

The Intellectual and School Status, and the Popularity Subscales of the Piers-Harris Self-Concept Questionnaire (Piers, 1984) completed the booklet.

The booklet was put together in the following format. The first vignette followed by a sociometric questionnaire, the second vignette followed by a sociometric questionnaire, a comparison rating of those two vignette characters followed by the point allocations to those characters in the form of six matrices. This half was then followed by the same arrangement again for the third and fourth vignettes, and finally the Piers-Harris Questionnaire completed the booklet.

#### 5.2.3 Procedure:

This study was conducted in a group setting with approximately 15 children per session, and the booklets were designed for individual self-paced administration. The children were given short, standardized verbal instructions as described in Section 4.3, and an example of the matrix ratings was illustrated on a blackboard to ensure that children understood how to use them properly. They were then told to work at their own pace and that they could ask for clarification if needed.

The entire procedure averaged 30 minutes in length and was completed in one session. At the end of the session, children were thanked for their participation.

### 5.3 Results:

Independent measures included sex and grade of the respondent, sex of the vignette and conditions of vignette (normal, learning disabled, or handicapped). The dependent measures consisted of three types. The sociometric questionnaire (total score and 2 subscale scores) the matrix responses (6 pull scores per condition) and two group comparison questions and the self concept questionnaire (2 subscale scores).

#### 5.3.1 Sociometric Questionnaire

A Factor Analysis, described more fully in Section 4.4 was conducted on the sociometric data to verify the a priori subscale divisions. Three subscales emerged from this analysis, however, the competence and happiness subscales were combined to form one, "cognitions" subscale; the social distance subscale was divided in half forming two smaller subscales, consisting of both affective and behavioural intent items, with one primarily reflecting in-school social information, and the other after-school social information. One item loaded on both scales. A subsequent Factor Analysis was done specifying two factors and the resultant factors

consisted of the cognitions scale and the original social distance scale. These 2 subscales were adopted for use in these studies. (Refer back to Table 2, Chapter 4).

Cronbach alpha reliability analyses were performed on the total sociometric, and the two factor analysis derived subscales. Results of this analysis were as follows: Cronbach  $\alpha$  for the total sociometric based on 235 cases was = 0.861. The reliability for the cognitions subscale (happiness + competence) was  $\alpha = 0.920$ , and for the social distance subscale,  $\alpha = 0.727$ .

Mean total sociometric ratings for normal, learning disabled and handicapped characters are provided in Table 3. A gender (2) by target gender (2) by grade (2) by target condition (3) repeated measures analysis of variance conducted on the total sociometric scores yielded a significant target condition effect,  $F(3,225) = 6183$ ,  $p < .0001$ . Follow up analyses revealed that learning disabled characters were perceived significantly less favourably than normal and than handicapped characters and that handicapped characters were perceived significantly less favourably than normal characters. This can be seen in Table 3. A trend

**TABLE 3. MEAN SOCIOMETRIC RATINGS OF  
NORMAL, LEARNING DISABLED AND  
HANDICAPPED TARGET GROUPS IN STUDY 1.**

	Normal	Learning Disabled	Handicapped
Overall Sociometric	35.90 (5.03)	18.97 (5.52)	29.84 (5.33)
Cognitions Subscale	19.35 (3.61)	6.21 (1.42)	13.54 (2.70)
Social Distance Subscale	16.55 (3.82)	12.76 (2.96)	16.31 (3.41)

towards a main effect of grade was observed,  $F(3,225) = 3.77$ ,  $p=.02$  as well as a trend for a main effect of gender  $F(3,225) = 2.58$ ,  $p=.03$ . There were no other significant main effects or interactions.

Similar repeated measures analyses of variance was conducted on the two sociometric subscales. These findings are also presented in Table 3. Significant target condition effects were obtained, for both subscales, minimum  $F(1,227) = 497.30$ ,  $p<.0001$ . On each subscale, the learning disabled characters were rated less favourably than both normal and handicapped characters,  $p<.001$ . The only nonsignificant finding was the comparison between normal and handicapped characters on the social distance subscale.

### 5.3.2 Comparison Ratings

Results indicated that 225 participants identified themselves as most like the normal character in the normal-learning disabled and the normal-handicapped conditions. Only one person chose a learning disabled individual and two people chose a handicapped child as being most like themselves. With respect to which character they would include in their group of friends, no respondent selected a learning disabled character but five chose either the handicapped character or "both" normal and handicapped characters.

### 5.3.3. Social Discrimination Matrix Analyses

The matrix responses were scored according to the procedures outlined in Bourhis and Sachdev (1986) and Turner et al (1979). Accordingly, "pull" scores were calculated for each of six strategies and the mean of these scores are reported in Table 4.

A mean pull score is measured as it pulls away from the anchor strategy or zero. The anchor strategy is located on the right hand side of the list of strategies in Table 4. If the mean is large, then it strongly pulls away from the anchor strategy. If it is close to zero, it does not pull away from the anchor strategy. Positive means represent pulls in favour of the ingroup. In accordance with the guidelines specified by Bourhis and Sachdev (1986), two types of analyses were conducted on the two sets of pull scores. First, a matrix strategy analysis was conducted within each of the two target conditions. This is recommended to check if the matrix pull scores (-6 to +6) are significantly different from zero and determine if a strategy was being used significantly.

The results of t-test comparisons within condition analyses are included in Table 4. In the normal/learning disabled comparison, participants' strategies significantly differed from zero on five of the six strategies ( $p < .001$ ). The only strategy not used significantly was the pull of maximum joint profit versus ingroup favouritism. With

TABLE 4. MEAN SCORES OF STRATEGIES USED ON THE SOCIAL DISCRIMINATION MATRICES FOR TWO TARGET GROUP COMPARISONS IN STUDY 1.

MATRIX STRATEGY	COMPARISON	
	Normal/ Learning Disabled	Normal/ Handicapped
TYPE 1		
<u>Ingroup Favouritism versus Maximum Joint Profit</u>	3.59 (2.20)	0.93 (1.42)
Maximum Joint Profit versus Ingroup Favouritism	0.14 ns (1.28)	0.25 ns (1.70)
TYPE 2		
<u>Maximum Difference versus Maximum Ingroup Profit and Maximum Joint Profit</u>	2.68 (2.10)	0.59 ns (2.01)
Maximum Ingroup Profit and Maximum Joint Profit versus Maximum Difference	1.30 (2.21)	0.99 (2.10)
TYPE 3		
<u>Ingroup Favouritism versus Fairness</u>	3.42 (2.13)	0.96 (3.12)
Fairness versus Ingroup Favouritism	1.66 (2.51)	3.17 (2.90)



respect to the normal/handicapped comparison, participants failed to significantly use the maximum joint profit versus ingroup favouritism strategy, and the maximum difference strategy when pitted against a combination of maximum ingroup profit and maximum joint profit. All other strategies significantly differed from zero ( $p < .001$ ).

Between treatment condition analyses consisted of the following.

A multivariate repeated measures analysis of variance (gender (2) by target gender (2) by grade (2) by target condition (N/LD, N/H)) was conducted on the six dependent measures (6 "pull" scores). A significant target condition effect was obtained using the Hotelling  $T^2$  criteria of  $F(6, 221) = 194.13$ ,  $p < .0001$ . No other significant main effects or interactions were obtained. Follow up univariate analyses of variance were conducted. Univariate values were significant for all six pull scores, minimum  $F(1, 226) = 11.26$ ,  $p < .0001$ .

Follow up post hoc analyses indicated that participants utilized the three discrimination strategies, (FAV vs MJP, MD vs MIP & MJP and FAV vs P) significantly more strongly in the normal/learning disabled comparison than in the normal/handicapped comparison ( $p < .001$ ). Moreover, participants used the fairness strategy (P vs FAV) more strongly in the normal/handicapped condition than in the normal/learning disabled condition ( $p < .01$ ).

Pearson correlations were conducted between the matrix strategy scores and the sociometric total and subscale scores to assess to what degree these measures could be considered to be measuring the same constructs. Results are summarized in Table 5. The matrix strategy scores for the normal/learning disabled comparison were correlated with the total sociometric scores for each condition as well as the subscale scores. Results indicated that the matrix strategy scores were not correlated with total sociometric scores for the normal or handicapped conditions, but 3 strategies, the three discrimination strategies, (FAV vs MJP, MD vs MIP & MJP and FAV vs P), were significantly negatively correlated with the total sociometric scale score for the learning disabled condition. In addition the pull of fairness on ingroup favouritism was significantly correlated with the sociometric ratings. With regard to subscale scores, significant negative correlations were associated with the social distance subscale on all three discrimination strategies and positively with the fairness strategy. The cognition subscale was negatively correlated with two of the discrimination strategies and positively correlated with the fairness strategy. Overall, this indicates that the lower the sociometric rating, the stronger the use of discrimination strategies.

TABLE 5. PEARSON PRODUCT CORRELATIONS AMONG SOCIAL DISCRIMINATION STRATEGIES AND SOCIOMETRIC RATINGS FOR THE LEARNING DISABLED TARGET GROUP IN STUDY 1.

MATRIX STRATEGY	SOCIOMETRIC		
Normal/Learning Disabled Comparison	Total	Cognitions	Social Distance
TYPE 1			
<u>Ingroup Favouritism versus Maximum Joint Profit</u>	-.15 *	-.14 *	-.15 *
Maximum Joint Profit versus Ingroup Favouritism	----	----	----
TYPE 2			
<u>Maximum Difference versus Maximum Ingroup Profit and Maximum Joint Profit</u>	-.26 **	----	-.27 **
Maximum Ingroup Profit and Maximum Joint Profit versus Maximum Difference	----	----	----
TYPE 3			
<u>Ingroup Favouritism versus Fairness</u>	-.19 *	-.14 *	-.17 *
Fairness versus Ingroup Favouritism	.15 *	.14 *	.14 *

\*\* p < .001

\* p < .01

### 5.3.3 Self-Concept Questionnaire

The results of the self concept questionnaire are summarized in Table 6. Means and percentiles (from the subscales standardized norms) are reported for boys and girls in grades six and eight on the Intellectual and School Status, and Popularity Subscales of the Piers-Harris questionnaire. Means of these subscales were within normal limits. There were no significant grade or gender effects. A subsequent analysis was conducted of high and low self esteem groups based on those scores falling above and below the mean values to see if there were any differences in responses. The repeated measures analysis of variance conducted previously on the sociometric ratings was replicated with a new grouping, low versus high self esteem. Results indicated that while some trends were evident for lower self esteem groups to rate all the vignette characters less favourably, there were no significant effects. Similarly, no effects for self esteem group were obtained with matrix analyses.

### 5.4 Discussion

Analyses have demonstrated that learning disabled and handicapped characters (as identified on the basis of three units of information) were rated significantly lower than normal characters on a sociometric questionnaire assessing aspects of cognitions about happiness and competence and

TABLE 6. SELF CONCEPT RATINGS FOR RESPONDENTS IN STUDY 1.

	SELF CONCEPT SUBSCALE			
	Intellectual and School Status		Popularity	
Grade 6	Raw Score	Percentile *	Raw Score	Percentile *
Boys	14.20 (4.21)	70	9.22 (3.62)	52
Girls	13.41 (5.12)	60	8.77 (2.98)	35-52
Grade 8				
Boys	12.68 (3.69)	49-60	9.52 (4.10)	52-69
Girls	13.97 (4.74)	70	9.75 (2.35)	52-69

\* Percentile ranks from the Piers-Harris Self Concept Scale Manual (Piers, 1984)

social distance. This finding is taken as direct support for hypotheses 1.1 and 1.2. While numerous studies have reported that handicapped or learning disabled children are less well accepted than their normal peers (Bender, 1980; Bruininks, 1978a,b; Bryan 1974, 1975, 1976; Gottlieb et al., 1977, 1978, 1982; Rosenbaum et al., 1986), rarely has this type of sociometric measure been used in conjunction with a written vignette format. This format is similar in some respects to the stick-drawing vignettes utilized by Hagen (1980) and Miller (1984). However, as pointed out earlier, their results were inconsistent using the same measure, and their description of the learning disabled character was highly specific. The present results can be taken as support for the utility of the vignette procedures to subtly differentiate normal from exceptional characters, and further, as support for the use of this sociometric as a measure sensitive to differences among vignette types. The advantages of using this vignette approach have been outlined earlier and include freedom from the potentially confounding effects of teacher and peer behaviour and of labelling, which have been identified as problematic with other procedures (Asher & Hymel, 1981; Cook & Wollersheim, 1976; Foley, 1979; Hollenbeck, 1978; Millich & Landau, 1982; Voeltz, 1980, 1982).

This significant difference between normal and exceptional characters can be partially explained by a number

of factors. From the standpoint of Social Identity Theory (Tajfel, 1978; Turner et al., 1979) it could be argued that because the "normal" children identified themselves with the "normal" vignette characters, they consequently engaged in strategies to assert their self concept by comparing themselves favourably on the dimensions identified in the questionnaire.

The analyses also demonstrated that the learning disabled characters were rated significantly lower on the sociometric measure than handicapped characters. This was taken as evidence to support hypothesis 1.3. This differentiation between LD and handicapped vignettes was a particularly interesting finding as there is some controversy in the literature concerning the relative peer acceptability of learning disabled and physically handicapped (Hagan, 1980; Miller, 1984). There are several possible explanations which could account for present results. It may be that because physically handicapped children have a physical difference in appearance, normal children find it easier to accept these peers' differences in behaviour whereas learning disabled children are not obviously different physically, and therefore normal children are less apt to accept differences in this group's behaviour. Relatedly, it may be that average children more readily accept handicapped children and their behaviour as there is little chance of them being

misclassified as being a handicapped group member. In contrast, a normal child could easily be misclassified as belonging to the learning disabled group by appearance, and therefore normal children may well try to maximize the differences between these two groups by discriminating against them more strongly. Some supporting evidence for these proposed explanations comes from the research on handicapped children (Gottlieb, et al., 1977, 1978, 1982; Rosenbaum et al., 1986) and from the research on Social Identity Theory and ingroup favouritism (Tajfel, 1978; Vaughan, 1978, 1981; Wetherell, 1982). Social Identity Theory, for example, could argue that the normal subjects would necessarily engage in strategies to help to differentiate themselves from the learning disabled group more ardently as the outcome of comparisons between these two groups is less clear.

Other possible explanations include the increased public awareness of handicapped children, and the slow dissipation of negative stereotypes about this group of children has served to either increase positive attitudes about these children, or, perhaps this has served to elicit a sympathetic attitude toward this target group (Armstrong, 1986). In addition, befriending this group may be perceived as a socially desirable and prestigious behaviour. The fact that there was no significant difference between social distance ratings of normal and handicapped peers provides



some evidence for this postulate. Finally, it may be that both learning disabled and handicapped children do have different social behaviours and handicapped children are associated with both groups and the characteristics described in the vignettes triggered the differential rating.

The results of the sociometric analyses indicated that the learning disabled characters triggered a very negative response on the cognition subscale. This subscale represents perceptions regarding competence and happiness of the learning disabled. This poses some interesting questions concerning the extent of the attitudes that these characteristics elicit. It would appear that these attitudes are not merely situation specific based on these findings, and that they may be fairly extensive, leading to predictions of success or failure in a variety of situations.

The matrix data provide further information to aid in explaining these findings. This study compared the relative strength of one strategy pitted against another for the following pairs of strategies: 1) absolute favouritism to one child with allocation of the most available points to both; 2) parity (equal amounts to both) versus favouritism to one and 3) maximum difference (meaning the giving of a pair of values such that there is the greatest difference in amounts between the two in favour of one (even to the point of sacrifices the most absolute points available to be given

to the one of choice) compared to a combination of the highest points to the one of choice and the most points available to give to both.

The matrix analyses were consistent with the findings of the sociometric questionnaire. In the normal/learning disabled comparison, discrimination against the LD was strong as was evident on the discrimination strategies of MD on MIP and MJP and FAV on P and MIP. In the normal/handicapped comparison, however, significance was obtained on a similar number of strategies, however these strategies were not used as strongly as evident in the absolute values of the "pull" scores.

These findings are taken as support for hypotheses 1.1, 1.2 and 1.3 as the significant differences in the strategies used reflected ingroup favouritism and discrimination against learning disabled and to a lesser extent against handicapped. It follows from Social Identity Theory that if a particular ingroup has strong discriminatory feelings towards a particular outgroup then the pulls for the strategies used in responding to the matrices would be expected to be significantly stronger, particularly for the strategies of favouritism (MIP + MD) and maximum difference. This pattern of responding was obtained in the present study.

The analyses conducted on these data consist of all normal subjects and it was assumed that they would belong to the normal vignette group. The data showed that this was the

case for by far the majority of the subjects, as two questions were included which asked each child to identify which character was most like themselves and which one they would include in their group at school. A small number of students, however, while identifying themselves as "most like" the normal character, chose to include the handicapped character in their group. This did not occur in the normal/learning disabled comparison. It may be that the two groups (normal,handicapped) are perceived equally favourably or that enough salient differences exist between the two groups such that active differentiation is not perceived as necessary by the normal group (and in fact lack of it may itself be a valued dimension with which to ensure a positive social identity in the normal group). Social Identity theory can both predict and explain a variety of findings associated with the intergroup behaviour of normal and exceptional children and therefore provides a useful alternative framework with which to consider these peer interactions.

Based on the a priori level of significance chosen for this research, no significant main effects of grade or gender of respondents were obtained. Evidence did not support hypothesis 1.5. However, the strong trend observed suggests that further examination of this grade difference is warranted. Similarly, no significant main effects of gender were obtained. However, the strong trend indicates that

further consideration of these differences is also warranted.

The lack of significant differences in responding on the basis of relative high and low self esteem groups fails to provide support for hypothesis 1.6. However, it may be that more sensitive measures of self esteem or analysis of only those respondents who fall at the extreme values of the scale scores would have yielded more valuable information. Unfortunately, the number of respondents with reported values at the extremes were very small.

Since no effect of vignette sex on responding was observed, this study cannot support the finding reported in the literature that female learning disabled children are less well accepted than males (Bryan, 1974, Scranton & Ryckman, 1979). It may be that peer nomination is more apt to show a sex bias in responding.

The similarities between the pattern of responding on the sociometric and on the matrices with very different response techniques provides evidence of convergent validity. The negative correlation between strength of the social discrimination strategies used and ratings on the sociometric questionnaire for the target group of most interest, the learning disabled is taken as support for hypothesis 1.4. This suggests that these two measures are assessing opposite ends of a similar construct, with acceptability as measured by the sociometric and the fairness matrix strategy representing the positive aspect, and lack of acceptance and

further, rejection or discrimination, being measured by the other matrix strategies.

One final question which arises from this study concerns the degree to which the nature of the information about social functioning in the vignettes influenced the responses evident on the sociometric and matrix ratings. Some researchers have argued, for example, that demand characteristics may influence responding (Oden & Asher, 1977; Millich & Landau, 1982). This suggests that some evaluation of whether or not the social information provided in the vignettes was solely responsible for the response patterns obtained in this study is warranted. This was addressed in Study 2.

## CHAPTER 6

### STUDY 2: REPLICATION OF STUDY 1 AND EVALUATION OF THE ROLE OF SOCIAL INFORMATION ON VIGNETTE RATINGS.

#### 6.1 Introduction

In study 1, respondents readily distinguished between the three vignette types, as identified on the basis of academic, athletic and social information, through their sociometric and matrix ratings. In addition, the participants perceived the "learning disabled" vignettes significantly less favourably than the "handicapped" or "normal" types, and the "handicapped" less favourably than the "normal" characters. It was considered valuable to test the reliability of these findings to ensure the stability of the results before exploring further which aspects of the vignette descriptions were the most salient to the subjects. It was important to see if the pattern of responding demonstrated in study 1 could be reliably elicited with another group of children.

In addition, some researchers have argued that demand characteristics may largely determine response patterns. For example, providing social information in the stimulus material to the subjects, could strongly influence their social responses toward the target characters (Oden & Asher,

1977; Millich & Landau, 1982). The significance of the rating differences between the "learning disabled" and "handicapped" characters reported in Study 1 did not suggest that social information alone was the likely cause of the observed findings. However, because of the possible confounding effects, it was decided to evaluate this issue more thoroughly.

#### 6.1.1 Specific Rationale and Predictions

This study was designed with two main purposes. The first objective was a replication of Study 1. The second objective was to examine whether the social activity information in the vignette was largely responsible for the response patterns demonstrated on the sociometric questionnaire and on the matrices. For this reason the social activity information was deleted from all vignettes. The vignettes were otherwise identical to those used in Study 1. As no significant findings were reported on the basis of vignette gender in study 1, only boy vignettes were selected for use in this study. Also, as no effect was reported based on self concept measures of the subject, this scale was also omitted from the present experiment. Finally, as some trends were evident for grade and gender of respondents in Study 1, and to facilitate comparability of findings, grade 6 and 8 students were selected to participate in this study.

Based on study 1 and the above rationale,

experimental hypotheses were made as follows. Significant differences were predicted between the perceptions of "normal" and "learning disabled", "normal" and "handicapped" and "learning disabled" and "handicapped" vignettes based on sociometric and matrix ratings (hypothesis 2.1). It was anticipated that "learning disabled" children would be perceived less favourably than "normal" or "handicapped" children as illustrated by lower ratings on the sociometric items and matrix ratings in spite of the removal of the social information (hypothesis 2.2).

## 6.2 Method

### 6.2.1 Subjects:

A total of 51 grade 6 children (23 boys, 28 girls; CA 11.4 to 12.8 years,  $M = 11.9$  yrs.) and 42 grade 8 children (15 boys, 27 girls; CA 13.4 to 14.7 years,  $M = 13.9$  yrs.) enrolled in mainstream elementary classrooms participated in this study. These children were selected from suburban schools in the local Separate School Board.

### 6.2.2 Materials:

The experimental materials were presented in booklet form as described in detail in study 1 with the following exceptions.

1. Vignettes. The vignettes used in this experiment were identical to those used in study 1 except that the social information statement was omitted from each vignette,



and that only boy vignettes were used.

2. The self-concept questionnaire was omitted.

### 6.2.3 Procedure:

The study was conducted as outlined for study 1, and described in detail in chapter 4.

## 6.3 Results:

### 6.3.1 Sociometric Questionnaire

Mean total sociometric ratings from normal, learning disabled and handicapped characters are provided in Table 7. Repeated measures analysis of variance as conducted in Study 1 yielded a significant target condition effect,  $F(3,90) = 189.02$ ,  $p < .0001$ . Follow up analyses revealed that learning disabled characters were perceived significantly less favourably than normal and than handicapped characters. Handicapped characters were perceived significantly less favourably than normal characters. No other significant main effects or interactions were obtained.

A similar repeated measures analysis of variance was conducted for each of the two subscales of the sociometric questionnaire and the results are included in Table 7. A significant target condition effect was obtained for both subscales, minimum  $F(1,91) = 87.21$ ,  $p < .0001$ . Follow up analyses indicated that on each subscale, the learning disabled characters were rated less favourably than both

**TABLE 7. MEAN SOCIOMETRIC RATINGS OF  
NORMAL, LEARNING DISABLED AND HANDICAPPED  
TARGET GROUPS IN STUDY 2 (WITHOUT SOCIAL INFORMATION)**

	Normal	Learning Disabled	Handicapped
Overall Sociometric	37.66 (5.26)	21.28 (5.12)	34.32 (5.30)
Cognitions Subscale	19.22 (4.72)	6.91 (1.48)	14.65 (3.27)
Social Distance Subscale	18.43 (4.21)	14.35 (3.04)	19.65 (4.61)

normal and handicapped characters,  $p < .001$ . However, no significant differences were observed between the normal and handicapped conditions on the social distance subscale.

### 6.3.2 Social Discrimination Matrix Analyses

"Pull" scores were calculated for each of the six matrix strategies and the means of these scores are presented in Table 8. Results of within condition analyses to assess whether each strategy differed significantly from zero are presented in Table 8. In the normal/learning disabled comparison, participants strategies significantly differentiated from zero on five of the six strategies ( $p < .001$ ). The only strategy not used significantly was the pull of maximum joint profit versus ingroup favouritism. With respect to the normal/handicapped comparison, participants did not use the three strategies considered to be discrimination strategies; however, the other three strategies differed significantly from zero ( $p < .001$ ).

Results of between condition analyses are as follows. A multivariate repeated measures analysis of variance was conducted as per study 1. Results indicated a significant main effect of target condition  $F(6,87) = 132.57$ ,  $p < .0001$ . No other significant main effects or interactions were obtained.

Follow up univariate analyses of variance were conducted as in the previous study. Univariate group effects

TABLE 8. MEAN SCORES OF STRATEGIES USED ON THE SOCIAL DISCRIMINATION MATRICES FOR TWO TARGET GROUP COMPARISONS IN STUDY 2 (WITHOUT SOCIAL INFORMATION)

MATRIX STRATEGY	COMPARISON	
	Normal/ Learning Disabled	Normal/ Handicapped
TYPE 1		
<u>Ingroup Favouritism versus Maximum Joint Profit</u>	4.85 (1.14)	-0.12 ns (2.71)
Maximum Joint Profit versus Ingroup Favouritism	0.14 ns (0.92)	0.29 (1.01)
TYPE 2		
<u>Maximum Difference versus Maximum Ingroup Profit and Maximum Joint Profit</u>	3.29 (1.23)	-0.04 ns (2.78)
Maximum Ingroup Profit and Maximum Joint Profit versus Maximum Difference	1.29 (1.01)	0.96 (1.21)
TYPE 3		
<u>Ingroup Favouritism versus Fairness</u>	5.39 (1.01)	-0.12 ns (2.67)
Fairness versus Ingroup Favouritism	0.34 (1.43)	3.67 (2.01)

were significant for four of the six strategies  $F(1,92) = 19.21, p < .001$ , with the exceptions being the pull of maximum joint profit versus ingroup favouritism and the pull of maximum ingroup profit and maximum joint profit on maximum difference, which were not significant.

As can be seen in Table 8, follow up post hoc analyses revealed that participants utilized the three discrimination strategies, FAV vs MJP, MD vs MIP & MJP and FAV vs P significantly more in the normal/learning disabled condition than in the normal/handicapped condition. In contrast, participants used the fairness strategy (P vs FAV) more strongly in the normal/handicapped condition than in the normal/learning disabled condition.

#### 6.4 Discussion:

The significance of the target group differences for other sociometric data and matrix strategies are taken as support for hypotheses 2.1 and 2.2, and as demonstration that the findings from study 1 are reliable. There were some slight differences in sociometric ratings between the two studies. While normal vignettes were rated almost identically in study 2 as in study 1, learning disabled characters were perceived a little more favourably, and handicapped characters were perceived a little less favourably without the social information. Interestingly, in contrast, the results of the matrix analyses indicated that participants used discrimination strategies slightly more in

normal/learning disabled comparison and less so in the normal/handicapped comparison than was observed in study 1. These differences in findings between the two studies may be partially attributable to the deletion of the social activity information present in study 1. It is relatively easy to attribute the improved sociometric ratings of the learning disabled characters and the more favourable matrix ratings of the handicapped characters to the absence of negative social information. However, the more negative ratings of the handicapped group on the sociometric questionnaire and the strong discrimination towards the learning disabled group is less clear. It is expected that the social activity characteristic is important. However, in this study it was verified as not representing the sole cause of the responses and strategies demonstrated in the previous experiment.

It is interesting to note that again much of the difference in sociometric ratings for learning disabled characters was accounted for by lowered ratings on the cognitions subscale, which reflects in part cognitions about perceived happiness and competence of the learning disabled, and not on measures of social distance as might well be expected.

Other factors which may account for some of the variance across these two studies include the different schools which participated in each study and individual variability of students.

## CHAPTER 7

### STUDY 3: THE RELATIVE SALIENCE OF ACADEMIC, ATHLETIC AND SOCIAL FACTORS FOR PERCEPTIONS OF PEER ACCEPTABILITY.

#### 7.1 Introduction

It was demonstrated in the first two studies that children were readily able to differentiate three vignette types which varied from one another on the basis of a few descriptive details reflecting academic, athletic and social competence. These character variations produced substantial and reliable differences in ratings on sociometric and matrix measures. Consequently, the fundamental question which arises from this research is the degree to which each characteristic or combination of characteristics is responsible for these differences in ratings. The following experiments were designed to systematically address this issue.

##### 7.1.1 Specific Rationale and Predictions

To reiterate, the three descriptive characteristics were selected on the basis of common features of learning disabled children reported in the literature (e.g. Dudley-Marling & Edmiaston, 1985). Recall that learning disabled children are of primary focus in this research for several

reasons. There are more contradictory findings reported in the literature concerning peer acceptability of learning disabled children than for any other group of exceptional children. In addition, there is a greater number of learning disabled children being integrated into the mainstreamed classroom than any other exceptional group of children. Further, there are several differences between those with learning disabilities and those with other exceptionalities, such as the lack of differences in physical appearance from normal peers. Such differences are often evident with other exceptional children, and therefore complicates the applicability of proposed explanations of exceptional children's peer acceptability to learning disabled children. For these reasons, further research focusing on this particular group of exceptional children is well justified.

As presented in Chapter 1, some evidence for the importance of these characteristics can be drawn from studies of mentally retarded and physically handicapped children which have focused on characteristics which influence peer ratings. These have suggested that labels, academic performance, physical stigmata, and social incompetence may all serve to adversely affect sociometric status (Gottlieb, et al., 1978; Siperstein et al, 1977, 1980; 1982).

The three common characteristics associated with learning disabled children as reported in the literature<sup>nd</sup> adapted for use in this research concern as<sup>th</sup>



athletic and social competence. Other features have been reported in the literature, particularly specific verbal interaction patterns, (eg. Bryan et al, 1982). However, as it is not clear whether these features may be a result of poor peer acceptance, as opposed to a cause, these specific behaviours were excluded from study.

In a contrived situation, void of the use of overt labels, and amongst a target group who do not characteristically possess any differences in physical appearance from normal peers or any specific visible stigmata, the relative importance of each of the three characteristics required investigation as it could not be assumed that these features would be equally important amongst various exceptional groups. Further, the identification of factors or characteristics which strongly influence peer ratings could be of pragmatic significance in the endeavour to successfully integrate groups of these children.

This study was designed to examine systematically the relative importance of each of the component characteristics and combinations of characteristics depicted in the vignettes in eliciting the sociometric rating differences and matrix strategies evident in both Study 1 and Study 2. Study 2 indicated that the removal of one characteristic does not necessarily result in a significant change in responding. It

would follow from this that certain characteristics or combinations of characteristics may be more salient than others in determining responses.

The vignettes utilized in this study described average or learning disabled boys. The handicapped vignette was excluded from this study as learning disabled children received the least favourable ratings of all the types and were the target group of interest. In addition, this allowed for the systematic variation of all characteristic combinations used in the average and learning disabled vignettes of studies 1 and 2.

As in study 2, only boy vignettes were selected for use in this study. In addition, grade six and grade eight children were selected to participate in this study to facilitate comparability of findings and to further explore any developmental differences between these grades..

Based on the findings of studies 1 & 2 and the above rationale, the following experimental hypotheses were made. It was predicted that significant differences would exist between perceptions of normal and the most severe learning disabled vignettes (negative description of all three characters) on sociometric measures and matrix responding as seen in study 1 (hypothesis 3.1). As academic incompetence has been identified as an important feature in educable mentally retarded children's acceptability (Gottlieb et al, 1978), it was also predicted that there would be some

significant differences between normal and only academically impaired LD vignettes as evidenced by sociometric and matrix responding (hypothesis 3.2). Further, because of the evidence that social competence is closely related to social status (Dodge, 1985; Renshaw & Asher, 1984), it was predicted that negative social information alone would also produce significantly lower ratings as compared to "normal" characters (hypothesis 3.3). It was not known whether athletic information alone would result in significant differences in responding although a combination of athletic and social information might show a stronger effect. Therefore, it was predicted that a combination of negative social and athletic information would be perceived significantly less favourably than the "normal" characters (hypothesis 3.4).

Study 3 consisted of two experiments to allow for the systematic study of all possible combinations of academic, athletic and social characteristics while requiring only a reasonable amount of work by each child.

**TABLE 9** The Experimental Design for the Vignette Descriptions in Study 3

N=122 n= 61				N=116 n=57			
<u>Experiment 3a</u>				<u>Experiment 3b</u>			
Vignette	Academic	Athletic	Social	Vignette	Academic	Social	Athletic
Normal	+	+	+	Normal	+	+	+
LD1	+	-	+	LD1	+	-	+
LD2	-	+	+	LD2	-	+	+
LD3	-	-	+	LD3	-	-	+
n=61				n=59			
Vignette	Academic	Athletic	Social	Vignette	Academic	Social	Athletic
Normal	+	+	-	Normal	+	+	-
LD1	+	-	-	LD1	+	-	-
LD2	-	+	-	LD2	-	+	-
LD3	-	-	-	LD3	-	-	-

## 7.2 EXPERIMENT 3A

### 7.2.1 Method

#### 7.2.1.1 Subjects:

A total of 61 grade six children and 61 grade 8 children enrolled in mainstream elementary classrooms participated in this study. Experiment 3a(i, with social information held positive) consisted of 30 grade 6 (14 boys, 16 girls, CA 11.5 to 12.4 years, M=11.9 years) and 31 grade 8 (17 boys, 14 girls; CA 13.6 to 14.4 years, M=13.8 years). Experiment 3a(ii, with social information held negative)

consisted of 31 grade 6 (16 boys, 15 girls, CA 11.6 to 12.7 years, M=11.9 years) and 30 grade 8 (13 boys, 17 girls; CA 13.7 to 14.1 years, M=13.8 years).

#### 7.2.1.2 Materials:

The experimental materials were presented in booklet form as described in detail for study 1 (see Chapter 4) with the following exceptions:

1) Vignettes: The vignettes used in this experiment described one of six boys, either as average or learning disabled in the respondents' grade. The characters were depicted on the basis of three stereotypic characteristics used previously, relating to academic, athletic and social skill or competence. These characteristics were either described as positive or negative according to the outline above. In this experiment the social component was kept constant as positive in part 3a(i) and negative in 3a(ii). Each of the six male characters described in the vignettes was depicted in each of the conditions to control for possible effects of name and introductory description. Careful vignette sequencing was devised to control for any possible order effects of story presentation.

1) Each child read 6 stories, an average and LD1 (only one additional negative feature) pair, an average and LD2 (two additional negative features) pair and an average and LD3 (most severe description) pair although the order

varied as outlined above (refer to Table 9).

2) Sociometric Questionnaire: The sociometric questionnaire was the same as in study 1 and described in Chapter 4, and followed each story presentation.

3) Comparison rating: This also followed each pair of stories as in study 1 and as described in Chapter 4.

4) Social Discrimination Matrices: These are identical to those described in detail in Chapter 4 and study 1 and followed each comparison rating.

5) The self concept questionnaire used in study 1 was omitted.

#### 7.2.1.3 Procedure:

This study was conducted as outlined for study 1, and described in Chapter 4.

#### 7.2.2 Results:

##### 7.2.2.1 Sociometric Questionnaire

Mean total sociometric ratings for normal, LD1, LD2, and LD3 vignettes are reported in Table 10. A gender (2) by grade (2) by social information (2) by target condition (2-academic x 2-athletic) repeated measures analysis of variance was conducted on the total sociometric ratings. Results indicated a significant main effect for academic information  $F(1,113) = 330.55, p < .0001$ . In addition, there was a significant main effect for social information  $F(1,113) =$

**TABLE 10. MEAN SOCIOMETRIC RATINGS OF TARGET GROUPS  
VARYING IN ACADEMIC, SOCIAL AND ATHLETIC  
COMPETENCE IN STUDY 3A.**

	POSITIVE SOCIAL COMPETENCE			
	POSITIVE ATHLETIC		NEGATIVE ATHLETIC	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
Overall Sociometric	33.95 (5.22)	26.28 (4.79)	31.33 (5.30)	22.72 (5.04)
	NEGATIVE SOCIAL COMPETENCE			
	POSITIVE ATHLETIC		NEGATIVE ATHLETIC	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
Overall Sociometric	30.24 (5.11)	21.07 (5.37)	27.93 (5.13)	17.93 (5.27)

45.62,  $p < .0001$ . A significant main effect for athletic information  $F(1,113) = 57.20$ ,  $p < .0001$  was also evident. There was a trend towards a grade by social information interaction, but it was not significant. No other significant main effects or interactions were obtained.

Follow up analyses of variance indicated that the mean total sociometric ratings for each of the LD1, LD2 and LD2 conditions were significantly less than the standard, minimum  $F(1,111) = 11.7$ ,  $p < .0001$  for both positive social and negative social conditions. Using the eta square statistic (Cohen & Cohen, 1983), the proportion of variance accounted for by each of the two within-subjects dependent variables was as follows. Academic competence information accounted for 60.0 percent of the variance explained, whereas athletic competence accounted for only 6.1 percent of the variance. With respect to the between subjects variance, social competence information accounted for 38.2 percent of the variance. This last proportion is of interest when compared to the proportion of between subject variance accounted for by athletic competence information in Study 3B.

#### 7.2.2.2. Social Discrimination Matrix Analyses

"Pull" scores were calculated for each of the six strategies for the three sets of comparisons and the results are summarized in Table 11. Within treatment condition analyses were conducted to see if each strategy differed



TABLE 11. MEAN SCORES OF STRATEGIES USED ON THE SOCIAL DISCRIMINATION MATRICES FOR THREE TARGET GROUP COMPARISONS WITH A STANDARD IN STUDY 3A.

MATRIX STRATEGY	COMPARISON			
	STANDARD	1	2	3
	POSITIVE SOCIAL COMPETENCE			
	POSITIVE ATHLETIC		NEGATIVE ATHLETIC	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
TYPE 1				
<u>Ingroup Favouritism versus Maximum Joint Profit</u>		2.88 (1.42)	1.31 (1.31)	5.22 (1.42)
Maximum Joint Profit versus Ingroup Favouritism		0.05ns (2.27)	0.31ns (3.21)	0.17ns (2.16)
TYPE 2				
<u>Maximum Difference versus Maximum Ingroup Profit and Maximum Joint Profit</u>		2.14 (1.30)	1.36 (1.42)	3.12 (1.19)
Maximum Ingroup Profit and Maximum Joint Profit versus Maximum Difference		1.07 (1.17)	1.18 (2.01)	1.73 (1.43)
TYPE 3				
<u>Ingroup Favouritism versus Fairness</u>		2.25 (1.14)	1.26 (2.13)	5.23 (2.10)
Fairness versus Ingroup Favouritism		1.91 (1.21)	2.56 (1.40)	0.16ns (2.31)

TABLE 11 CONT'D. MEAN SCORES OF STRATEGIES USED ON THE SOCIAL DISCRIMINATION MATRICES FOR THREE TARGET GROUP COMPARISONS WITH A STANDARD IN STUDY 3A.

MATRIX STRATEGY	COMPARISON			
	STANDARD	1	2	3
	NEGATIVE SOCIAL COMPETENCE			
	POSITIVE ATHLETIC		NEGATIVE ATHLETIC	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
TYPE 1				
<u>Ingroup Favouritism versus Maximum Joint Profit</u>		2.74 (1.36)	1.73 (1.03)	4.59 (2.56)
Maximum Joint Profit versus Ingroup Favouritism		0.28ns (1.15)	0.23ns (1.90)	0.06ns (1.72)
TYPE 2				
<u>Maximum Difference versus Maximum Ingroup Profit and Maximum Joint Profit</u>		1.70 (1.42)	1.61 (1.00)	2.81 (1.03)
Maximum Ingroup Profit and Maximum Joint Profit versus Maximum Difference		1.73 (1.27)	1.32 (1.13)	1.81 (1.30)
TYPE 3				
<u>Ingroup Favouritism versus Fairness</u>		1.09ns (2.67)	0.71 (2.11)	4.62 (1.83)
Fairness versus Ingroup Favouritism		2.60 (1.31)	2.71 (1.47)	0.81 (1.01)

significantly from zero. Results indicated that only the strategy maximum joint profit versus favouritism did not differ significantly from zero in the N/LD1 and N/LD2 comparisons, whereas this and the strategy fairness versus favouritism also did not differ significantly from zero in the N/LD3 comparison for both the socially positive and the socially negative conditions.

Between condition analyses were conducted on the three target condition comparisons.

A multivariate repeated measures analysis by variance (gender (2) by grade (2) by social (2) by target condition (N/LD1, N/LD2, N/LD3) was conducted on the six dependent measures (6 "pull" scores). A significant target condition effect was obtained using the Hotelling  $T^2$  criteria of  $F(6,99)=12.3$ ,  $p<.0001$ . A trend for a main effect of social information ( $p=.02$ ) and for a gender by target condition interaction ( $p=.03$ ) existed in this data. No other significant main effects or interactions were obtained.

Follow up univariate analyses using a Bonferroni type procedure to protect for Type I error rate indicated that significant effects of target condition existed for four of the six matrix strategies, the three discrimination strategies (FAV vs MJP, MD vs MIP and MJP, and FAV vs P) and for the strategy assessing the strength of fairness responses versus ingroup favouritism, minimum  $F(2,194)=9.7$ ,  $p<.0001$ .

Appropriate post hoc analyses, Newman-Keuls Tests indicated that children in the N/LD2 comparison used the three discrimination strategies significantly less strongly than in the N/LD3 and significantly more strongly than in the N/LD1 comparison. Further, the reverse was true for the strategy assessing the "pull" of fairness on ingroup favouritism ( $p$  in all cases,  $<.001$ ) for both socially positive and socially negative conditions.

### 7.3 Experiment 3b

In this experiment, the athletic information was held constant as a between subjects variable. One half of the participants read vignettes with all positive athletic information, the other half read vignettes with all athletic information negative. Other than this difference, the design was identical to 3a. Consequently, the hypotheses were the same.

#### 7.3.1 Method:

A total of 57 grade six children and 59 grade 8 children enrolled in mainstream elementary classrooms participated in this study. Experiment 3b(i, with athletic information held positive) consisted of 28 grade 6 (12 boys, 16 girls; CA 11.8 to 12.6 years,  $M = 11.9$  years) and 29 grade 8 (16 boys, 13 girls, CA 13.8 to 14.4 years,  $M = 13.9$  years). Experiment 3b(ii, with athletic information held negative) consisted of 29 grade 6 children (16 boys, 13 girls; CA 11.6

to 12.6 years,  $M = 11.8$  years ) and 30 grade 8 children (11 boys, 19 girls, CA 13.7 to 14.3 years,  $M = 13.9$  years).

The materials and procedure were the same as 3a except that the vignettes had the athletic component held constant and positive for 3b(i) and negative for 3b(ii) as indicated in Table 9.

### 7.3.2 Results:

#### 7.3.2.1 Sociometric questionnaire

Mean total sociometric ratings for Normal, LD1, LD2, and LD3 vignette characters are reported in Table 12. A gender (2) by grade (2) by athletic information (2) by target condition (2-academic by 2-social) repeated measures analysis of variance was conducted on the total sociometric ratings. Results indicated a significant effect for athletic information,  $F(1,111) = 9.44$ ,  $p < .001$ . A significant main effect of academic information,  $F(1,111) = 170.59$ ,  $p < .0001$  and for social information,  $F(1,111) = 214.8$ ,  $p < .0001$  as well as a significant interaction of athletic by social information,  $F(1,111) = 18.25$ ,  $p < .0001$  were obtained. There were no significant effects of grade or gender obtained.

Follow up analyses of variance indicated that the mean total sociometric ratings for each of the LD1, LD2 and LD3 conditions were significantly less than the standard

**TABLE 12. MEAN SOCIOMETRIC RATINGS OF TARGET GROUPS  
VARYING IN ACADEMIC, SOCIAL AND ATHLETIC  
COMPETENCE IN STUDY 3B.**

	POSITIVE ATHLETIC COMPETENCE			
	POSITIVE SOCIAL		NEGATIVE SOCIAL	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
Overall Sociometric	34.91 (5.31)	26.01 (4.97)	28.93 (5.17)	20.29 (5.02)
	NEGATIVE ATHLETIC COMPETENCE			
	POSITIVE SOCIAL		NEGATIVE SOCIAL	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
Overall Sociometric	32.22 (5.14)	24.15 (5.03)	26.10 (5.21)	20.43 (5.11)

condition minimum for the significant analyses  $F(1,111) = 8.72$ ,  $p < .001$ , for both positive athletic and negative athletic information.

The relative importance of each of these variables, academic, athletic and social information was assessed using the eta square statistic (Cohen & Cohen, 1983). The proportion of variance accounted for by each of the two within subjects dependent variables was as follows. Academic competence information accounted for 33.6 percent of the variance and social competence information accounted for 30.2 percent of the variance. With respect to the between subjects variance, the athletic competence information accounted for 8.0 percent of the variance.

#### 7.3.2.2 Social Discrimination Matrix Analyses

"Pull" scores were calculated for each of the six strategies for the three sets of comparisons and the results are summarized in Table 13. Within treatment condition analyses were conducted to see if each strategy differed significantly from zero. Results indicated that only one strategy did not significantly differ from zero across all three comparisons (N/LD1, N/LD2, and N/LD3). This strategy was maximum joint profit versus favouritism. This result was observed in both the athletically positive and the athletically negative conditions.

TABLE 13. MEAN SCORES OF STRATEGIES USED ON THE SOCIAL DISCRIMINATION MATRICES FOR THREE TARGET GROUP COMPARISONS WITH A STANDARD IN STUDY 3B.

MATRIX STRATEGY	COMPARISON			
	STANDARD	1	2	3
	POSITIVE ATHLETIC COMPETENCE			
	POSITIVE SOCIAL		NEGATIVE SOCIAL	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
TYPE 1				
<u>Ingroup Favouritism versus Maximum Joint Profit</u>		2.93 (1.32)	1.29 (1.07)	4.76 (2.14)
Maximum Joint Profit versus Ingroup Favouritism		0.27ns (1.73)	0.20ns (2.01)	0.13ns (1.82)
TYPE 2				
<u>Maximum Difference versus Maximum Ingroup Profit and Maximum Joint Profit</u>		2.36 (1.17)	1.21 (1.06)	3.47 (2.01)
Maximum Ingroup Profit and Maximum Joint Profit versus Maximum Difference		0.98 (1.01)	1.25 (1.17)	1.03 (1.06)
TYPE 3				
<u>Ingroup Favouritism versus Fairness</u>		2.67 (2.21)	1.36 (1.72)	4.31 (2.31)
Fairness versus Ingroup Favouritism		2.74 (2.40)	3.22 (2.19)	1.11 (1.67)



TABLE 13 CONT'D. MEAN SCORES OF STRATEGIES USED ON THE SOCIAL DISCRIMINATION MATRICES FOR THREE TARGET GROUP COMPARISONS WITH A STANDARD IN STUDY 3B.

MATRIX STRATEGY	COMPARISON			
	STANDARD	1	2	3
	NEGATIVE ATHLETIC COMPETENCE			
	POSITIVE SOCIAL		NEGATIVE SOCIAL	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
TYPE 1				
<u>Ingroup Favouritism versus Maximum Joint Profit</u>		3.11 (2.32)	2.78 (2.12)	4.24 (2.17)
Maximum Joint Profit versus Ingroup Favouritism		0.34ns (1.82)	0.38ns (2.21)	0.02ns (1.30)
TYPE 2				
<u>Maximum Difference versus Maximum Ingroup Profit and Maximum Joint Profit</u>		2.64 (1.17)	2.03 (1.80)	3.25 (2.01)
Maximum Ingroup Profit and Maximum Joint Profit versus Maximum Difference		1.61 (1.22)	1.39 (1.51)	1.65 (1.17)
TYPE 3				
<u>Ingroup Favouritism versus Fairness</u>		3.34 (2.11)	2.59 (1.91)	4.51 (2.10)
Fairness versus Ingroup Favouritism		2.26 (1.73)	2.73 (1.18)	1.13 (1.70)

Between condition analyses were conducted on the three target condition comparisons. A multivariate repeated measures analysis of variance (gender (2) by grade (2) by target condition (N/LD1, N/LD2, N/LD3) was conducted on the six dependent measures (6 "pull" scores). A significant target condition effect was obtained using the Hotelling  $T^2$  criteria of  $F(6,108) = 7.31, p < .0001$ . No other significant main effects or interactions were obtained.

Follow up univariate analyses using a Bonferroni type procedure to protect for Type I error rate indicated that significant effects of target condition again existed for four of the six matrix strategies, the three discrimination strategies (FAV vs MJP, MD vs MIP and MJP and FAV vs P) and for the strategy assessing the strength of fairness responses pitted against ingroup favouritism, minimum  $F(2,112) = 12.63, p < .0001$ .

Appropriate post hoc analyses, Newman-Keuls range Tests indicated that children in the N/LD2 comparison used the three discrimination strategies significantly more strongly than in the N/LD1 and significantly less strongly than in the N/LD3 comparison for both athletically positive and athletically negative conditions. Further, the reverse was observed for the strength of the fairness strategy when pitted against ingroup favouritism ( $p$  in all cases,  $< .001$ ).

#### 7.4 Discussion:

Clearly, the significance of the positive/negative distinction of each of the three factors, academic, athletic and social competence indicated that all factors are important in the perception of peer acceptability.

In this respect, evidence supported hypothesis 3.1 indicating that significant differences existed between the standard or "normal" vignette condition and the most severe vignette, the "LD3" condition in both experiments. This is consistent with results obtained in study 1 and 2 as well as with many learning disabled investigations reported in the literature (eg. Bryan, 1974 a,b, 1976; Dudley-Marling & Edmiaston, 1985).

In addition, support was provided for hypothesis 3.2 as significant differences were observed between the standard or "normal" vignette conditions and the academically negative vignette conditions. This is consistent with some reports that academic competence is an important component of social status among educable mentally retarded children (Siperstein & Gottlieb, 1976). From a practical point of view, the stress placed on academic achievement by schools and society would indicate that this observation is expected to some degree.

Further, support was obtained for hypothesis 3.3 as negative social competence vignettes were perceived significantly less favourably than the standard or "normal"

vignettes. This is also consistent with reports concerning the importance of social competence on perceived social status (Dodge, 1985; Renshaw & Asher, 1984).

Finally, the significant difference between the standard and the negative athletic and social vignette combinations obtained in this study provide support for hypothesis 3.4. The relatively small influence of athletic information was somewhat less than anticipated, particularly in light of the numerous reports of lower acceptance of physically handicapped children whose only deficit of the three studied is often athletic (Gottlieb et al, 1977; Harper et al, 1985; Rosenbaum et al, 1986). However, negative athletic information alone was sufficient to elicit significantly less favourable ratings than the standard vignettes. The findings of study 2, which omitted social information, are consistent with this pattern as physically handicapped characters were less well accepted than normal characters when described only in terms of athletic competence difficulties. One possible influence which may have affected the magnitude of the athletic effect may be the emphasis on academic achievement in the higher elementary grades. The weight of athletic competence may be greater at younger grade levels, where there may be somewhat less emphasis on academic achievement and more on other areas such as athletics. Similar research with younger participants

could shed some light on this finding.

The answer to the focal question of the relative importance of each factor or combination of factors is more elusive. With respect to the sociometric questionnaire, a stepwise decrease in ratings occurred with each of the conditions, N, LD1, LD2 and LD3 when social information was held constant (in both positive and negative trials). Subsequent analyses of the three factors in this first experiment indicated three significant main effects, but no significant interactions between these factors, when social information was a between-subjects variable. This indicates that for the most part, the greater the number of negative features present in a vignette, the lower the peer ratings of the vignette. This is consistent with many reports in the literature that severe mental and physical handicapped persons are least well accepted on ratings of disabled persons (Harper et al, 1986; Richardson et al, 1961). One exception to this rule is the lower rating for only negative academic information as opposed to only negative athletic information. As no significant interaction existed, this finding suggests that the academic information comprised a more salient factor than the athletic information alone in influencing peer acceptability ratings. A similar pattern was observed in study 3b, suggesting that academic information is again slightly more salient than social information alone in eliciting negative peer ratings. In as

far as learning disabled children are defined on the basis of academic difficulties, this finding is consistent with these children's most essential characteristics (see Siegel & Heaven, 1986). In experiment 3b, a significant interaction between social and athletic information was obtained indicating that these may be closely associated and the value of one of these factors may strongly influence the impact of the other. For example, in the negative scenario, a negative social factor may be perceived more seriously than when the athletic scenario is positive. It was reported by Siperstein et al (1978) that athletic competence could improve ratings of learning disabled peers.

Calculations of the proportion of variance explained helped to identify which factors were most significant. According to these results, academic information was the most important, social information was a close second and athletic information was third and far below the others in this context in influencing peer acceptability ratings.

The results of the matrix strategies utilized in the study generally mirrored the pattern obtained with the sociometric measures. As with the sociometric ratings, generally significantly greater use of all of the discrimination strategies occurred and alternatively less use of the fairness strategy was observed with increasing numbers of negative characteristics. Again, negative academic

information alone appeared to have had a more detrimental effect than either social or athletic information alone. These findings generally suggest that as a character presents with more negative characteristics, the more likely he is to be discriminated against.

It is necessary to acknowledge the importance of context effects to the salience of these three factors and their subsequent effects on peer ratings. In various environments or contexts, certain combinations of these factors may well vary in their degree of importance to peer acceptance.

The differences between these two experiments in this study can be largely attributed to the effect of holding athletic versus social information constant in the vignettes as well as to individual variability of students and the different schools which participated in the study.

From an intergroup perspective, Social Identity Theory can account for the main findings obtained in this study. In terms of this theoretical framework, an individual actively engages in comparisons on salient dimensions with various outgroups in order to maintain a positive social identity (Tajfel 1978; Tajfel & Turner, 1979). It follows from this premise that the greater the number of salient variables that compare favourably for the respondent's group, the greater the magnitude of the perceived differences between these two groups (Tajfel, 1982a, b). This would be

reflected in the degree to which discrimination strategies were utilized to maintain this perceived differential. Similarly, perceived differences based on favourable comparisons between the respondent's group and the particular outgroup of interest on some dimensions may be valued more highly. For example, a favourable comparison on a highly valued dimension could have more "weight" with respect to perceived group differences and the subsequent strategies employed to maintain these differences than a similarly favourable comparison on a dimension which is not valued as highly. In the case of the present study, academic competence apparently represents a more salient or highly valued dimension of comparison than did either social or athletic competence, however, social competence followed as a close second. This is an interesting finding as the removal of all social competence information in study 2 did not significantly alter the pattern of results obtained when this information was included as either positive or negative.

The value ranking of the three characteristics obtained in this study suggests that academic competence is a highly significant factor in determining peer sociometric status. Indeed, in an achievement oriented society, this finding is far from surprising.

In summary, the significance of the sociometric data and matrix strategies are interpreted as supporting



hypothothesis 3.1 and 3.2. Further, the results indicate that all factors, academic, athletic and social are very important in accounting for the children's attitude responses. Surprisingly, few interaction effects were evident. It would appear that while each factor is sufficient on its own to elicit negative attitudes, combining these factors systematically increases the magnitude of this negative response.

One question which arises from this study is whether or not a grade effect may actually exist although it might not be always apparent within the narrow range between grades six and eight. If a grade effect does exist, it may reflect a particular factor as being relatively more important over a certain age range than another. From this perspective, further investigation of this question given the trends toward a grade interaction in the first experiment is warranted.

## CHAPTER 8

### STUDY 4: REPLICATION AND EXAMINATION OF DEVELOPMENTAL TRENDS

#### 8.1 Introduction

There was some evidence provided in Study 1, although it did not reach significance, that developmental differences in responding may exist when rating exceptional characters depicted on the basis of academic, athletic and social competence information. This has raised the possibility of the existence of developmental differences although they may not be easily recognized when only a small age range is examined. As some studies have reported a peak in negative responding around the grade 4 level (eg. Miller, 1984), a study was designed to incorporate this age group. Further, study 3 demonstrated the relative salience of academic, social and athletic competence information on peer acceptability ratings among grade 6 and 8 students. A further objective of this study was to examine whether or not the relative salience of these characteristics were similar for this particular age group.

##### 8.1.1 Specific Rationale and Predictions

The primary objective of this study was to examine further the effect of developmental age on vignette

responses. Some grade differences have been reported in the literature (Miller, 1984), and some trends in grade differences have been observed in the present research. Miller (1984) reported a peak in negative responding among grade 4 students in a study of early primary grades. Theories of racial attitudes generally argue that attitudes are negative early in life and then become more moderate (Allport, 1954). Similarly, evidence from research in the development of ethnic attitudes has indicated a peak in negative attitude responses around eight to ten years of age and then a decline in negative attitudes (Allport, 1954; Katz, 1976; Kalin, 1984). Including a younger grade level which encompasses the typical age reported to exhibit a peak in negative attitudes, such as grade 4 in the current research would allow for further examination of possible developmental differences between children aged nine through thirteen. In addition, inclusion of this age group would provide some opportunity to observe any differences which may exist in the perceived importance of the three factors of interest. As discussed in the context of study 3, it is possible that the athletic competence information may be relatively more salient at a younger grade level.

The vignettes utilized in this study described "average" and "learning disabled" boys and were identical to those used in study 3, experiment 3a. Due to the length of the materials and the possible conceptual difficulty children

of this age group might have with the particular matrices employed, the matrices were omitted from this study for this younger age group. In addition, the self concept measures were included to allow for further investigation of the possible effects of self esteem levels on ratings of sociometric status.

Based on the findings of the previous study and the above rationale, it was predicted that significant differences would exist between perceptions of "normal" (standard) and the most severe "learning disabled" vignettes on sociometric measures (hypothesis 4.1). It was also predicted that there would be significant differences between "normal" (standard) and academically impaired learning disabled vignettes as evidenced by sociometric measures (hypothesis 4.2). On the basis of study 3 it was further predicted that athletically impaired and socially impaired vignettes would also be perceived significantly differently from "normal" (standard) vignettes (hypothesis 4.3, 4.4). However, it was unclear whether any interaction of combinations of these characteristics would be evident at this grade level.

## 8.2 Method

### 8.2.1 Subjects

A total of 60 grade 4 children (28 boys, 32 girls; CA 9.0 to 10.8 years, M = 10.0 years) enrolled in mainstream

elementary classrooms participated in this study. The children were selected from suburban schools in the local Separate School Board.

### 8.2.2 Materials

The experimental materials were presented in booklet form as described in study 3, experiment 3a, with the following exceptions:

1) Vignettes: The vignettes used in this study were identical to those used in study 3, experiment 3a except the age of the characters was adjusted to the mean grade 4 age. There were two sets of vignettes, one held social information constant and positive, the other held social information constant and negative.

Each child read 4 stories, a "normal", LD1, LD2 and LD3 as they are described in study 3, experiment 3a.

2) Sociometric questionnaire: The Sociometric questionnaire was the same as described in study 1, and followed each story presentation.

3) The Self Concept Questionnaire described in Study 1 was included.

The procedure was identical to that employed in previous studies.

### 8.3 Results

Independent measures were sex of respondent and

condition of the vignette. Dependent measures included the sociometric questionnaire and the self concept questionnaire.

Sociometric questionnaire:

Mean total sociometric ratings for Normal, LD1, LD2 and LD3 vignettes are reported separately for those with positive social information and those with negative social information and summarized in Table 14.

A gender (2) by social (2) by target condition (2-academic x 2-athletic) repeated measures analysis of variance was conducted on the total sociometric ratings. Results indicated a significant main effect of social information,  $F(1,55) = 7.21$ ,  $p < .01$ , a significant main effect of academic information,  $F(1,55) = 175.08$ ,  $p < .0001$  and a significant main effect of athletic information,  $F(1,55) = 44.12$ ,  $p < .0001$ . There were no significant interactions.

Follow up analyses of variance indicated that the mean total sociometric ratings for the LD1, LD2 and LD3 conditions were significantly less than the standard condition for socially positive information. In the negative social condition the mean totals for normal and LD1 were not significantly different, however, the LD2 and LD3 conditions were significantly less than the standard vignette (minimum  $F(1,58) = 12.23$ ,  $p < .001$ ).

The relative importance of each of the three factors, academic, athletic and social were assessed using the eta square statistic (Cohen & Cohen, 1983). The proportion of

**TABLE 14. MEAN SOCIOMETRIC RATINGS OF TARGET GROUPS  
VARYING IN ACADEMIC, SOCIAL AND ATHLETIC  
COMPETENCE IN STUDY 4.**

	POSITIVE SOCIAL COMPETENCE			
	POSITIVE ATHLETIC		NEGATIVE ATHLETIC	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
Overall Sociometric	34.17 (5.23)	25.17 (5.31)	30.13 (5.07)	21.23 (5.11)
	NEGATIVE SOCIAL COMPETENCE			
	POSITIVE ATHLETIC		NEGATIVE ATHLETIC	
	Positive Academic	Negative Academic	Positive Academic	Negative Academic
Overall Sociometric	31.34 (5.01)	20.79 (5.31)	29.17 (5.11)	18.14 (5.17)

variance accounted for by the within-subject variables were as follows. Academic competence information accounted for 63.2 percent of the variance whereas athletic competence information accounted for 7.1 percent of the variance. With respect to between subjects variance, social competence information only accounted for 2.2 percent of the variance.

#### Self Concept Questionnaire

The results of the self concept questionnaire are presented in Table 15. The findings indicated that mean values for boys and girls on the Intellectual and School Status and the Popularity Subscales of the Piers-Harris Self Concept Questionnaire were well within normal limits based on the standardized normative data. A subsequent analysis of relative high and low self concept groups (those above and below the mean respectively) did not yield any significant differences in responding to the sociometric questionnaire for any treatment condition.

#### 8.4 Discussion

Grade 4 children rated each of the learning conditions significantly less favourably than the standard or "normal" vignette when social information was held positive. Similarly, when social information was held negative, only the learning disabled condition which depicted negative athletic and negative social information was not significantly differentiated from the standard. The



TABLE 15. SELF CONCEPT RATINGS FOR RESPONDENTS IN STUDY 4.

	SELF CONCEPT SUBSCALE			
	Intellectual and School Status		Popularity	
Grade 4	Raw Score	Percentile *	Raw Score	Percentile *
Boys	13.87	70	8.92	52
Girls	13.34	60	9.12	52

\* Percentile ranks from the Piers-Harris Self Concept Scale Manual (Piers, 1984)

significance of the sociometric data is taken as support for hypothesis 4.1, 4.2, 4.3 and 4.4. However, only partial support for hypothesis 4.3 is available. It has been demonstrated that the findings in study 3 are reliable and can be replicated. The results obtained when the social factor was held constant and positive were identical to those obtained in study 3, experiment 3a. However, when the social factor was held constant as negative, the comparison between vignettes with negative social and negative social and athletic information was not significant suggesting that these were perceived as equivalent. All other findings replicated those found in study 3, and experiment 3b. This study indicated that the grade four children responded in a similar fashion as the grade 6 and 8 students.

These findings again suggest that even among grade 4 students, academic competence is relatively the most important factor in determining sociometric status followed by social competence and athletic competence, however, the relative importance of these two factors is less clear for this age group. What is evident from this study is that social competence information was comparatively less important to the grade 4 respondents than was reported in study 3 with grade 6 and grade 8 participants.

As with study 1, there were no significant differences in responding based on relative high and low self concept groups. As discussed in the context of study 1, it

may be due to a lack of significant differences among participants or a lack of sensitivity in the measures. Finally, no support could be provided for the reported "peak" in negative responding at the grade 4 level asserted in a study using hypothetical peer ratings (Miller, 1984) and identified by researchers in developmental ethnic attitudes which report a peak in negative attitudes around 8-10 years of age (Kalin, 1984; Katz, 1976). It is not clear why no support was evident. It may be due to the demand characteristics of the particular task to the relatively small sample size used. Perhaps differences would have been more apparent on the social discrimination matrices if they were employed in this investigation. However, the known relationship between the two dependent measures suggests that they measure similar constructs. Therefore, it is unlikely that including this measure in the current study would have provided evidence for this assertion.

Across the ages examined in this research, academic achievement is a highly important factor in perceptions of peer acceptability.

## CHAPTER 9

### STUDY 5: LEARNING DISABLED CHILDREN'S PERCEPTIONS OF PEER ACCEPTABILITY.

#### 9.1 Introduction

In the previous four studies, it was demonstrated that children readily distinguish between normal and learning disabled characters based on three units of information concerning academic, athletic and social competence. Further, the learning disabled characters were perceived significantly less favourably than normal characters and this was a reliable finding even when compared with another exceptional character. In addition, closer examination of the relative salience of these three factors indicated that while all three were important, academic competence information was the most salient feature in determining these peer acceptability ratings, followed closely by information concerning social competence and finally, athletic competence.

A number of studies which have examined peer acceptability issues with actual learning disabled children have reported a variety of behavioural features which can differentiate these children from their normal peers (Pearl, Donahue and Bryan, 1986). Of particular interest are the

differences proposed in social perception (Bryan, 1978; Bryan, Werner & Pearl, 1982; Cartledge et al, 1986; Weiss, 1984), as this could conceivably affect learning disabled children's perceptions of social situations. It was of interest to determine if learning disabled children were sensitive to the three forms of competence information manipulated in the vignettes and to see whether they would respond in a similar pattern to characters depicted as normal, learning disabled, and handicapped as did their normal peers.

From an intergroup perspective, and specifically from the theory of Social Identity, it was particularly interesting to assess whether or not learning disabled children, actual outgroup members based on the previous studies, would respond in such a way as to favour their ingroup and discriminate against the "normal" outgroup. In addition, it was of interest to see whether or not learning disabled children would make use of the same strategies available to them in the matrices as did their normal peers.

Social Identity Theory allows some predictions to be made when anticipating the response of a lower status outgroup such as the learning disabled. For example, studies have shown that low status groups (learning disabled, in this case) often respond in such a manner as to show outgroup (normal) favouritism (Sachdev & Bourhis, 1987; Tajfel, 1978; Wetherell, 1982).

### 9.1.1 Specific Rationale and Predictions

This study was designed to replicate study 1 with a sample of learning disabled children. There were several reasons for conducting this study. First, much of the present research has focused on an intergroup perspective of children's responses and therefore it is important to consider this "outgroup's" response to the vignette material. Secondly, it would provide information regarding whether or not learning disabled children were as sensitive to these characteristics as were their normal peers, and if so, whether they would react with the same attitudes as their normal peers. In addition, the learning disabled data provides the opportunity to further evaluate the appropriateness of Social Identity Theory in predicting and interpreting results of a significant other group of children, the outgroup of interest in this research.

It was predicted that the learning disabled group would perceive significant differences between the normal and learning disabled descriptions (hypothesis 5.1) and between the normal and handicapped vignettes (hypothesis 5.2). From a Social Identity Theory perspective, the effect of social categorization would predict that both normal and learning disabled respondents would demonstrate ingroup favouritism. However, studies examining status differentials of respondents within this framework have shown that on pertinent comparison dimensions, lower status groups show

outgroup favouritism. In addition, high status groups in this situation discriminate against the low status groups to maintain their distinctiveness or positive social identity (Sachdev & Bourhis, 1987). Therefore it was predicted that learning disabled children would respond in the same manner as the normal children (Sachdev & Bourhis, 1987; Tajfel, 1978). To clarify, it was predicted that the learning disabled children would rate the normal characters the most favourably on the sociometric ratings, and on the social discrimination ratings (hypothesis 5.3). In addition, it was predicted that the learning disabled children would rate the handicapped characters more favourably on the sociometric and matrix ratings than the learning disabled characters. (hypothesis 5.4).

Further, on the basis of the Social Identity Theory premise, that members of low status groups often act in such a way as to compare favourably with the outgroup, and may engage in specific strategies, such as trying to change group membership to improve their comparative outcome (Tajfel, 1978; Tajfel & Turner, 1979), it was postulated that some subgroup of learning disabled children would exist that would identify themselves as being "normal" group members. This specifically would be evidenced in ratings of being "most like the normal character" as well as "including the normal character among their group of friends" on the comparison ratings (hypothesis 5.5).

## 9.2 Method

### 9.2.1 Subjects

A sample of 31 elementary school children (18 boys, 13 girls, CA 10.2 to 14.1 years,  $M = 118$  years) who had been identified by the school board as learning disabled participated in this study. To be identified as learning disabled these children were administered a battery of standardized tests and had to evidence an educationally significant discrepancy between ability and academic achievement that was not due to mental retardation, emotional disturbance, sensory impairment or environmental, cultural or economic disadvantage. These children were enrolled in mainstream classrooms in a number of schools although they were withdrawn for specialized resource programs for part of the day.

The materials and procedures employed in this experiment were identical to those used in Study 1 (the age of the vignette characters was adjusted accordingly) (refer to Chapter 4 for details).

## 9.3 Results

### 9.3.1 Sociometric Questionnaire

Mean total sociometric ratings for normal, learning disabled and physically handicapped vignettes are reported in Table 16. A gender (2) by target condition (3) repeated measures analysis of variance was conducted on the total



**TABLE 16. MEAN SOCIOMETRIC RATINGS OF  
NORMAL, LEARNING DISABLED AND  
HANDICAPPED TARGET GROUPS IN STUDY 5.**

	NORMAL	LEARNING DISABLED	HANDICAPPED
All Subjects (n = 31)  Overall Sociometric	33.16 (5.31)	21.26 (5.12)	27.55 (5.07)
	NORMAL	LEARNING DISABLED	HANDICAPPED
Normal Group Affiliates (n = 20)  Overall Sociometric	32.10 (5.13)	20.35 (5.17)	27.74 (5.08)
Learning Disabled Group Affiliates (n = 11)  Overall Sociometric	33.67 (5.24)	22.44 (5.20)	27.44 (5.11)

sociometric scores. A significant main effect of target condition was obtained,  $F(2,28) = 45.25, p < .0001$ . There was no significant effect of gender on these ratings. Follow up analyses of variance indicated that the mean total sociometric rating for the normal vignette was significantly higher than the mean rating for the handicapped vignette which was significantly higher than for the learning disabled vignette, minimum  $F(1,29) = 15.73, p < .001$ .

As only 11 of the 31 participants in this study identified themselves as being most like the learning disabled character in the comparison rating, these groups were reanalyzed separately. While there was a tendency for the learning disabled children who identified with the learning disabled character to rate the LD character a little more favourably, there was no significant difference in ratings. In addition, this subgroup of children also rated the normal and handicapped characters slightly more favourably.

### 9.3.2 Social Discrimination Matrix Analyses

"Pull" scores were calculated for each of the six matrix strategies and the means of these scores are presented in Table 17. In addition this table provides the results of within condition t-test analyses to assess whether each strategy differed significantly from zero.

TABLE 17. MEAN SCORES OF STRATEGIES USED ON THE SOCIAL DISCRIMINATION MATRICES FOR TWO TARGET GROUP COMPARISONS IN STUDY 5 BY GROUP AFFILIATION

NORMAL GROUP AFFILIATION

MATRIX STRATEGY	COMPARISON	
	Normal/ Learning Disabled	Normal/ Handicapped
TYPE 1		
<u>Ingroup Favouritism versus Maximum Joint Profit</u>	3.19 (1.21)	0.58 ns (1.34)
Maximum Joint Profit versus Ingroup Favouritism	0.29 ns (1.32)	-0.06 ns (1.17)
TYPE 2		
<u>Maximum Difference versus Maximum Ingroup Profit and Maximum Joint Profit</u>	2.32 (1.16)	-0.13 ns (1.67)
Maximum Ingroup Profit and Maximum Joint Profit versus Maximum Difference	1.16 (1.02)	1.16 (1.05)
TYPE 3		
<u>Ingroup Favouritism versus Fairness</u>	2.30 (1.12)	-0.23 ns (1.40)
Fairness versus Ingroup Favouritism	2.23 (1.10)	3.64 (1.32)

TABLE 17 CONT'D. MEAN SCORES OF STRATEGIES USED ON THE SOCIAL DISCRIMINATION MATRICES FOR TWO TARGET GROUP COMPARISONS IN STUDY 5 BY GROUP AFFILIATION

LEARNING DISABLED GROUP AFFILIATION

MATRIX STRATEGY	COMPARISON	
	Normal/ Learning Disabled	Normal/ Handicapped
TYPE 1		
<u>Ingroup Favouritism versus Maximum Joint Profit</u>	-2.55 (1.17)	-0.89 ns (1.34)
Maximum Joint Profit versus Ingroup Favouritism	0.33 ns (1.23)	0.00 ns (1.01)
TYPE 2		
<u>Maximum Difference versus Maximum Ingroup Profit and Maximum Joint Profit</u>	-1.00 (1.02)	0.22 ns (1.30)
Maximum Ingroup Profit and Maximum Joint Profit versus Maximum Difference	2.33 (1.17)	2.25 (1.13)
TYPE 3		
<u>Ingroup Favouritism versus Fairness</u>	-1.62 (1.12)	-0.67 ns (1.62)
Fairness versus Ingroup Favouritism	1.37 (1.35)	2.89 (2.10)

The subgroup of learning disabled children who identified with the learning disabled characters on the comparison ratings were analyzed separately from the group of children who identified themselves as normal group members. The results of ratings of children who identified themselves as members of the normal group are presented first. Within condition t-tests performed on these strategy means indicated that all but the strategy assessing the strength of maximum joint profit pitted against ingroup favouritism significantly differed from zero. With respect to the normal/handicapped comparison, this group of children only utilized one strategy significantly, the pull of fairness versus ingroup favouritism. For the children who identified themselves as members of the learning disabled group, three of the strategies were used significantly. The pull of ingroup favouritism on maximum joint profit, the pull of fairness on ingroup favouritism and the pull of maximum difference versus maximum ingroup profit and maximum joint profit were used significantly. With respect to the normal/handicapped comparison, this group of children only utilized two strategies significantly, the pull of fairness versus ingroup favouritism and maximum ingroup profit and maximum joint profit versus maximum difference.

Between treatment condition analyses consisted of the following. A multivariate repeated measures analysis of variance (gender (2) by target gender (2) by target condition

(N/LD, N/H)) was conducted on the six dependent measures (6 "pull" scores).

For the group of children identifying with the normal characters, there was a significant main effect for target condition,  $F(5,15) = 20.50$ ,  $p < .0001$  but no significant effects of gender or target gender. Follow up univariate analyses indicated the normal affiliate children utilized the three discrimination strategies significantly more in the normal/learning disabled comparison than in the normal/handicapped comparison. In addition, the fairness strategy was utilized more strongly in the normal/handicapped condition, minimum  $F(1,19) = 11.32$ ,  $p < .01$ .

Similar analyses were conducted on the learning disabled identification group in spite of the small sample size. While there were too few subjects to run an appropriate MANOVA, the learning disabled affiliate group demonstrated a use of strategies in favour of the outgroup or normal children as evidenced by the negative pull scores on the three discrimination strategies. Univariate analyses of variance indicated that two of the discrimination strategies, ingroup favouritism versus maximum joint profit and ingroup favouritism versus fairness, were used significantly more strongly in the normal/learning disabled condition than in the normal/handicapped condition. In addition the fairness strategy was used significantly more in the normal/handicapped condition, minimum  $F(1,9) = 11.60$ ,  $p < .01$ .

### 9.3.3 Self Concept Questionnaire

The means for the Intellectual and School Status and the Popularity subscales of the Piers-Harris Self Concept Scale were calculated separately for the children who identified themselves as "normal" group members and those members of the learning disabled group. These means are reported in Table 18, however, they were within normal limits and did not differ significantly from each other.

### 9.4 Discussion

The results of this study essentially replicated the findings of study 1 with normal respondents. Learning disabled children were sensitive to the differences between the vignettes and they rated learning disabled characters less favourably than normal characters on the basis of sociometric and matrix ratings. This provides support for hypothesis 5.1. In addition, learning disabled characters were rated less favourably than handicapped characters supporting hypothesis 5.4. These findings also support hypothesis 5.3 which predicts that normal characters would receive the highest ratings on both the sociometric and matrix measures.

It is interesting that less than half of the learning disabled participants actually identified themselves as members of the learning disabled group. In addition, of the 11 who did acknowledge this group membership, 5 stated that they would rather include the normal character as a member of

TABLE 18. SELF CONCEPT RATINGS FOR RESPONDENTS IN STUDY 5.

	SELF CONCEPT SUBSCALE			
	Intellectual and School Status		Popularity	
	Raw Score	Percentile *	Raw Score	Percentile *
Overall n= 31				
(18) Boys	13.23	60	8.65	35-52
(13) Girls	13.10	60	8.79	35-52
Learning Disabled Group Affiliates n = 11				
(8) Boys	12.88	60	8.23	35-52
(4) Girls	13.03	60	8.11	35-52

\* Percentile ranks from the Piers-Harris Self Concept Scale Manual (Piers, 1984)



their group of friends. Further, in comparing the responses of the "normal" affiliates and the "learning disabled" affiliates, both groups responded in the same pattern as normal characters although on the sociometric measures both groups of learning disabled children tended to rate the learning disabled vignette a little more favourably than did the normal children in studies 1 and 2.

With regard to the social discrimination matrices, both groups of learning disabled participants again responded in a similar manner to the normal children in study 1. Hence the learning disabled affiliate group actually engaged in strategies in favour of the normal outgroup as illustrated by negative pull scores on the three discrimination strategies. Social Identity explanations are congruent with these findings. In fact, the theory states that members of a low status, or minority group may well engage in strategies that favour the high status outgroup on the relevant dimension of comparison. (Tajfel, 1978). In Chapter two it was briefly pointed out that within the context of this theory, people strive to maintain a positive social identity. One of the strategies that people may employ when they find themselves unable to compare favourably with a high status group on any commonly valued dimension, is to try to change groups and become a member of the high status outgroup. This may explain why 20 of the learning disabled children identified themselves as being most like the normal characters. In

addition, it has been observed in studies conducted in this intergroup paradigm, that members of low status or minority groups may behave in a manner as to favour the high status outgroup (Sachdev & Bourhis, 1987; Tajfel, 1978; Vaughan, 1977; Wetherell, 1982). While this was observed in some of the learning disabled participants, analysis of the self concept scores of these two groups did not differ significantly. This could not support reports of learning disabled children often suffering low self esteem (Larsen et al, 1973; Strange et al, 1978).

An intergroup perspective and specifically, Social Identity Theory explains many of the observed findings. However, possible alternatives should also be considered. It is plausible that the learning disabled children do not actively categorize or discriminate as much as the normal children do. The evidence presented in this experiment, however, does not support this explanation. Along a similar vein, however, it may be that learning disabled children are less apt to see themselves as all belonging to one group of learning disabled people, or themselves as a member of the group they consider to be learning disabled. Essentially none of the literature concerning learning disabled children has evaluated an intergroup perspective (refer back to Table 1). In addition, few studies have evaluated learning disabled children's perceived acceptability rating of normal and other learning disabled peers.

## CHAPTER 10

### GENERAL DISCUSSION

#### 10.1 Research Evaluation

An important aspect of any research project is the retrospective evaluation of the goals identified at the outset of the program. This project has been successful in achieving these primary and secondary a priori goals.

Recall that the prime objectives were threefold. Firstly, it was demonstrated that in a situational context removed from a number of potentially confounding factors, learning disabled children, depicted on the basis of three features common to this group of children as a whole, were perceived significantly less favourably than normal peers on sociometric ratings of peer acceptance. Further, it was reliably demonstrated that learning disabled characters were rated significantly less favourably than an alternative exceptional group of handicapped characters. To this end, the initial goal was achieved. These findings are supported by much of the literature indicating poor peer acceptance of learning disabled children (Bruininks 1978a, b; Bryan, 1974a, b, 1978; Dudley-Marling & Edmiaston, 1985; Gresham & Rechley, 1986, 1987; Hagen, 1980; Miller, 1984; Siperstein et al, 1978) as well as other exceptional children such as the

mentally retarded and the physically handicapped (Gottlieb, 1974, 1975; Rosenbaum et al, 1986; Siperstein & Bak, 1987a; Voeltz, 1980) as compared to normal peers.

Secondly, the relative salience of the three characteristics both individually and in combination were investigated. It was demonstrated that while each of the three characteristics are important to perceptions of peer acceptability, some relative differences were observed. Academic competence information was demonstrated to have the strongest influence on peer ratings, followed closely by social competence information and then by information concerning athletic competence. This fulfills the second major objective. Several investigators have indicated that academic competence is a significant correlate of peer acceptability of mildly handicapped children (Gottlieb et al, 1978; MacMillan & Morrison, 1980; Siperstein & Gottlieb, 1976) and a number of studies have emphasized the importance of social skills (Asher & Hymel, 1981; Cartledge et al, 1986; Dodge, 1983; Gottlieb et al, 1978). Some evidence has indicated that athletic competence may temper negative attitudes toward learning disabled children (Siperstein, Bopp & Bak, 1978) and indeed, this factor was found to be a significant influence on peer ratings, however, not as strong an influence as academic or social competence.

Another major goal was to see if the adoption of an intergroup perspective, specifically Social Identity Theory,

and the associated social discrimination matrices were applicable to the study of peer acceptability of exceptional children. It seems apparent, on the basis of this research, that an intergroup perspective of peer relations is applicable and can be useful to provide further information regarding specific behavioural strategies directed toward particular exceptional groups of interest.

While individual interactions are critical to and in fact, are likely responsible for much of peer interaction, intergroup behaviours and social categorization have been demonstrated to play a role (Kalin, 1984; Vaughan, 1978). It is plausible that the intergroup perspective represents another variable in the complex equation of peer interactions, and in this context, it is useful.

The information gathered from the intergroup perspective applies more readily to interactions where individuals are not well known. Once individuals are well acquainted, a variety of interpersonal variables, individual characteristics and features may strongly influence peer interactions (Bryan, 1974a; Dodge, 1983; Freeman & Algozzine, 1980; Morrison et al, 1983; Perlmutter, et al, 1983).

The information gathered from intergroup studies should not be underestimated. It has been demonstrated repeatedly that very strong attitudes and behaviours can

result from mere social categorization (Tajfel, 1970; 1978; 1982b; Vaughan, 1978; Wetherell, 1982), and sometimes this impedes interindividual social contact and thereby effectively limits the influence of these much studied individual features.

This can be likened to the differences between peer nomination and peer rating scales. Peer nomination scales, it has been argued, assess more individual popularity, whereas peer rating scales provide information concerning a more general level of acceptance (Asher & Hymel, 1981; Dudley-marling & Edmiston, 1985). The intergroup measures also provide information concerning a more general level of acceptance, at the intergroup level before an individual's characteristics really become a strong influence.

The intergroup measures employed in this research also provide more information than just the rating scales alone. They identify, for example, some qualitative as well as quantitative information regarding a variety of strategies used, as well as the relative strength of these strategies used. In addition, Social Identity Theory could adequately predict and explain results obtained in these studies.

In summary, an intergroup perspective and specifically, Social Identity Theory, is felt to provide a useful framework which is considered readily applicable to the study of peer acceptability of exceptional children. In addition to the present body of research, other

investigations have utilized this technique in the study of developmental ethnic attitudes with considerable success (Vaughan, 1978, Vaughan et al 1981; Wetherell, 1982).

One of the secondary goals identified in this research was to assess whether the written vignette, which allows for easy experimenter manipulation and control of specific variables of interest, was a useful technique to address the issues related to peer acceptability of exceptional children. The significant and reliable differences obtained on the peer ratings and the close parallel with the matrix measures provide substantial support for the utility of the written vignette format.

In addition, it was of interest to determine if the sociometric questionnaire devised for use in this research provided reliable and valid information concerning perceived sociometric status or peer acceptability. Again, the reliable and significant difference observed in these ratings provide support for their sensitivity. In addition, the comparability of these findings to those reported in the literature utilizing a variety of different rating scales, such as peer nomination and direct observational measures, provides further support for the adequacy of the scale employed (see Dudley-Marling & Edmiaston, 1985). Further, the factor analysis, reliability coefficients and the correlational relationship with a different type of rating

measure (matrices) support the reliability and validity of the measure.

A final dependent measure evaluated in this research is the self concept questionnaire used in several studies. No significant relationships were obtained for subjects' self concept ratings in any of the studies which included this measure. It is difficult to interpret what this means. It may be that a wider range in self concepts would be needed or it could mean that the measures employed were not sensitive to differences between participants. While the questionnaire used has some of the better psychometric properties that are reported for measures of this kind, these properties are only fair. Alternatively, it may be that the manner in which these data were used and analyzed were not the most optimal to detect differences. As no significant differences were observed, support could not be provided for the role of self concept in perceptions of peer acceptability.

## 10.2 Future Research

The present research endeavour has provided useful information concerning the relative degree of acceptability and discrimination towards learning disabled peers. In addition, further understanding of various factors which can influence peer acceptability of exceptional children has emerged from these studies. While the information provided in this context has relevant implications for actual peer



interaction, a number of questions remain to be clarified within this framework before examining actual peer relations of exceptional children.

For example, it is important to consider the potential effects of other characteristic features of learning disabled children as well as alternate situational contexts on acceptability ratings and attitudes obtained in this research. It may be that certain verbal or nonverbal behaviours associated with isolated children or aggressive children may also often apply to some learning disabled children (eg. Millich & Landau, 1982; Rubin, 1984; 1985).

In addition, the context within which the hypothetical person is described may have an important bearing on the acceptability ratings obtained. Recently, Harper et al (1985) reported that preference ratings on a hypothetical rating scale of various physical disabilities (after Richardson et al, 1963) were influenced by context effects. In particular the effects noted concerned the range of target disabilities provided for ranking. It suggests, and reasonably so, that acceptability and preference ratings should be considered relative to the other target peers being compared in the specific context.

At the outset, it is also plausible that situational context may also influence peer acceptability ratings. There is some evidence that situational context can influence person perception. In a recent study (Ryan & Heaven, 1987),

a variety of different situation descriptions influenced ratings of competence and benevolence among adult targets. It is conceivable that the situational context, whether academically oriented or socially oriented, may influence ratings. There is some evidence to suggest, however, that this dimension may be less influential. It has been documented that sociometric ratings are fairly stable over time (Asher and Taylor, 1981; Dodge 1983, 1985) and recently it has been reported that sociometric ratings elicited in school were strongly correlated with students' involvement in after school unstructured activities, and negatively correlated with structured after school activities such as clubs and sports programs (Ackerman & Howes, 1986).

Strong and reliable attitudinal responses were obtained on the basis of very little stimulus information in these experiments. This suggests that children have fairly extensive and developed beliefs and attitudes about others that are triggered by at least one characteristic. A key question which arises from this investigation concerns how extensive these reported attitudes are. It can be argued that valuable information could be obtained by assessing whether the observed attitudes are fairly context specific or more extensive, ranging across a variety of situations and attributes.

A brief pilot project was developed to initially assess the viability of this research question.

### 10.3 Implications for Exceptional Children and Education

Currently, much of the focus on improving peer acceptability has stressed improving individual's social skills (Asher, 1985; Dodge, 1985; Hops & Finch, 1985). This has largely been done because several studies have reported that peer acceptability is closely related to an individual's level of social competence across a variety of ages (Dodge, 1983; LaGreca & Mesibov, 1979). The results of the present research have provided support for these findings. These experiments have emphasized the great importance of academic competence on perceived acceptability. This latter finding has received less attention in terms of remedial procedures or efforts to improve peer acceptability than has social competence.

Most learning disabled children are typified by a long history of school failure or poor achievement (Bryan & Bryan, 1975). The relative importance placed on academic competence by regular children strongly indicates that if learning disabled children in the mainstream setting are to be better accepted by their regular peers, these children's perceptions of learning disabled peers' academic competence must also improve. While this may seem like a contradiction in terms, as learning disabled children by definition

experience difficulty with academic competence (Siegel & Heaven, 1986), there are a variety of ways to foster changes. For example, most learning disabled children in the mainstream classroom have individualized programs of some form directed at their level of achievement in one or more subjects. While it will be clear to all students that the learning disabled children are not performing at the same quantifiable level (eg. Grade 6 math) as his or her regular peers, the learning disabled child can be provided with programming which allows him or her to attain success. This can allow the learning disabled to achieve the same relative quality of performance as their regular peers. If normal children see that a learning disabled child is achieving well, within the context of his own program, and it is framed in this way, their relative academic competence can be demonstrated.

Also, many learning disabled children have specific disabilities in only one or two academic areas. For these children it is possible to emphasize their achievements in other subjects which are on par with their peers. While this will not eliminate the academic competence problem, it will likely help to minimize its effects to some degree.

Another issue with implications for mainstreamed educational programming concerns regular children's understanding of learning disabilities. It was discussed in the context of study 1, that one possible reason why learning

disabled children were less accepted than handicapped children by their normal peers could be that normal children are less able to accept the deficits in learning disabled children as there is not readily identifiable cause for these behavioural differences. Most physically disabled children have some visible difference which may make it easier to accept their behavioural differences. It was indicated on the basis of study 1 findings, that the items which comprised the cognition subscale were relatively more negative than the social distance subscale in peer ratings of learning disabled children. One possible interpretation of this, is that children do not have any possible reasons available to them that could moderate their attitudes. Perhaps including a brief educational component which provides regular peers with some information regarding learning disabilities may help to improve acceptability. Similar information programs such as "Kids on the Block" have been used in public awareness programs designed to improve the social status and acceptability of physically disabled persons with considerable success.

With respect to learning disabled children, a recent study by Cunningham, Clark, Heaven, Durrant and Cunningham (1985) demonstrated that providing information regarding a disabled peer was a helpful component in improving that child's acceptability ratings within the group. A previous

program designed to teach social skills to the same disabled target child did not result in a significant improvement, suggesting that attitude change toward disabled peers may be more effectively instigated when programming efforts include an educational component for mainstreamed peers.

It may be implied on the basis of the response patterns and results observed in these studies, that specific learning disabled children are better accepted than general learning disabled children and mentally handicapped children. This may simply reflect the fact that children with specific learning disabilities perform on par with their regular peers in more areas than those with a more generalized disability.

The available literature concerning attitude change indicates that some attitudes are more resistant to modification than others (Armstrong, 1986; Ostrom, 1969). It is not this author's intention that implementing changes outlined in this discussion will eliminate peer acceptability problems, but rather that consideration of these types of changes may lead to some improvement in peer acceptance.

#### 10.4 Limitations

As with any research, there are a number of limitations which should be acknowledged. There is a long standing argument in psychology and indeed, in science as a whole concerning the basic approach to examining a research

question. There are those who argue that a particular issue or phenomenon can only be understood in the context of its naturally occurring environment. Those opposing this view argue that it is impractical and perhaps impossible to understand the effects of a particular phenomena within the complex environment if it is not first understood in isolation. Researchers have been at odds about this issue of approach to research for years and it certainly will not be resolved in the context of this discussion. Where these two paths cross, however, is in their agreement that ultimately, to understand a phenomena fully, it must be considered within its real environment.

While much of the present research follows the "vacuum tube" approach, this approach has provided valuable information concerning the salience of three very basic characteristics of learning disabled children on perceptions of peer acceptability and attitudes toward learning disabled children.

There is a trade off to this approach, however, and several limitations are acknowledged. Because the vignette characters were not real children, and were constructed of very limited information, it is not possible to assess the moderating or exacerbating effects of individual characteristics such as personality variables, physical appearance, social mannerisms, other children's or teacher's behaviours toward these children on ratings of peer

acceptability.

Learning disabled children are far from a homogeneous group. Children experience difficulty in a variety of areas or combinations of areas not well represented in this research. In addition, it could be argued that the findings may be context dependent and that in a real life setting the relative importance of these characteristics may diminish in the presence of other, as yet, unidentified influences. It has been readily acknowledged that individual variables play an important role in peer acceptability.

In addition, another limitation of this research concerns the content of the vignette descriptions employed in these studies. Only one basic vignette format was used to enable systematic examination of each of its components. However, as already acknowledged, learning disabled children are a very heterogeneous group. Alternative vignette descriptions might have elicited different degrees of acceptance responses, or even possibly minor differences in component characteristic salience, although the general pattern of responding likely would remain the same. Some possible evidence for this can be found in the literature and may be attributable to some of the discrepancies which have been reported (Miller, 1984).

A further possible limitation concerns the debate in the literature regarding the relationship between peer ratings and actual peer behaviour. Several researchers have



suggested that children's ratings of acceptability of their peers may not reflect their actual social behaviours directed towards those peers (eg. Ajzen & Fishbein, 1977; Bagozzi & Burnkrant, 1979). There is some evidence from the learning disability literature that there is a strong correspondence between peer acceptability ratings and actual behavioural interactions. Several studies that have utilized both peer rating procedures and direct observation techniques have reported a high correlation between these two measures (Asher & Hymel, 1981; Bryan & Bryan, 1978; Gottlieb et al, 1986; Gresham, 1981b).

A final limitation to this research concerns the interpretation and applicability of its findings. As this study was conducted in a hypothetical context, the results are not directly interpretable to real life interactions. What can be clearly stated is that the three characteristics examined in this research have been demonstrated to be salient to children and that further attention given to these characteristics in direct interaction studies is justifiable. In addition, the results of this project are generalizable to normal and learning disabled children in grades 4 through 8 within this context.

#### Summary and Conclusions

In spite of the inherent limitations acknowledged in this type of research, it can be argued that it has provided

valuable information to the field of peer acceptability of exceptional children.

This research has provided support for several findings reported in the literature. The observation that learning disabled children experience poor peer acceptability and often rejection has been reliably demonstrated here and is consistent with many other studies (eg. Dudley-Marling & Edmiaston, 1985). In addition, studies reporting lower peer acceptability of handicapped children as compared to normals have been replicated (Bak & Siperstein, 1987a, b; Siperstein et al, 1976).

Further, results of the present research are consistent with the few researchers who have reported that learning disabled children are less well accepted than physically handicapped children (Hagen, 1980).

On the basis of this investigation, little or no support can be provided for reports of significant age or gender differences that have appeared in the literature (Bryan, 1974, 1976; Miller, 1984; Scranton & Ryckman, 1979). This may be due to the nature of the procedures utilized in this project or to the limited range of ages of the children who participated. In addition, no support was obtained for the assertion that low self concept was associated with peer acceptability ratings as was reported in at least one study (Scheare, 1978).

This investigation has provided valuable information regarding the relative importance of academic, athletic and social competence to ratings of perceived peer acceptability and behavioural strategies directed towards learning disabled as compared to normal children. Some reports have identified the importance of poor academic performance to mentally retarded children's sociometric status (MacMillan et al, 1980; Siperstein et al, 1970) which is consistent with the findings presented here. In addition, several investigators have emphasized the relationship between sociometric status and social competence measures (eg. Asher & Hymel, 1981) which also is congruent with the indication of ratings of learning disabled children.

Another area of information provided by this research project concerns the applicability of an intergroup perspective and related research techniques to the issue of peer acceptability of exceptional children. This approach has not been closely examined with this population to date and on the basis of the present investigation, an intergroup perspective, and specifically Social Identity Theory, were useful in both prediction and interpretation of results. It is suggested that the intergroup framework is a viable and valuable approach to be considered along with the much emphasized interindividual approach in studying not only exceptional children but in furthering understanding of peer relations as a whole.

---

This research program has provided further evidence that strong and reliable attitudes can be formed on the basis of very little information and has suggested that the observed attitudes extend beyond the specific situational context in which they were elicited. In so doing, this research has pointed the direction for some further research, to explore the extent of these attitudes more fully and assess means of modifying these attitudes in order to facilitate positive peer interactions of exceptional children within the growing mainstreamed environment.

**APPENDICES**

**APPENDIX 1****VIGNETTE EXAMPLES**

The following pages present actual examples of vignettes used in the various studies. Due to the large number of variations of target name, gender and age as well as target condition, only a sample of these vignettes are presented.

	Page
Basic vignette structure	192
Sample vignettes from Study 1 and 5	193
Sample vignette from Study 2	204
Sample vignettes from Study 3A and 4	198
Sample vignettes from Study 3B	210

Example of a "Normal" vignette used in Study 1.

<sup>1</sup>Lisa is eleven years old and has brown hair and blue eyes. She lives in a small neighbourhood and goes to a school close to her home./ <sup>2</sup>She does not find school hard and can answer most questions in class. She usually gets her work done on time./ <sup>3</sup>In gym class she is good at most sports./ <sup>4</sup>At lunchtime Lisa likes to play ball or other games with her friends.

#### Basic Vignette Structure

- 1 Introductory information
- 2 Academic competence information
- 3 Athletic competence information
- 4 Social competence information

Example of a "Normal" vignette from Study 1 or 5.

Steven is twelve years old and has blue eyes and brown hair. He goes to a school in his neighbourhood just a few streets from his home. Steven does well at school and nearly always has his work done on time. When the teacher asks him a question in class, he usually knows the answer. In gym class, Steven plays as well as most of the other kids. After lunch, Steven usually plays ball or "tag" with his friends in the school yard.



	Page
Example of one particular vignette depicted as	
1) normal	195
2) learning disabled	196
3) handicapped	197

Cathy is thirteen years old and has blue eyes and blond hair. She lives in the city and takes a yellow school bus to school. She does not find school hard and can answer most questions in class. She usually gets her work done on time. In gym class she is good at most sports. At lunchtime, Cathy likes to play ball or other games with her friends.

Cathy is twelve years old and has blue eyes and brown hair. She lives in the city and takes a yellow school bus to school. She finds school very hard and cannot answer many questions in class. She is always the last to get her work done. In gym class, she seems clumsy and is not very good at sports. At lunchtime, Cathy usually doesn't play any games with the other girls.

Cathy is twelve years old and has blue eyes and brown hair. She lives in the city and takes a yellow school bus to school. She has to go in a special bus as she is in a wheelchair. She doesn't find school too hard and can answer most questions in class. She usually gets her work done on time. In gym class, she has to watch most of the time as she cannot play most sports. At lunchtime, Cathy cannot play like the other children.

Vignette example from Study 3A (and 4) depicting negative academic but positive athletic and social information.

John is twelve years old and has green eyes and blond hair. He goes to a small school which is only a few houses away from his home. He finds school very hard and cannot answer many questions in class. He is always the last to get his work done. In gym class he is good at most sports. At lunch time John likes to play ball or other games with the other boys.

Vignette example from Study 3A (and 4) depicting negative athletic and positive academic and social information.

David is twelve years old and has brown hair and blue eyes. He lives in a small neighbourhood and goes to a school on the bus. He does not find school hard and can answer most questions in class. Usually, he gets his work completed in class. In gym class he seems clumsy and is not very good at sports. At lunch time David likes to play ball or other games with the other boys.

Vignette example from Study 3A (and 4) depicting negative social and positive academic and athletic information.

John is twelve years old and has green eyes and blond hair. He goes to a small school which is only a few houses away from his home. He does not find school hard and can answer most questions in class. Usually, he gets his work completed in class. In gym class he is good at most sports. At lunchtime John usually doesn't play any games with the other boys.

Vignette example from Study 3B depicting positive academic, social and athletic information.

Robert is twelve years old and has blue eyes and reddish colour hair. He lives in a big neighbourhood and goes to school on the yellow school bus. He does not find school hard and can answer most questions in class. He usually gets his work done on time. At lunch time Robert likes to play ball or other games with the other boys. In gym class, he is good at most sports.



Vignette example from Study 3B depicting negative athletic and positive academic and social information.

John is twelve years old and has green eyes and blond hair. He goes to a small school which is only a few houses away from his home. He does not find school hard and can answer most questions in class. He usually gets his work done on time. At lunch time John likes to play ball or other games with the other boys. In gym class, he seems clumsy and is not very good at sports.

Vignette example from Study 3B depicting negative academic and athletic information and positive social information.

Peter is twelve years old and has blond hair and blue eyes. He lives in the city and takes a yellow school bus to school. He finds school very hard and cannot answer many questions in class. He is always the last to get his work done. At lunch time Peter likes to play ball or other games with the other boys. In gym class he seems clumsy and is not very good at sports.

Vignette example from Study 2 without social information.

Steven is twelve years old and has brown eyes and brown hair. He goes to a school in his neighbourhood just a few streets from his home. Steven does fairly well at school and nearly always has his work done on time. When the teacher asks him a question in class, he usually knows the answer. In gym class, Steven is good at most sports.

**APPENDIX 2**  
**SOCIOMETRIC QUESTIONNAIRE**

The following page presents an example of the sociometric questionnaire used in studies 1 to 5 inclusively. Each vignette presented was accompanied by the sociometric questionnaire, which was adapted to include the name of the corresponding vignette character. The example presented here has the name John, however, these names always matched the preceding vignette in actual use.

Respondents simply read each statement and circled their choice of answer.

1. John is a happy boy.

strongly agree      agree      can't decide      disagree      strongly disagree

2. John has many friends.

strongly agree      agree      can't decide      disagree      strongly disagree

3. I would like to make friends with John.

strongly agree      agree      can't decide      disagree      strongly disagree

4. John needs a lot of help doing things.

strongly agree      agree      can't decide      disagree      strongly disagree

5. John is often sad.

strongly agree      agree      can't decide      disagree      strongly disagree

6. I wouldn't feel good doing a school project with John.

strongly agree      agree      can't decide      disagree      strongly disagree

7. John feels sorry for himself.

strongly agree      agree      can't decide      disagree      strongly disagree

8. In class, I wouldn't sit next to John.

strongly agree      agree      can't decide      disagree      strongly disagree

9. John is a smart guy.

strongly agree      agree      can't decide      disagree      strongly disagree

10. I would invite John to my Birthday Party.

strongly agree      agree      can't decide      disagree      strongly disagree

11. I would not play with John at lunchtime.

strongly agree      agree      can't decide      disagree      strongly disagree

12. After school, I would invite John to my house.

strongly agree      agree      can't decide      disagree      strongly disagree

**APPENDIX 3**  
**SOCIAL DISCRIMINATION MATRICES**

The following six pages present the actual social discrimination matrices used in the present research. These matrices were used in studies 1, 2, 3 and 5. On each matrix, respondents first fill in the name of the character in each story in the spaces provided and then choose one vertical pair of numbers which they feel best allocates points to the two characters.

While there are six matrices, they represent three basic types, which are controlled for order effects. One version places the ingroup character along the top row and the outgroup character along the bottom row. The alternate version reverses this positioning.

The six example matrices are ordered here to demonstrate the ingroup/outgroup and outgroup/ingroup versions of each of the three strategies. The first pair of matrices, on pages 209 and 210 are used to calculate the pull or strength of the maximum difference strategy pitted against a combination of maximum ingroup profit and maximum joint profit. The second pair of matrices, presented on pages 211 and 212, are used to calculate the strength of a fairness strategy versus ingroup favouritism. The final pair of matrices, presented on pages 213 and 214, are used to

calculate the strength of ingroup favouritism versus maximum joint profit. Abbreviated scoring procedures are outlined in Appendix 5.

POINTS FOR THE BOY IN THE  
FIRST STORY (HIS NAME \_\_\_\_\_)

<b>19</b>	<b>17</b>	<b>15</b>	<b>13</b>	<b>11</b>	<b>9</b>	<b>7</b>
<b>25</b>	<b>21</b>	<b>17</b>	<b>13</b>	<b>9</b>	<b>5</b>	<b>1</b>

POINTS FOR THE BOY IN THE  
SECOND STORY (HIS NAME \_\_\_\_\_)



POINTS FOR THE BOY IN THE  
FIRST STORY (HIS NAME \_\_\_\_\_)

POINTS FOR THE BOY IN THE  
SECOND STORY ( HIS NAME \_\_\_\_\_)

1	5	9	13	17	21	25
7	9	11	13	15	17	19

POINTS FOR THE BOY IN THE  
FIRST STORY (HIS NAME \_\_\_\_\_)

POINTS FOR THE BOY IN THE  
SECOND STORY (HIS NAME \_\_\_\_\_)

16	18	20	22	24	26	28
16	14	12	10	8	6	4

POINTS FOR THE BOY IN THE  
FIRST STORY (HIS NAME \_\_\_\_\_)

4	6	8	10	12	14	16
28	26	24	22	20	18	16

POINTS FOR THE BOY IN THE  
SECOND STORY (HIS NAME \_\_\_\_\_)

POINTS FOR THE BOY IN THE  
FIRST STORY (HIS NAME \_\_\_\_\_)

19	17	15	13	11	9	7
1	5	9	13	17	21	25

POINTS FOR THE BOY IN THE  
SECOND STORY (HIS NAME \_\_\_\_\_)

POINTS FOR THE BOY IN THE  
FIRST STORY (HIS NAME \_\_\_\_\_)

<b>25</b>	<b>21</b>	<b>17</b>	<b>13</b>	<b>9</b>	<b>5</b>	<b>1</b>
<b>7</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>15</b>	<b>17</b>	<b>19</b>

POINTS FOR THE BOY IN THE  
SECOND STORY (HIS NAME \_\_\_\_\_)

**APPENDIX 4****SELF CONCEPT SCALE**

The following page presents the self concept scale adapted for use in Studies 1, 4 and 5. It is a combination of the items from the Intellectual and School Status subscale and the Popularity subscale of the Piers-Harris Self Concept Scale (Piers, 1984). The 28 items were presented on one page and respondents simply read each statement and circled "yes" or "no" answers.

1. My classmates make fun of me..... yes no
2. It is hard for me to make friends..... yes no
3. I am smart..... yes no
4. I am shy..... yes no
5. I get nervous when the teacher calls on me..... yes no
6. When I grow up I will be an important person..... yes no
7. I am unpopular..... yes no
8. I am well behaved in school..... yes no
9. I have good ideas..... yes no
10. I am an important member of my family..... yes no
11. I am good in my school work..... yes no
12. I am slow in finishing my school work..... yes no
13. I am an important member of my class..... yes no
14. I can give a good report in front of the class..... yes no
15. In school I am a dreamer..... yes no
16. My friends like my ideas..... yes no
17. I feel left out of things..... yes no
18. I often volunteer in school..... yes no
19. I am among the last to be chosen for games..... yes no
20. My classmates in school think I have good ideas.... yes no
21. I have many friends..... yes no
22. I am dumb about most things..... yes no
23. People pick on me..... yes no
24. In games and sports, I watch instead of play..... yes no
25. I forget what I learn..... yes no
26. I am popular with girls..... yes no
27. I am a good reader..... yes no
28. I am different from other people..... yes no

## APPENDIX 5

ABBREVIATED SCORING PROCEDURES  
FOR THE SOCIAL DISCRIMINATION  
MATRICES\*

As discussed in the text, there are four principle variables which are combined in several ways to assess various strategies employed in allocating points in the matrices. These four variables are: Fairness (or Parity), Maximum Joint Profit, Maximum Ingroup Profit, and Maximum Difference.

There are three basic matrix types. For each type there are two forms. In the first form all the strategies of interest are located together with their maximum values at one end of the matrix. In the second form, two strategies have their maximum values at one end of the matrix while the third strategy has its maximum value at the opposite end of the matrix. These forms are referred to as "strategies together" and "strategies opposed" respectively.

For each matrix type, these two forms are achieved by simply inverting the position of the targets on the matrix.

\*This abbreviated description of Scoring Procedures was adapted from Bourhis, R. & Sachdev, I. (1986). The Tajfel Matrices As An Instrument For Conducting Intergroup Research. Hamilton, Ontario: McMaster University Mimeo. This document provides detailed instructions for scoring the matrices and data concerning their psychometric properties.



To exemplify, the target for point allocation is on the top row in one form, and inverted to the bottom row in the second form.

In a situation, for example, where a learning disabled child is allocating points to a learning disabled target and a normal target on a specific matrix type:

In this form, the maximum values of the strategies occur at conflicting ends of the matrix, the "strategies opposed" form.

LD	19	17	...	9	7
N	1	5		21	25
	MIP + MD (FAV)			MJP	

In this form the maximum value for all strategies coincide at one end of the matrix, the "strategies together" form.

N	19	17	...	9	7
LD	1	5		21	25
	MIP + MD and MJP (FAV)				

But usually, the ordering is flipped so the targets can stay in their same place to avoid confusion for the respondents, as illustrated below.

LD	25	21	...	5	1
N	7	9		17	19
	MIP + MD and MJP (FAV)				

Scoring Procedure to determine the strength or Pull of A + B on C

- 1) determine which of the three types of matrix it is
- 2) determine whether the strategies are together at one end or opposed
- 3) determine the location of the maximum value of the stationary strategies or the base point from which to measure the pull or strength of the alternate strategy away from this stationary strategy. In this example, find the maximum value of C or MJP (  $\frac{7}{25}$  ). This is the zero point.
- 4) Count the number of ranks or columns from this zero point to the pair of numbers selected by the respondent.
- 5) Repeat this procedure for the other form of the matrix.
- 6) This procedure is followed for each of the "pulls" of one strategy versus another, counting the mean number of ranks from the stationary point
  - a when strategies are together
  - b when strategies are opposed

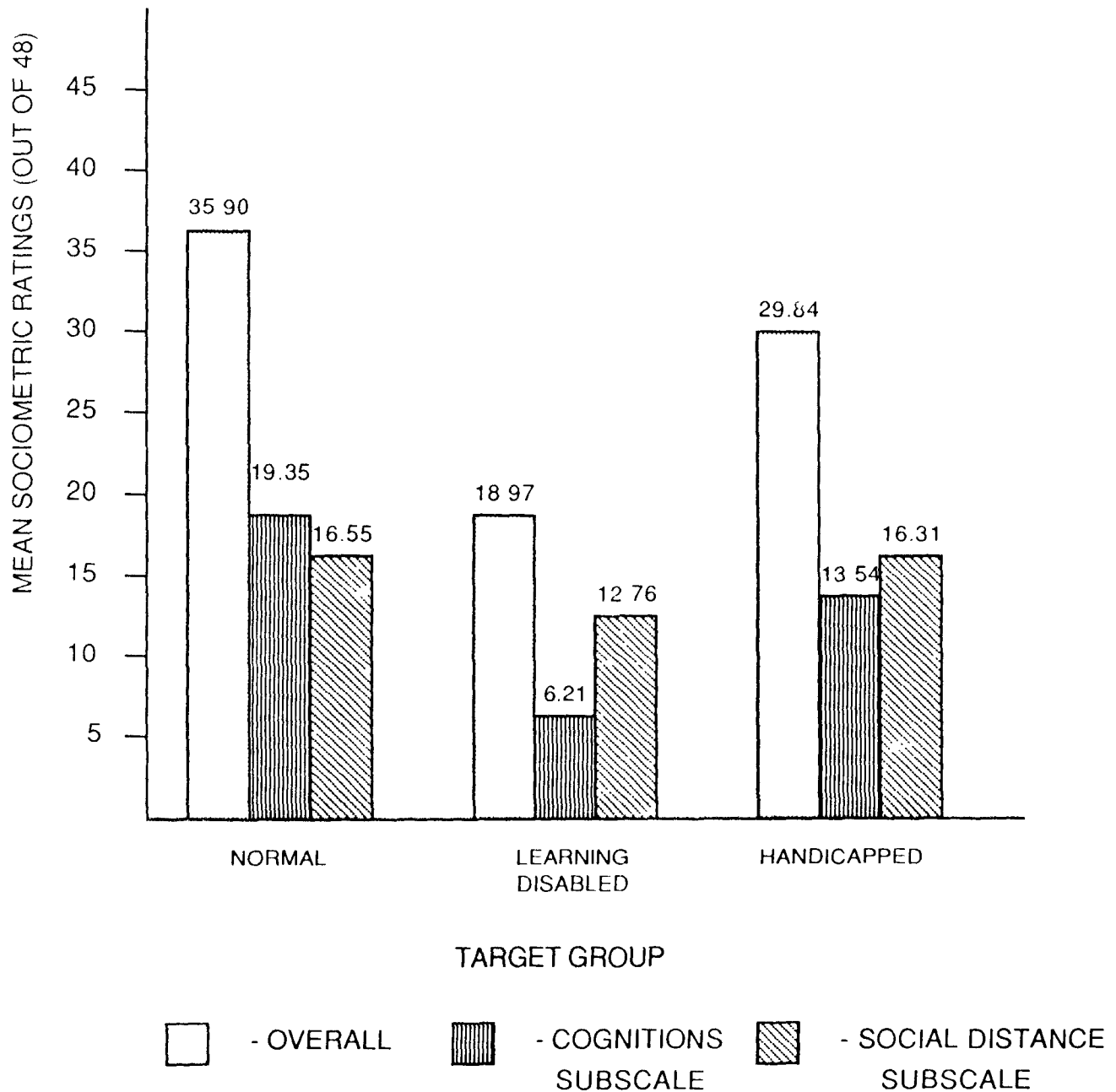
To determine the mean pull of strategy A + B on the stationary strategy C, the difference between the two means b - a is calculated.

To determine the mean pull of strategy C on strategy A + B, it can be calculated as above, or more simply, through the use of the formula  $(12 - b) - a$ .

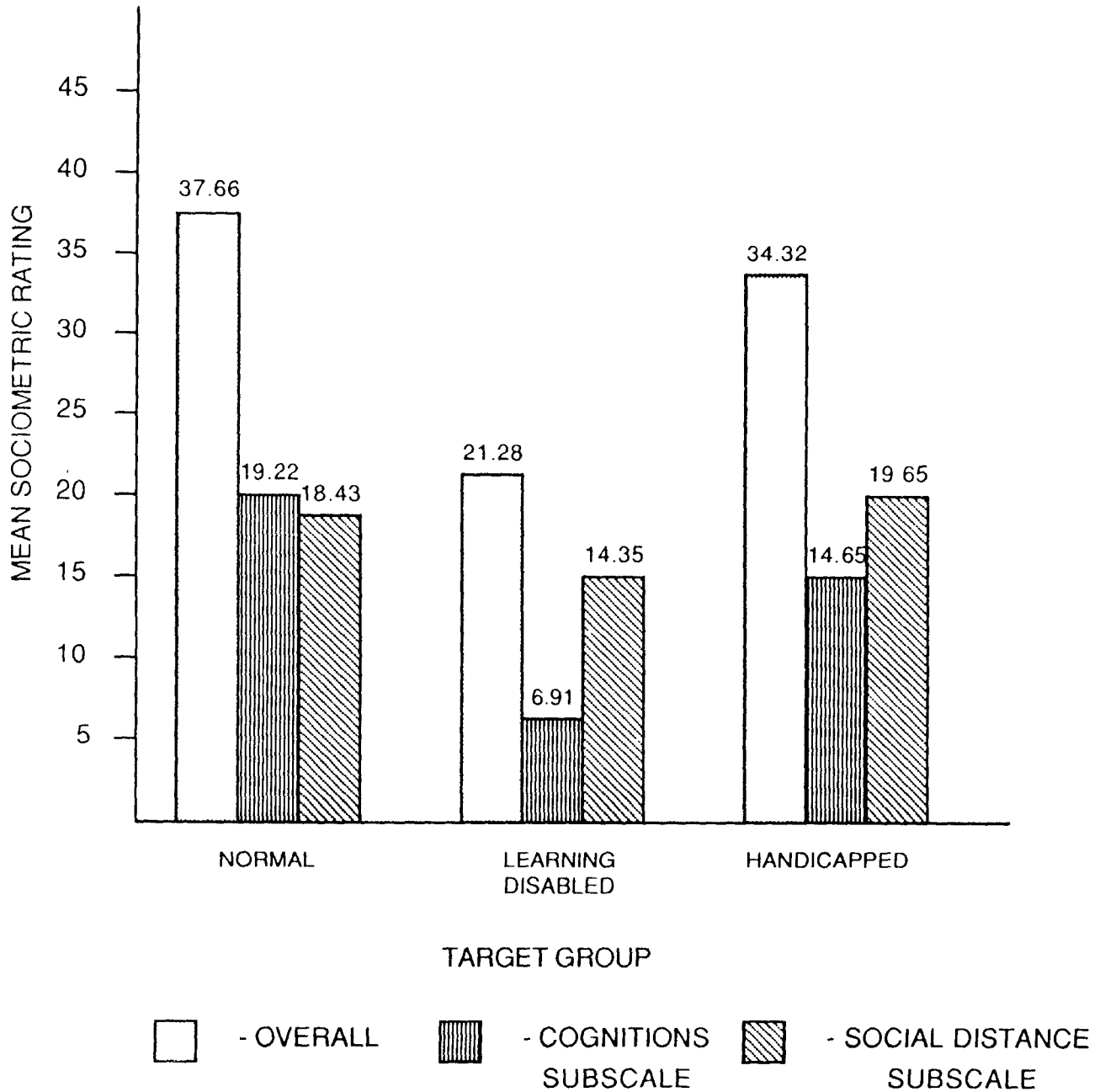
**APPENDIX 6**

GRAPHIC SUMMARY OF SOCIOMETRIC RATING RESULTS  
FOR STUDY 1 THROUGH STUDY 5

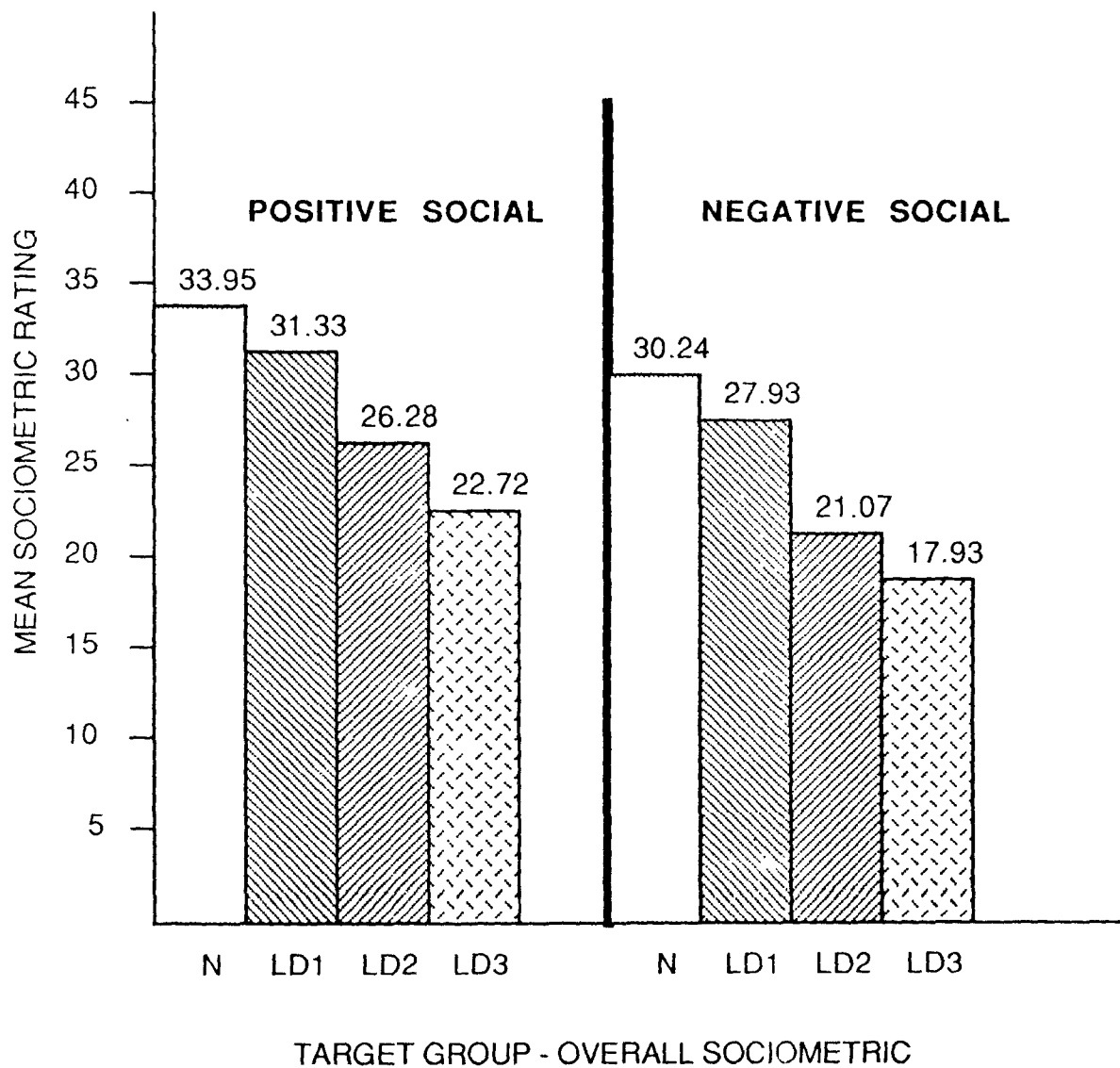
MEAN SOCIOMETRIC RATINGS OF NORMAL, LEARNING DISABLED  
AND HANDICAPPED TARGET GROUPS IN STUDY 1.



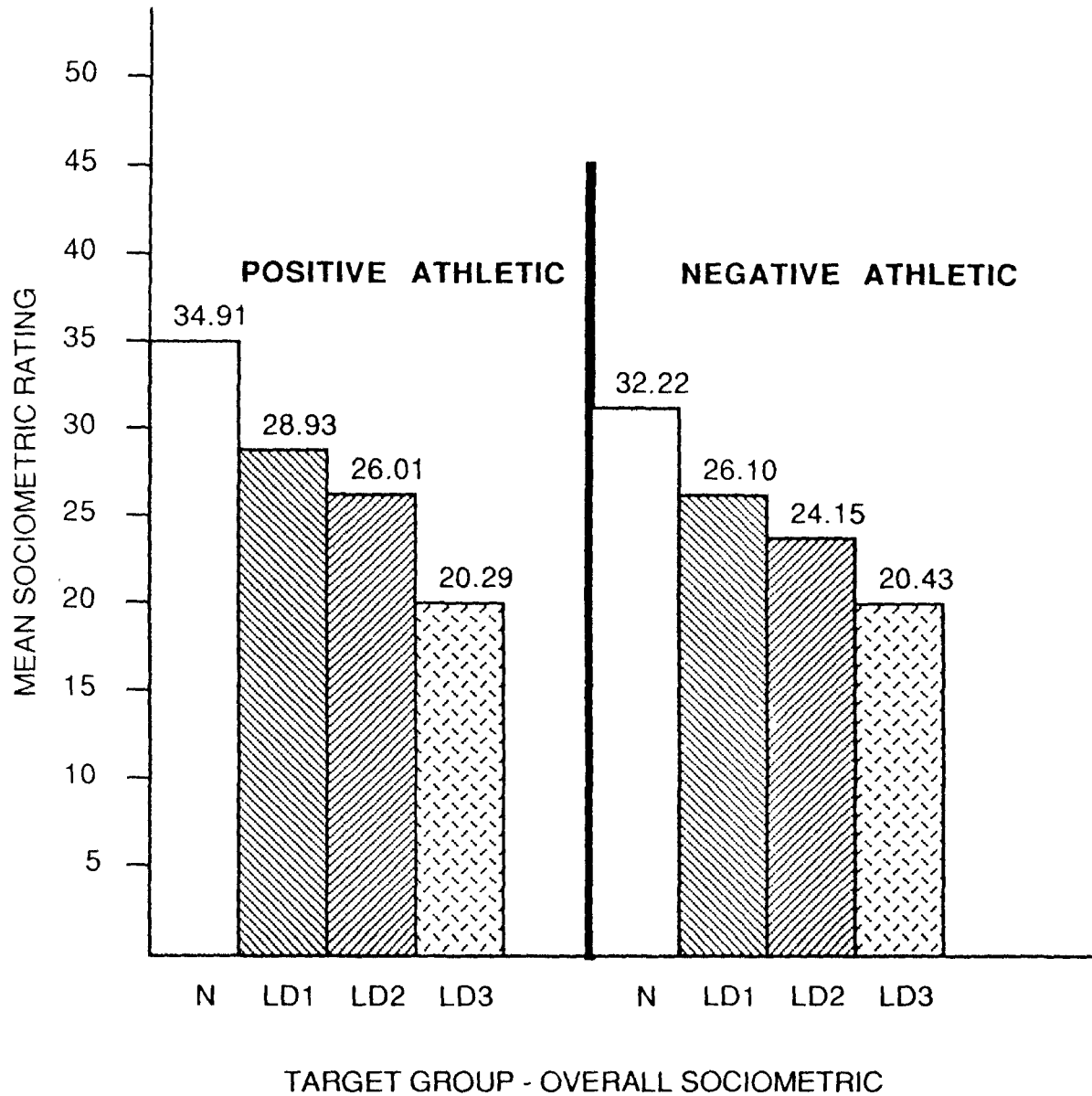
MEAN SOCIOMETRIC RATINGS OF NORMAL, LEARNING DISABLED  
AND HANDICAPPED TARGET GROUPS IN STUDY 2  
(WITHOUT SOCIAL INFORMATION).



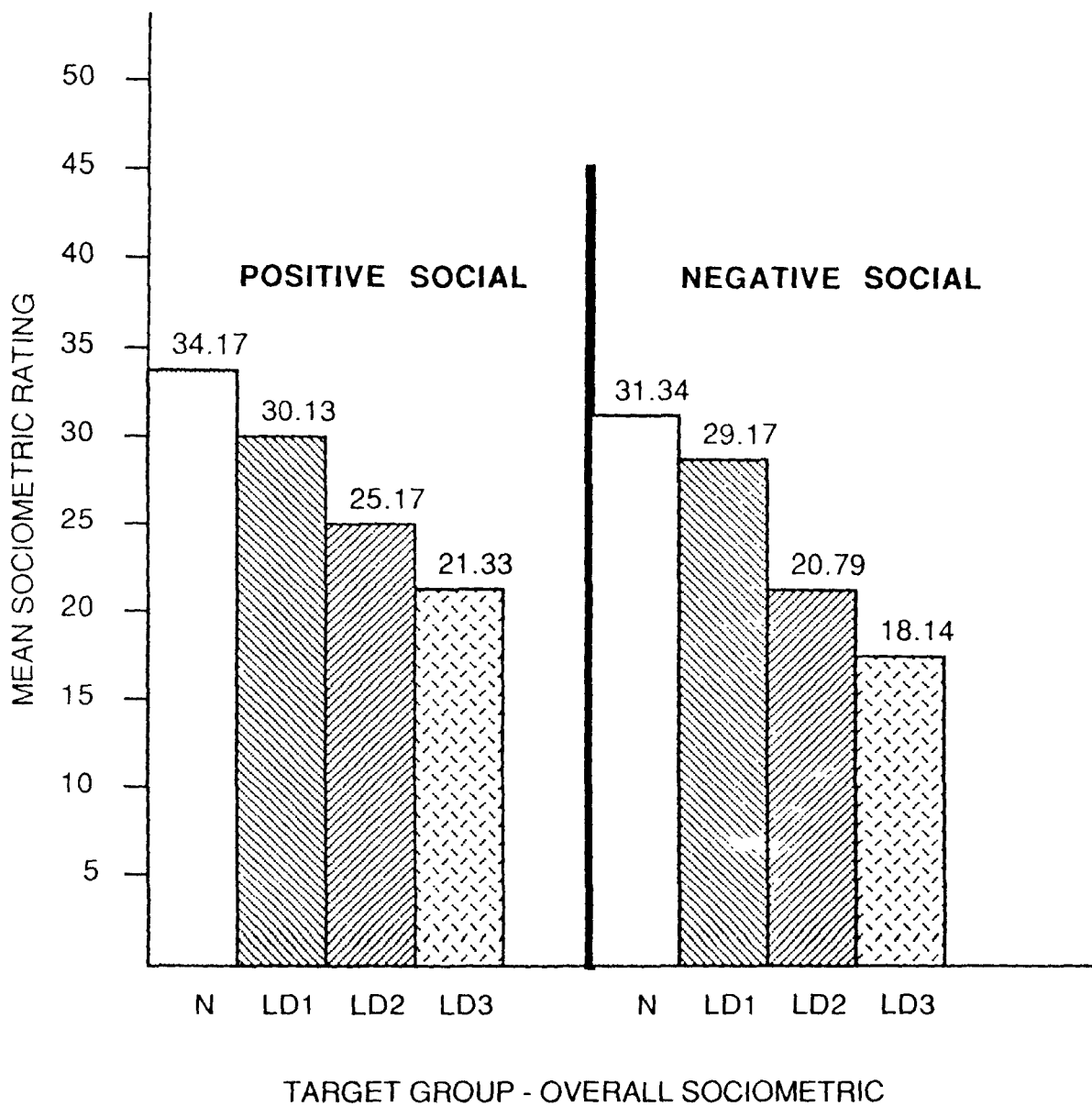
MEAN SOCIOMETRIC RATINGS OF TARGET GROUPS VARYING  
IN ACADEMIC, SOCIAL AND ATHLETIC COMPETENCE IN  
STUDY 3A.



MEAN SOCIOMETRIC RATINGS OF TARGET GROUPS VARYING  
IN ACADEMIC, SOCIAL AND ATHLETIC COMPETENCE IN  
STUDY 3B.

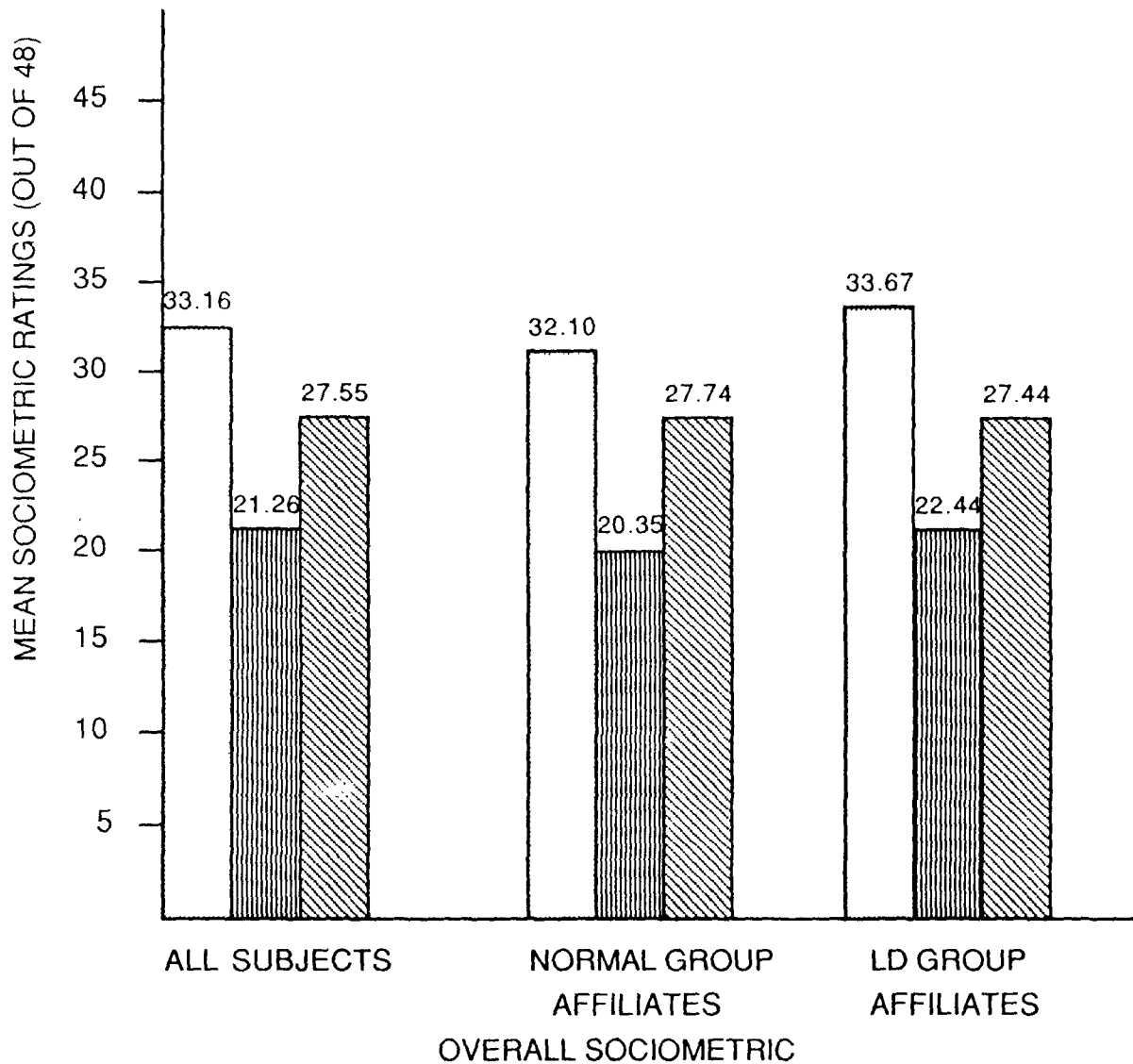


MEAN SOCIOMETRIC RATINGS OF TARGET GROUPS VARYING  
IN ACADEMIC, SOCIAL AND ATHLETIC COMPETENCE IN  
STUDY 4.





**MEAN SOCIOMETRIC RATINGS OF NORMAL, LEARNING DISABLED AND HANDICAPPED TARGET GROUPS IN STUDY 5.**



**TARGET GROUP:**

□ - NORMAL

▨ - LEARNING DISABLED

▩ - HANDICAPPED

## REFERENCES

- Aboud, F. E. (1984). The development of ethnic identity and attitudes. Paper presented at SRCDC Study Group on Children's Ethnic Socialization, Los Angeles.
- Aboud, F. E. & Skerry, S. A. (1984). The development of ethnic attitudes, a critical review. Journal of Cross-Cultural Psychology 15, 3-34.
- Ackerman, D. & Howes, C. (1986). Sociometric Status and After-School Social Activity of Children with Learning Disabilities Journal of Learning Disabilities, 19, 416-419.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. Psychological Bulletin, 84, 888-918.
- Allport, G. W. (1954). The Nature of Prejudice. New York: Doubleday Anchor.
- Armstrong, R. W. (1986). Attitudes toward disabled children: A new measure of able-bodied children's attitudes toward disabled children. Unpublished Doctoral Dissertation. Hamilton.
- Aschenbrenner, K. M., & Schaefer, R. E. (1980). Minimal group situations: Comments on a mathematical model and on the research paradigm. European Journal of Social Psychology, 10, 389-398.
- Asher, S. R. (1985). An evolving paradigm in social skill training research with children. In B. H. Schneider, K. H. Rubin & J. E. Ledingham (Eds.), Children's peer relations: Issues in assessment and intervention (pp. 23-40). New York: Springer Verlag.
- Asher, S. (1978). Children's peer relations. In M. Lamb (Ed.), Social and Personality Development. New York: Holt Rinehart & Winston.
- Asher, S. R. & Taylor, A. R. (1981). Social outcomes of mainstreaming: Sociometric assessment and beyond, Exceptional Education Quarterly, 2, 13-31.

Asher, S. R. & Hymel, S. (1981). Children's social competence in peer relations: Sociometric and behavioral assessment. In J. D. Wine & M. D. Smyne (Eds.), Social Competence (pp. 125-157). New York: Guildford Press.

Bagozzi, R. P. & Burnkrant, R. E. (1979). Attitude organization and the attitude-behaviour relationship. Journal of Personality and Social Psychology, 37, 913-929.

Bak, J. J. & Siperstein, G. N. (1987). Similarity as a factor effecting change in children's attitudes to mentally retarded peers. American Journal of Mental Deficiency, 91, 524-531.

Bak, J. J. & Siperstein, G. N. (1987b). Effects of mentally retarded children's behavioural competence on nonretarded peers' behaviours and attitudes: Toward establishing ecological validity in attitude research. American Journal of Mental Deficiency, 92, 31-39.

Bender, L. F. (1980). Editorial: Attitudes toward disabled people. Developmental Medicine and Child Neurology, 22, 427-428.

Billig, M., & Tajfel, H. (1973). Social categorization and similarity in intergroup behaviour. European Journal of Social Psychology, 3, 27-52.

Bornstein, G., Crum, L., Wittenbraker, J., Harring, K., Insko, C.A., & Thibaut, J. (1983a). On the measurement of social orientations in the minimal group paradigm. European Journal of Social Psychology, 13, 321-350.

Bornstein, G., Crum, L., Wittenbraker, J., Harring, K., Insko, C.A., & Thibaut, J. (1983b). Reply to Turner's comments. European Journal of Social Psychology, 13, 369-381.

Bourhis, R. Y. and Hill, P. (1982). Intergroup perceptions in British higher education: A field study. In: Tajfel, H. (Ed.) Social Identity and Intergroup Relations, Cambridge and Paris, pp. 423-468.

Bourhis, R. Y. & Sachdev, I. (1984). Subjective vitality perceptions and language attitudes: Some Canadian data. Journal of Language and Social Psychology, 3.

Bourhis, R. Y. & Sachdev, I. (1986). The Tajfel matrices as an instrument for conducting intergroup research. Hamilton, Ontario: McMaster University Mimeo.

Bray, J. H., & Maxwell, S. E. (1982). Analyzing and interpreting significant MANOVAs. Review of Educational Research, 52, 340-367.

Brewer, M. B. (1979). Ingroup bias in the minimal intergroup situation. A cognitive motivational Analysis Psychological Bulletin, 86, 307-324.

Brewer, M., & Kramer, M. (1985). The psychology of intergroup attitudes and behaviour. Annual Review of Psychology, 36, 219-243.

Brown, R. J. (1978). Divided we fall: an analysis of relations between sections of a factory work-force. In: Tajfel, H. (Ed.) Differentiation Between Social Groups, Academic Press, London and New York, pp. 395-429.

Brown, R. (1986). Social psychology. Second edition. New York: The Free Press.

Brown, R., & Bourhis, R. Y. (1978). Instructions for scoring intergroup matrices as developed by Tajfel, Flament, Billig & Bundy (1971) and Turner & Brown (1978). Bristol: University of Bristol Mimeo.

Brown, R., & Ross, F. (1982). The battle for acceptance: An investigation into the dynamics of intergroup behaviour. In H. Tajfel (Ed.), Social identity and intergroup relations. Cambridge and Paris: Cambridge University Press and Edition de la Maison des Sciences de l'Homme.

Brown, R. J., Tajfel, H., & Turner, J. C. (1980). Minimal group situations and intergroup discriminations: Comments on the paper by Aschenbrenner and Schaefer. European Journal of Social Psychology, 10, 399-414.

Bruck, M., & Heber, M. (1982). Correlates of learning disabled students' peer interaction patterns. Learning Disability Quarterly, 5, 353-362. ←

Bruininks, V. (1978a). Actual and perceived peer status of learning disabled students in mainstream programs. Journal of Special Education, 12, 51-58. ←

Bruininks, V. L. (1978b). Peer status and personality characteristics of learning disabled and nondisabled students. Journal of Learning Disabilities, 11, 484-489. ←

Bruininks, R. H., Rynders, J. E., & Gross, J. C., (1974), Social acceptance of mildly retarded pupils in resource rooms and regular classes. American Journal of Mental Deficiency, 78, 377-383.

Bruning, J. L. & Kintz, B. L. (1977). Computational handbook of statistics. Second edition. Glenview, Illinois: Scott, Foresman and Company.

Bryan, T. (1974). Peer popularity of learning disabled children. Journal of Learning Disabilities, 7, 621-625.

Bryan, T. H. (1974b). An observational analysis of classroom behaviours of children with learning disabilities. Journal of Learning Disabilities, 7, 26-34.

Bryan, T. (1976). Peer popularity of learning disabled children. A Replication. Journal of Learning Disabilities, 9, 49-53.

Bryan, T. S. (1978). Social relationships and verbal interactions of learning disabled children. Journal of Learning Disabilities, 11, 107-115.

Bryan, T. S., & Wheeler, R. (1973). Perception of children with learning disabilities: The yee of the beholder. Journal of Learning Disabilities, 5, 484-488.

Bryan, T. & Bryan, J. H. (1975). Understanding Learning Disabilities. New York: Alfred Publishing.

Bryan, T. H. & Bryan, J. H. (1978). Social interactions of learning disabled children. Learning Disability Quarterly, 1, 33-38.

Bryan, T., Donahue, M., & Pearl, R. (1981). Learning disabled children's peer interactions during a small group problem-solving task. Learning Disability Quarterly, 4, 13-22.

Bryan, T. H., Werner, M. & Pearl, R. (1982). Learning disabled students' conformity responses to pro-social and antisocial situations. Learning Disability Quarterly, 5, 344-352.

Bryan, J. H., Bryan, T. H., & Sonnefeld, I. J. (1982). Being known by the company we keep: The contagion of first impressions. Learning Disability Quarterly, 5, 288-294.

Bursuck, W. D. (1983). Sociometric status, behavior ratings and social knowledge of learning disabled and low-achieving students. Learning Disability Quarterly, 6, 329-338.

Carledge, G.; Stupay, D. & Kaczala, C. (1986). Social skills and social perceptions of LD and nonhandicapped elementary school students. Learning Disability Quarterly, 9, 226-234.

Coben, S. S. and Zigmond, N. (1986). The social integration of learning disabled students from self-contained to mainstream elementary school settings. Journal of Learning Disabilities, 19, 614-618.

Cohen, J. (1977). Statistical power analysis for the behavioral sciences (rev. ed.). New York: Academic Press.

Cohen, J., & Cohen, P. (1983). Applied multiple regressions/correlation analysis for the behavioral sciences. Hillsdale, NJ: Lawrence Erlbaum.

Cook, J. W. & Wollersheim, J. P. (1976). The effect of labelling of special education students on the perceptions of contact versus non-contact normal peers. Journal of Special Education, 10, 187-198.

Cowen, E. L., Pederson, A., Babigian, H., Izzo, L.D., & Trost, M.A. (1973). Long-term follow-up of early detected vulnerable children. Journal of Consulting and Clinical Psychology, 41, 438-446.

Cunningham, C. E.; Clark, M. L., Heaven, R. K. B., Durrant, J. & Cunningham, L. J. (1985). The relative effects of group problem solving and contingency management procedures on the positive and negative interactions of learning disabled and attention deficit disordered children with a residually autistic peer. Submitted to the Journal of Experimental Child Psychology.

Deshler, D. D., Schumaker, J. B., Warner, M.M., Alley, G. R., & Clark, F. L. (1980). An edpidemiological study of learning disabled adolescents in secondary schools: Social status, peer relationships, activities in and out of shcool, and time use (Research Report No. 18). Lawrence, KS: University of Kansas Institute for Research in Learning Disabilities.

Dixon, W. J., Brown, M. B., Engleman, L., Frane, J. W., Hill, M. A. Jennrich, R. I. & Toporek, J. D. (1983) BMDP Statistical Software. Berkeley: University of California Press.

Dodge, K. A. (1983). Behavioural antecedents of peer social

status. Child Development, 54, 1386-1399.

Dodge, K. A. (1985). Facets of social interaction and the assessment of social competence in children. In B. H. Schneider, K. H. Rubin and J. E. Ledingham (Eds.), Children's peer relations: Issues in assessment and intervention (pp. 3-32). New York: Springer Verlag.

Doyle, A. (1984). Friends, acquaintances, and strangers: The influence of familiarity and ethnolinguistic background on social interaction. In K. H. Rubin & H. S. Ross (Eds.), Peer relationships and social skills in childhood (pp. 229-252). New York: Springer Verlag.

Dudley-Marling, C. C. & Edmiaston, R., (1985). Social status of learning disabled children and adolescents: A review. Learning Disability Quarterly, 8, 189-204.

Foley, J. F. (1979). Effects of labelling and teacher behaviour on children's attitudes. American Journal of Mental Deficiency, 83, 380-384.

Foster, S., & Ritchey, W. (1979). Issues in the assessment of social competencies in children. Journal of Applied Behaviour Analysis, 12, 625-638.

Freeman, S. & Algozzine, B. (1980). Social acceptability as a function of labels and assigned attributes. American Journal of Mental Deficiency, 84, 589-595.

Garrett, M. K. & Crump, W. D. (1980). Peer acceptance, teacher preference, and self-appraisal of social status among learning disabled students. Learning Disability Quarterly, 3, 43-48.

Goodman, H., Gottlieb, J., & Harrison, R. H. (1972). Social acceptance of EMRs integrated into a nongraded elementary school. American Journal of Mental Deficiency, 76, 412-417.

Goodman, N., Richardson, S. A., Dornbusch, S. A., & Hastorf, A. H. (1963). Variant reactions to physical disabilities. American Sociological Review, 28(37), 429-435.

Gottlieb, J. (1974) Attitudes toward retarded children: Effects of labeling and academic performance. American Journal of Mental Deficiency, 79, 268-272.

Gottlieb, J. (1975). Public, peer and professional attitudes toward mentally retarded persons. In M. J. Begab & S. A. Richardson (Eds.), The mentally retarded and society: A social science perspective. Baltimore: University Park

Press.

Gottlieb, J. & Budoff, M. (1973). Social acceptability of retarded children in non-graded schools differencing in architecture. American Journal of Mental Deficiency, 78, 15-19.

Gottlieb, J. & Gottlieb, B. (1977). Stereotypic attitudes and behavioural intentions toward handicapped children. American Journal of Mental Deficiency, 82, 65-71.

Gottlieb, B. W., Gottlieb, J., Berkell, D. and Levy, L. (1986). Sociometric status and solitary play of LD boys and girls. Journal of Learning Disabilities, 19, 619-622.

Gottlieb, J., Semmel, M. I., & Veldman, D. J. (1978). Correlates of social status among mainstreamed mildly retarded children. Journal of Educational Psychology, 70, 396-405.

Gottlieb, J. & Siperstein, G. N. (1976) Attitudes toward mentally retarded persons: Effect of attitude referent specificity. American Journal of Mental Deficiency, 80, 376-381.

Gottlieb, J. & Switzky, H. N. (1982). Development of school-age children's stereotypic attitudes toward mentally retarded children. American Journal of Mental Deficiency, 86, 596-600.

Gresham, F. M. (1981a). Social skills training with handicapped children: A review. Review of Educational Research, 51, 139-176.

Gresham, F. M. (1981b). Validity of social skills measures for assessing social competence in low-status children: A multivariate investigation. Developmental Psychology, 17, 390-398.

Gresham, F. M. (1982a). Misguided mainstreaming: The case for social skills training with handicapped children. Exceptional Children, 48, 422-433.

Gresham, F. M. (1982b). Social interactions as predictors of children's likeability and friendship patterns.

Gresham, F. M. & Elliott, S. M. (1984). Assessment and classification of children's social skills: A review of methods and issues. School Psychology Review, 13, 292-301.



Gresham, F. M. & Reschley, D. J. (1986). Social skill deficits and low peer acceptance of mainstreamed learning disabled children. Learning Disability Quarterly, 9, 23-32.

Gresham, F. M. & Reschly, D. J. (1987) Sociometric differences between mildly handicapped and nonhandicapped black and white students. Journal of Educational Psychology, 79, 195-197.

Hagan, M. P. An examination of the validity and reliability of the scale of children's attitudes toward exceptionality. Unpublished Doctoral Dissertation. Indiana State University, 1980.

Hagan, M. P. (1983). The peer system. In E. M. Hetherington, (Ed.), Handbook of Child Psychology, (Vol. 3): Social Development. New York: Wiley.

Hamilton Wentworth Separate School Board (1984). Each Belongs Hamilton, Ontario: Hamilton Wentworth Separate School Board Mimeo.

Harnett, D. L. (1975). Introduction to statistical methods, second edition. Don Mills, Ontario: Addison-Wesley.

Harper, D. C., Walker, D. P. & Cobb, L. S. (1986). Children's social preferences toward peers with visible physical differences. Journal of Pediatric Psychology, 11, 323-342.

Hartup, W. (1970). Peer interaction and social behavior. In P. H. Mussen (Ed.), Carmichael's Manual of Child Psychology, (Vol. 2). New York: Wiley.

Hartup, W. (1979). Two social worlds: Family relations and peer relations. Scientific Formulation of Developmental Psychiatry. London: Heinemann.

Hartup, W., Glazer, J. A., Charlesworth, R. (1967). Peer reinforcement and sociometric status. Child Development, 38, 1017-1024.

Hollenbeck, A. (1978). Problems of reliability in observational research. In G. Sackett (Ed.), Observing Behaviour, Vol. II: Data Collection and Analysis Methods (pp. ). Baltimore: University Park Press.

- Hops, H. & Finch, M. (1985). Social competence and skill: A reassessment. In B. H. Schneider, K. H. Rubin & J. E. Ledingham (Eds.), Children's peer relations: Issues in assessment and intervention (pp. 23-40). New York: Springer Verlag.
- Horowitz, E. C. (1981). Popularity, decentering ability, and role-taking skills in learning disabled and normal children. Learning Disability Quarterly, 4, 23-30.
- Iannotti, R. J. (1978). Effects of role-taking experiences on role-taking, empathy, altruism and aggression. Developmental Psychology, 14, 119-124.
- Jennings, H. (1959). Sociometry in group relations: A manual for teachers. Washington, D.C.: American Council on Education.
- Johnson, G. O. (1950). A study of the social position of mentally handicapped children in the regular grades. American Journal of Mental Deficiency, 55, 60-69.
- Kalin, R. (1984). The development of ethnic attitudes. In R. Samuda, J. Berry & M. Laferriere (Eds.) Multiculturalism in Canada. Social and Educational Perspectives, (pp. 114-127). Toronto: Allyn & Bacon Inc.
- Katz, P. A. (1976). The acquisition of racial attitudes in children. In P. A. Katz (Ed.). Toward the elimination of racism. New York: Pergamon Press.
- Kerwin, M. E. & Day, J. D. (1985). Peer influences on cognitive development. In J. B. Pryor & J. D. Day (Eds.), The development of social cognition (pp. 211-228). New York: Springer Verlag.
- Klech, R. (1969). Physical stigma and task oriented interactions. Human Relations, 22, 53-60.
- Kohlberg, L. (1969). Stage and sequence: The cognitive-developmental approach to socialization. In D.A. Goslin (Ed.), Handbook of socialization theory and research. New York: Rand-McNally, 1969.
- Larsen, S. C., Parker, R., & Jorjorian, R. (1973). Differences in self-concept of normal and learning disabled children. Perceptual and Motor Skills, 37, 510.
- La Greca, A. & Mesibov, G. (1979). Social skills with learning disabled children. Selecting skills and implementing training. Journal of Clinical Child Psychology,

8, 234-241.

La Greca, A. M. & Mesibov, G. B. (1982). Facilitating interpersonal functioning with peers in learning-disabled children. Journal of Learning Disabilities, 15, 197-199 & 238.

Ledingham, J. E. & Younger, A. J. (1985). The influence of the evaluator on assessment of children's social skills. In B. H. Schneider, K. H. Rubin & J. E. Ledingham (Eds.), Children's peer relations: Issues in assessment and intervention (pp. 23-40). New York: Springer Verlag.

Lemyre, L. & Smith, P. M. (1985). Intergroup discrimination and self-esteem in the minimal group paradigm, Journal of Personality and Social Psychology, 49, 660-307.

Lindesmith, A. R. & Strauss, A. L. (1968). Social Psychology. New York. Third edition. Holt Rhinehart and Winston.

MacMillan, D. L. & Morrison, G. M. (1986). Correlates of social status among mildly handicapped learners in self-contained special classes. Journal of Educational Psychology, 72, 437-444.

Madden, N. A., & Slavin, R. E. (1981). Mainstreaming students with mild handicaps: Academic and social outcomes. Review of Educational Research, 53, 519-569.

Markoski, B. D. (1983). Conversational interactions of the learning disabled and nondisabled child. Journal of Learning Disabilities, 16, 606-609.

Miller, S. A. & Brownell, C. A. (1975). Peers, persuasion and Piaget: Dyadic interaction between conservers and non conservers. Child Development, 46, 992-997.

Miller, C. T. & Gibbs, E. D. (1984). High school students' attitudes and actions toward "slow learners" American Journal of Mental Deficiency, 89, 156-166.

Miller, M. (1984). Social acceptability characteristics of learning disabled students. Journal of Learning Disabilities, 17, 619-621.

Millich, R. & Landau, S. (1982). Socialization and peer relations in hyperactive children. In K. P. Gordon & J. Bialer, (Eds.) Advances in Learning and Behavioural Disabilities, Volume 1 (pp. 283-339). New York: JAI Press.

Milner, D. (1984). The development of ethnic attitudes. In H. Tajfel (Ed.), The Social Dimension, Vol. 1, Cambridge & Paris: Cambridge University Press and Editions de la Maison des Sciences de l'Homme.

Moreno, J. L. (1934). Who shall survive: A new approach to the problem of human interrelations. Washington, DC: Nervous and Mental Disease Publishing.

Morrison, G.M. (1981). Sociometric measurement: Methodological considerations of its use with mildly learning handicapped and non-handicapped children. Journal of Educational Psychology, 73, 193-201.

Morrison, G.M., Forness, S.R., & MacMillan, D.L. (1983). Influences on the sociometric ratings of mildly handicapped children: A path analysis. Journal of Educational Psychology, 75, 63-74.

Newcomb, T. M. (1956). The prediction of interpersonal attraction. American Psychologist, 11, 575-586.

Oakes, P., & Turner, J.C. (1980). Social categorization and intergroup behaviour: Does minimal intergroup discrimination make social identity more positive? European Journal of Social Psychology, 10, 295-301.

Ostrom, T. M. (1969). The relationship between the affective, behavioral, and cognitive components of attitude. Journal of Experimental Psychology, 5, 12-30.

Pearl, R., Donahue, M., and Bryan, T. (1986). Social relationships of learning-disabled children. In J. K. Torgesen & B.Y.L. Wong (Eds.), Psychological and Educational Perspectives on Learning Disabilities (pp. 193-224). Toronto: Academic Press.

Perlmutter, B. F. (1986). Personality variables and peer relations of children and adolescent with learning disabilities. In S. Ceci (Ed.), Handbook of cognitive, social and neuropsychological aspects of learning disabilities. Volume 1 (pp. 339-360). Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Perlmutter, B. F., Crocker, J., Cordray, D., & Garstecki, d. (1983). Sociometric status and related personality characteristics of mainstreamed learning disabled adolescents. Learning Disability Quarterly, 6, 20-30.

Piaget, J. (1926). The language and thought of the child. London: Routledge & Kegan Paul.

Piaget, J. (1932). The moral judgement of the child. Glencoe: Free Press.

Piers, E. V. & Harris, D. B. (1969). Manual of the Piers-Harris Children's Self Concept Scale. Los Angeles, C.A.: Western Psychological Association.

Piers, E. V. (1984). Manual of the Piers-Harris Children's Self Concept Scale (Revised). Los Angeles, C.A.: Western Psychological Association.

Prillamen, D. (1981). Acceptance of learning disabled students in mainstream environment: A failure to replicate. Journal of Learning Disabilities, 14, 344-374. ←

Putallaz, M. (1983). Predicting children's sociometric status from their behaviour. Child Development, 54, 1417-1426.

Putallaz, M. & Gottman, J. M. (1981). An interactional model of children's peer groups. Child Development, 52, 986-994.

Reeves, J. Y. & Roberts, A. (1983). The effect of type of information on children's attraction to peers. Child Development, 54, pp. 1024-1031.

Renshaw, P. D. & Asher, S. R. (1984). Social competence and peer status: The distinction between goals and strategies. In K. H. Rubin & H. S. Ross (Eds.) Peer relationships and social skills in childhood (pp. 375-395). New York: Springer Verlag.

Richardson, S. A., Goodman, N., Hastorf, A. H., & Dornbusch, S. M. (1961). Cultural uniformity in reaction to physical disabilities. American Sociological Review, 26, 241-247.

Roff, M., Sells, B., & Golden, M. (1972). Social Adjustments and Personality Development in Children. Minneapolis: University of Minnesota Press.

Rosenbaum, P. L. & Armstrong, R. W. (1984). Measuring children's attitudes toward disabled peers: Methodological perspective on the development of a new instrument. Unpublished manuscript.

Rosenbaum, P. L., Armstrong, R. W. & King, S. (1986). Children's attitudes toward disabled peers: A self-report measure. Journal of Pediatric Psychology, 11, 517-530.

Rubin, K. H. (1984). Social and social-cognitive developmental characteristics of young isolate, normal and sociable children. In K. H. Rubin & H. S. Ross (Eds.), Peer relationships and social skills in childhood (pp. 375-395). New York: Springer Verlag.

Rubin, K. H. (1985). Socially withdrawn children: An "at risk" population? In B. H. Schneider, K. H. Rubin & J. E. Ledingham (Eds.), Children's peer relations: Issues in assesment and intervention (pp. 125-131). New York: Springer Verlag.

Rubin, K. H., Daniels-Eirness, T. & Hayvren, M. (1982). Correlates of peer acceptance and rejection in early childhood. Canadian Journal of Behavioural Science, 14. ←

Rubin, Z. (1980). Children's friendships. Cambridge: Harvard University Press.

Ryan, E. B. & Heaven, R. K. B. (1987). The impact of situational context on age-based attitudes. Submitted to Social Behaviour.

SPSS Inc. (1986). SPSS users guide Second Edition. Chicago: SPSS Inc.

Sabornie, E. J. (1985). Social mainstreaming of handicapped students: Facing an unpleasant reality. Remedial and Special Education, 6(2), 12-16.

Sabornie, E. J. & Kauffman, J. M. (1986). Social acceptance of learning disabled adolescents. Learning Disability Quarterly, 9, 55-60. ←

Sachdev, I., & Bourhis, R. Y. (1984). Minimal majorities and minorities. European Journal of Social Psychology, 14, 35-52.

Sachdev, I., & Bourhis, R. Y. (1985). Social categorization and power differentials in group relations. European Journal of Social Psychology, 15, 415-534.

Sachdev, I., & Bourhis, R. Y. (1987). Status differentials and intergroup behaviour. European Journal of Social Psychology, 17, 277-293.

Sainato, D. M., Zigmond, N. & Strain, P. S. (1983). Social status and initiations of interaction by learning disabled students in a regular education setting. Analysis and Intervention in Development Disabilities, 3, 71-87.

Scranton, T. R. & Ryckman, D. B. (1979). Sociometric status of learning disabled children in an integrative program. Journal of Learning Disabilities, 12, 402-407.

Sherif, M. (1966). Group conflict and co-operation: Their social psychology. London: Routledge and Kagen Paul.

Siegel, L. S. & Heaven, R. K. B. (1986). Categorization of learning disabilities. In S. Ceci (Ed.), Handbook of Cognitive Social and Neuropsychological Aspects of Learning Disabilities Volume 1 (pp. 95-121) Hillsdale, New Jersey, Lawrence Erlbaum Associates.

Singleton, L. C. & Asher, S. R. (1977). Peer preferences and social integration among third-grade children in an integrated school district. Journal of Educational Psychology, 69, 330-336.

Siperstein, G. N. (1980). Instruments for measuring children's attitudes toward the handicapped. Unpublished manuscript, University of Massachusetts, Boston.

Siperstein, G. N. & Bak, J. (1977). Instruments to measure children's attitudes toward the handicapped: Adjective checklist and activity preference list. Unpublished manuscript, University of Massachusetts, Boston.

Siperstein, G. N. and Bak, J. J. (1980, April). Improving children's attitudes toward blind peers. Visual Impairment and Blindness, pp. 132-135.

Siperstein, G. N., Bak, J. J. & Gottlieb, J. (1977). Effects of group discussion on children's attitudes toward handicapped peers. Journal of Educational Research, 70, 131-134.

Siperstein, G. N. & Gottlieb, J. (1977). Physical stigma and academic performance as factors affecting children's first impressions of handicapped peers. American Journal of Mental Deficiency, 81, 455-462.

Siperstein, G. N., Bopp, M. J. & Bak, J. J. (1978). Social status of learning disabled children. Journal of Learning Disabilities, 11, 98-102.

Siperstein, G. N., Budoff, M., & Bak, J.J. (1980). Effects of the labels, "Mentally retarded" and "retard" on the social acceptability of mentally retarded children. American Journal of Mental Deficiency, 84, 596-601.

Siperstein, G. N., & Chatillon, A. C. (1982). Importance of perceived similarity in improving children's attitudes toward mentally retarded children. American Journal of Mental Deficiency, 86, 453-458.

Skrtic, T. M. (1980). The regular classroom interactions of learning disabled adolescents and their teachers (Research Report No. 8). Lawrence, KS: University of Kansas Institute for Research in Learning Disabilities.

Slate, J. R. & Saudargus, R. A. (1986). Differences in learning disabled and average students' classroom behaviours. Learning Disability Quarterly, 9, 61-67.

Sobol, M., Earn, B. M. (1985). Assessment of children's attributions for social experiences: Implications for social skills training. In B. H. Schneider, K. H. Rubin & J. E. Ledingham (Eds.), Children's peer relations: Issues in assessment and intervention (pp. 23-40). New York: Springer Verlag.

Stephenson, G. (1984). Intergroup and interpersonal dimensions of bargaining and negotiation. In H. Taffel (Ed.), The social dimension, volume 3. Cambridge and Paris: Cambridge University Press, and Editions de la Maison des Sciences de l'Homme.

St. Claire, L., & Turner, J. C. (1982). The role of demand characteristics in the social categorization paradigm. European Journal of Social Psychology, 12, 307-312.

Strain, P. S. (1984). Social behaviour patterns of nonhandicapped and developmentally disabled friend pairs in mainstream preschools, Analysis and Intervention in Developmental Disabilities, 4, 15-28.

Strange, L., Smith, M. D., & Rogers, C. M. (1978). Social comparison, multiple groups, and the self-concepts of academically handicapped children before and after mainstreaming. Journal of Educational Psychology, 70, 487-497.

Sullivan, J. S. (1953). The interpersonal theory of psychiatry. New York: Norton.



- Sutherland, J. H., Algozzine, R., Ysseldyke, J. & Freeman, S. (1983). Changing peer perceptions. Effects of labels and assigned attributes. Journal of Learning Disabilities, 16, 217-220. ←
- Tajfel, H. (1970). Experiments in intergroup discrimination. Scientific American, 223, 96-102.
- Tajfel, H. (1978). The psychological structure of intergroup relations. In H. Tajfel (Ed.) Differentiation between social groups (pp. 27-98). London: Academic Press.
- Tajfel, H. (1981a). Social stereotypes and social groups. In J. C. Turner & H. Giles (Eds.), Intergroup behaviour (pp. 144-167). Oxford: Basil Blackwell.
- Tajfel, H. (1981b). Human groups and social categories. Cambridge: Cambridge University Press.
- Tajfel, H. (1982a). Social psychology of intergroup relations. Annual Review of Psychology, 33, 1-39.
- Tajfel, H. (1982b) (Ed.). Social Identity and Intergroup Relations. Cambridge and Paris: Cambridge University Press, Éditions de la Maison de Sciences de l'Homme.
- Tajfel, H., Flament, C., Billig, M., & Bundy, R. (1971). Social categorization and intergroup behaviour. European Journal of Social Psychology, 11, 149-178.
- Tajfel, H. & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), The Social Psychology of Intergroup Relations, (pp. 33-47). Brooks/Cole: Monterey, California.
- Triandis, H. C. (1971). Attitude and attitude change. New York: Wiley.
- Turner, J. C. (1980). Fairness or discrimination in intergroup behaviour? A reply to Branthwaite, Doyle & Lightbrown. European Journal of Social Psychology, 10, 131-147.
- Turner, J. C. (1984). Social categorization and the self-concept: A social cognitive theory of group behaviour. To appear in E. J. Lawler (Ed.), Advances in Group Processes: Theory and Research. Vol. 2 Greenwich Conn.: JAI Press, Inc.
- Turner, J. C., Brown, R. J. & Tajfel, H., (1979). Social comparison and group interest in intergroup favouritism. European Journal of Social Psychology, 9, 187-204.

Turner, J. C. (1978). Social categorization and social discrimination in the minimal group paradigm. In H. Tajfel (Ed.), Differentiation between social groups (pp. 101-140). London: Academic Press.

Turner, J. C. (1983a). Some comments on ... ' the measurement of social orientations in the minimal group paradigm." European Journal of Social Psychology, 13, 351-367.

Turner, J. C. (1983b). A second reply to Bornstein, Crum, Wittenbraker, Harring, Insko and Thibaut on the measurement of social orientations. European Journal of Social Psychology, 13, 383-387.

Vaughan, G. M. (1978). Social categorization and intergroup behaviour in children. In H. Tajfel (Ed.), Differentiation between social groups. London: Academic Press.

Vaughan, G.M., Tajfel, H., & Williams, J. (1981). Intergroup and interindividual discrimination in British children. Social Psychology Quarterly, 44, 37-42.

Voeltz, L. M. (1980). Children's attitudes toward handicapped peers. American Journal of Mental Deficiency, 84, 455-464.

Voeltz, L. M. (1982). Effects of structured interactions with severely handicapped peers on children's attitudes. American Journal of Mental Deficiency, 86, 380-390.

Wanless, R. L. & Prinz, R. J. (1982). Methodological issues in conceptualizing and treating childhood social isolation. Psychological Bulletin, 92, 39-55.

Weiss, E. (1984). Learning disabled children's understanding of social interactions of peers. Journal of Learning Disabilities, 17, 612-615.

Wetherell, M. (1982). Cross-cultural studies of minimal groups: Implications for the social identity theory of intergroup relations. In H. Tajfel (Ed.), Social Identity and Intergroup Relations, (pp. 207-240). Cambridge: Cambridge U. Press.

Wilder, D.A. (1981). Perceiving persons as a group: Categorization and intergroup relations. In D. L. Hamilton (Ed.), Cognitive processes in stereotyping and intergroup behaviour. Hillsdale, N.J., Erlbaum.

Wilder, D.A. (1986). Social categorization. In L. Berkowitz (ed.) Advances in experimental social psychology. Volume 19 (pp. 291-335). New York: Academic Press.

Wisely, D. W. & Morgan, S. B. (1981). Children's ratings of peers presented as mentally handicapped and physically handicapped. American Journal of Mental Deficiency, 86, 281-286.

Worchel, S., & Austin, W. G. (1986). (Eds.) The Psychology of Intergroup Relations, Vol. 2. Chicago: Nelson-Hall.

Wong, B. Y. L. & Wong, R. (1980). Role-taking in normal achieving and learning disabled children. Learning Disability Quarterly, 3, 11-18.

Youniss, J. (1980). Parents and peers in social development: A Sullivan-Piaget perspective. Chicago: University of Chicago Press.