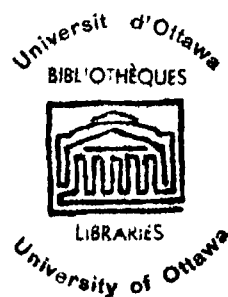


SOCIAL ACCEPTANCE ENHANCEMENT OF LOW SOCIOMETRIC
STATUS PUPILS IN SPECIAL CLASSES

by Rakib Buckridan

Thesis presented to the School of
Graduate Studies of the University
of Ottawa as partial fulfillment of
the requirements for the degree of
Doctor of Philosophy



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CURRICULUM STUDIORUM

Rakib Buckridan was born in Trinidad, West Indies. He received the Bachelor of Science degree from McGill University. Later he obtained the Master of Arts degree in Psychology at the University of Saskatchewan. The title of his Master's thesis was: Modification of the Cold Pressor Response by Hypnosis and the Relationship of Certain Personality Traits. He also graduated with the Diploma in Public Administration from Carleton University (in a combination with Hospital Administration from the University of Ottawa). Further at Carleton University he received the Master of Arts degree in International Affairs with his thesis entitled: Canadian Attitudes to International Development.

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INTRODUCTION

This study was predicated on the hunch that pupils in special classes, most of whom are of the educable mentally retarded range, tend to be ostracized because of unpredictable, uncooperative behaviour. The purpose of this study was therefore primarily to examine whether or not the social acceptance of pupils of low sociometric status in special classes could be enhanced and maintained through a technique of participative and cooperative group activities culminating in the class presentation of a skit. At the same time it explored the possibility that these pupils, after the skit presentation, would rate themselves more acceptable by their fellow classmates.

The social status of the educable mentally retarded or slow learner has been a topic of particular interest to psychologists and educational researchers, especially since the advent of Moreno's sociometric tests in 1934. Some studies have explored social status improvement of students in regular classes, but there is hardly any controlled investigation aimed at social enhancement of the mentally retarded or emotionally disturbed in special classes. Researchers have looked at and emphasized, correlates of social acceptance of the slow learner in regular classes, in residential schools, and to some degree in special classes. But

such studies seem to lack any particular suggestion that psychologists or teachers could implement to facilitate the social acceptance of the special class pupil despite intensive sympathetic discussions in promoting his welfare. Yet, it has often been urged that the rationale for special classes lies in the opportunity they provide for promoting adequate social and personal adjustment of the pupil than could be obtained in regular classes.

A logical step beyond correlates of peer acceptance would seem to be research on techniques that might enhance the social acceptability of unpopular pupils in special classes and which might yield information contributory to their social acceptance.

Investigations of this kind would not only provide practical information to the psychologist and special class teacher in promoting the social acceptance of special class pupils, but would be heuristic in generating further explorations and understanding in the social behaviour and interpersonal relationships among such pupils.

In this report, a review of the pertinent literature is presented in the first chapter. Theoretical considerations leading to the hypotheses under investigation are indicated. Chapter two presents the experimental design employed to investigate the hypotheses, and includes identification of the relative variables, operational definitions,

description of subjects, measuring instruments and experimental procedure. The statistical techniques adopted are also described. The results of the experiment are presented in the third chapter and discussed in the fourth. Implications and limitations of the study are noted, with suggestions for further research. Then follows a summary and conclusion section.

The appendices include the sociometric tests and instructions, the skit design, a summary of the raw data and an abstract of the report.

CHAPTER I

REVIEW OF THE LITERATURE

The pertinent literature is reviewed in this chapter from three major points of view: a) A brief overview of sociometric testing is presented since such testing provided the dependent criterion variable in the current project; b) studies dealing with correlates of sociometric status, particularly of low status, are then reviewed; and c) reported experimental attempts aimed at enhancing sociometric status, especially in the classroom, are then evaluated. It becomes apparent that a gap exists in the need to apply properly intervention techniques in special classes to encourage social acceptability of the pupils. Important considerations leading to the planning of a relative investigation are also gleaned. Theoretical guidelines in the current experiment and the specific hypotheses explored are also indicated.

1. Sociometric Testing.

In 1934, Moreno¹ launched sociometry as a scientific endeavour. In 1960, he described it as a branch of socionomy, the "science of social laws", and stated that "Sociometry is the science of socius measurement, an architectonically

1. J. L. Moreno, Who Shall Survive?, Washington, D. C., Nervous and Mental Disease, 1934, xvi-440 p.

structured system of social measurements with sociometric tests at its base (which cannot be bypassed)".² Moving away from such esoteric phraseology to a more practical approach, Barclay described sociometry as "a method for describing and analyzing patterns of friendship within a group setting".³ And Gronlund has defined the sociometric test as "a technique for measuring the extent to which individuals are accepted by other group members and for determining the internal structure of a group".⁴

The so-called "test" is actually a free-response situation in which individuals are asked to nominate (in confidence) from among other members of their group, the member(s) they most (or least) like as friends, seat mates, playmates, roommates or some such criterion of desirability. For example, as Chaires has cited, Barbe⁵ had 244 elementary

2 J. L. Moreno, Ed., The Sociometry Reader, Glencoe, Illinois, Free Press, 1960, p. 127.

3 J. R. Barclay, "Sociometry: Rationale and Technique for Effecting Behaviour Change in the Elementary School", Personnel and Guidance Journal, Vol. 44, 1966, p. 1067-1076.

4 N. E. Gronlund, Sociometry in the Classroom, New York, Harper and Brothers, 1959, p. 31.

5 W. B. Barbe, "Peer Relationships of Children of Different Intelligence Levels", School and Society, Vol. 80, 1954, p. 60-62, cited in Madelyn C. Chaires, Improving the Social Acceptance of Educable Mentally Retarded Pupils in Special Classes, unpublished doctoral dissertation presented to the School of Education of Indiana University, 1966, p. 4.

school pupils, on instructions from their teachers, indicate their three best friends. Equal weight was ascribed to each choice. And Bonney⁶ had pupils in elementary schools nominate those pupils with whom they would like their picture taken, sit with, give a Christmas gift to, and have as a partner in a party. Social acceptance was ascribed points: a first choice received 5 points; second choice, 4 points; third, 3; fourth, 2; all others, one point, and total points or scores could be calculated for all pupils. Some procedures require members to rank others from most to least preferred. Thus a group member can be assigned a score (or rating) reflecting the number of positive or negative choices he receives from the other members. The configuration of scores or choices may be plotted on a sociogram, "a process to visualize the position of each individual within his group as well as the interrelations of all other individuals as these are affected by attractions and repulsions".⁷ Thus sociometric testing, in terms of scores or the sociogram, can permit a discernment of members of a group that are mutually congenial, popular or low in social acceptance, depending on the particular questionnaire criterion.

6 M. E. Bonney, "Relationships Between Social Success, Family Size, Socioeconomic Home Background and Intelligence Among School Children in Grades III to V", Sociometry, Vol. 7, 1944, p. 26-39.

7 Moreno, Who Shall Survive?, p. 26.

More relevant to the current project, however, is not the procedure in the sociogram but the reliability and validity of sociometric tests, for the scores obtained can be examined for changes over time after the introduction of an intervention technique, such as a skit presentation, by pupils of low sociometric status.

Reliability.— The reliability (consistency) of sociometric scores is not without debate. According to Mouton, Blake and Fruchter,⁸ one view holds that behaviour is flexible, adaptive and continuously changing, therefore high reliability coefficients between two occasions must not be expected. A high coefficient could mean the sociometric test is not sensitive enough to changing interpersonal relations. The opposing view claims that behaviour is sufficiently invariant from one occasion to another and high coefficients can be elicited. And, after examining fifty-three reports on reliability of sociometric test scores, Mouton et al.⁹ concluded that members of a group can make consistent sociometric judgement. Like Gronlund,¹⁰ Mouton et al. were also able to identify some associated factors.

8 J. S. Mouton, R. B. Blake and B. Fruchter, "The Reliability of Sociometric Measures", in J. L. Moreno, Ed., The Sociometry Reader, 1960, p. 323.

9 Ibid.

10 Gronlund, op. cit.

For example, consistency is enhanced in test-retest comparisons the shorter the intervening period, the closer the age of the subject to adulthood, the longer the members have been acquainted with one another prior to the first testing, the larger the group of people, and the more relevant the criterion of choice on which judgements are made to the activity of the group.

Gronlund¹¹ in his review of previous reliability studies concluded further that there is greater consistency in sociometric positions of leadership and isolation than of average subjects.

According to Chaires in a study of 133 girls, aged 12 to 16 years, in a residential training school, Jennings¹² reported that on the choice of fellow residents most preferred as work mates, the girls showed a correlation coefficient as high as .96 on a retest four days later. Interestingly, on a choice of least preferred work mates (or negative choice), a coefficient of .93 was forthcoming in the same period of time, indicating that rejection was also quite stable in the same period of time.

11 Ibid.

12 Helen Jannings, Leadership and Isolation, New York, Longmans Green, 1950, cited in Madelyn C. Chaires, Improving Acceptance of Educable Mentally Retarded Pupils in Special Classes, unpublished doctoral dissertation presented to the School of Education of Indiana University, 1966, p. 5.

With a longer interval, four months, Gronlund¹³ found an average reliability coefficient of .75 (on a work mate criterion) for nine regular classes from grades four to six. He noted that the larger coefficients were associated with the higher grades (or older pupils).

And again with a four month interval, but with forty-three retarded children, mean age 11 years and three months, mean IQ 70, Murry,¹⁴ using a criterion of best friends, and personal interviews to ensure comprehension of simplified versions of a number of sociometric tests, found reliability coefficients of .33 and .50. Further, Chaires¹⁵ on checking out the reliability of a sociometric scale (on a friendship criterion) in "an intermediate educable mentally retarded class" of negro pupils (with IQ's less than 70) found a four-day interval correlation coefficient of .74. In another scale, one in which the rater judges himself as he feels perceived by others, the coefficient was .69. Though relatively low, these coefficients suggest some stability of

13 N. E. Gronlund, "The Relative Stability of Classroom Social Status with Weighted Sociometric Status Scores", Journal of Educational Psychology, Vol. 46, 1955, p. 343-354.

14 H. Murry, "The Sociometric Stability of Personal Relations Among Retarded Children", Sociometry, Vol. 16, 1953, p. 113-141.

15 Madelyn C. Chaires, Improving the Social Acceptance of Educable Mentally Retarded Pupils in Special Classes, unpublished doctoral dissertation presented to the School of Education of Indiana University, 1966, v-90 p.

scores in test-retest situations even among the retarded or slow learners.

Altogether, the evidence tends to suggest reliability of a degree sufficient for research involving sociometric scales.

Validity.— With respect to validity, the degree to which a test measures what it purports to measure, a problem immediately arises, for as Gronlund points out, "there is little agreement as to what the sociometric technique is supposed to measure".¹⁶ But if, as he notes further, sociometric tests are meant to measure choice behaviour, then it is not surprising that some sociometrists claim them to be valid by definition. However, researchers would not be satisfied with a circular play on words and a scientific perspective would resort to experimental interrogation.

There have been studies relating sociometric scores to a variety of validation criteria. Byrd,¹⁷ among 27 pupils in a fourth grade class obtained a correlation coefficient of .80 between indications on a sociometric scale of most preferred choice of classmates as fellow actors for a class play on the one hand, and actual physical choice within

16 Gronlund, Sociometry in the Classroom, p. 158.

17 E. Byrd, "A Study of Validity and Constancy of Choice in a Sociometric Test", Sociometry, Vol. 14, 1951, p. 175-181.

a later period of two months on the other. And Gronlund¹⁸ found in 40 sixth grade classes that teachers tended to prefer pupils who were most often chosen as preferred play companions by the pupils themselves. He claimed that the sociometric test not only revealed a pupil's acceptance by his peers but also his teacher's acceptance of him.

Further, in a review of studies on validity, Gronlund again pointed out that validity of sociometric scales can be found in observed classroom behaviour of pupils, teachers' judgements of social acceptance, reputation among peers, problems of social adjustment, and less so in problems of personal adjustment. He notes that

... Pupils with high sociometric status are generally characterized by feelings and behaviours which are indicative of good personal-social adjustment. In contrast, pupils with low sociometric status tend to have socially ineffective behaviour characteristics, and tend to exhibit evidence of poor personal-social adjustment.¹⁹

Mouton, Blake and Fruchter²⁰ reviewed forty-three validity studies and also concluded that positive sociometric

18 N. E. Gronlund, "The Accuracy of Teacher's Judgements Concerning the Sociometric Status of Sixth-Grade Pupils", Sociometry Monographs, No. 25, New York, Beacon House, 1951, cited in Madelyn C. Chaires, op. cit.

19 Gronlund, Sociometry in the Classroom, p. 183.

20 J. S. Mouton, R. B. Blake and B. Fruchter, "The Validity of Sociometric Responses", in J. L. Moreno, Ed., The Sociometry Reader, 1960, xxiv-733 p.

criteria can predict productive performance and that an inverse relation exists with undesirable behaviour.

In brief, it appears that sociometric tests scores are pertinent to classroom groups and there is some evidence they are correlated with social adjustment, peer acceptance and teachers' judgements.

2. Correlates of Low Sociometric Status.

The literature reveals that substantial emphasis has been placed on the search for psychological correlates of low social acceptance. Three particular aspects have been explored: intelligence, academic achievement and interpersonal adjustment.

Intelligence.- A considerable number of investigations have dealt with the relationship between intelligence and social acceptance. Whether a direct approach is employed in correlating sociometric ratings with intelligence scores, or a method of comparing groups of high and low sociometric pupils on intelligence is used, a consistent, but moderate, positive correlation has been found among children in regular classes, as reported, for example, by Grossman and Wrighter,²¹

21 H. Grossman and J. Wrighter, "The Relationship Between Selection-Rejection and Intelligence, Social Status, and Personality Amongst Sixth-Grade Children", Sociometry, Vol. 11, 1948, p. 346-355.

Gronlund and Anderson,²² and Richards.²³

A similar pattern is obtained with the educable mentally retarded. In a study of thirty-nine mentally retardates in 25 regular classes with 659 non-retarded peers, Johnson²⁴ found that the retarded were significantly rejected on the sociometric selection criteria of best friend, seat companion and playmate. However, the reasons given for rejection were not so much intelligence as such but inability to comply with group standards, showing off, fighting and cheating. The same pattern of results were replicated by Johnson and Kirk²⁵ in a "progressive" school system (with emphasis on social adjustment). Baldwin²⁶ also found similar results when she compared retarded children and non-retarded in the same

22 N. E. Gronlund and L. Anderson, "Personality Characteristics of Socially Accepted, Socially Neglected, and Socially Rejected Junior High School Pupils, Educational Administration and Supervision, Vol. 43, 1957, p. 329-338.

23 H. H. Richards, "Psychological Factors Associated with the Sociometric Status of Children Attending a Comprehensive School in Breconshire", British Journal of Educational Psychology, Vol. 37, 1967, p. 261-262.

24 G. O. Johnson, "A Study of the Social Position of Mentally Handicapped Children in the Regular Grades", American Journal of Mental Deficiency, Vol. 55, 1950, p. 60-89.

25 G. O. Johnson and S. A. Kirk, "Are Mentally Handicapped Children Segregated in the Regular Grades?", Journal of Exceptional Children, Vol. 17, 1950, p. 65-68, 87-88.

26 W. K. Baldwin, "The Social Position of the Educable Mentally Retarded Child in the Regular Grades in the Public Schools", Exceptional Children, Vol. 25, 1958, p. 106-108.

regular classes, and Rucker, Howe and Snider²⁷ in 1969 had concurring findings in a study of 23 junior high school classes. Baldwin also noted at the same time that among the mentally retarded in special classes many popular children may be found but not so among mentally retarded in regular classes.

Miller²⁸ compared mentally superior, mentally typical and mentally retarded children, and observed that the most wanted pupils (as friends) were the superior ones and the least acceptable were the least intelligent. Interestingly, Miller also claimed that retardates were not rejected by their more intelligent peers but were simply not accepted. And Barbe²⁹ in a study of 244 children with IQ's from 65 to 140 found that bright children selected as friends those with slightly lower IQ's than theirs and that low IQ children selected children somewhat brighter than themselves (but not very much brighter). The dull child was not selected.

27 C. N. Rucker, C. E. Howe and B. Snider, "The Participation of Retarded Children in Junior High Academic and Nonacademic Regular Classes", Exceptional Children, Vol. 35, 1969, p. 617-623.

28 R. V. Miller, "Social Status and Socioempathic Differences", Exceptional Children, Vol. 23, 1956, p. 114-119.

29 Barbe, op. cit.

With regard to special classes, Johnson³⁰ reported that retardates obtained higher acceptance scores than in regular classes, perhaps because the basic frame of reference for the sociometric test is changed in the special class. Nevertheless, among pupils of special classes, low sociometric status is also associated with low intelligence. In eighteen special classes of 390 children in Negro elementary schools in North Carolina, Turner³¹ noted that the top fourth of pupils, ranked in terms of mental ability, were significantly more acceptable to their classmates than the pupils in the lowest quarter. Jordan³² also found the lowest quartile of a special class in IQ to be significantly lower in acceptance and greater in rejection than pupils in the upper three quartiles combined as judged by fellow classmates who were themselves all mentally handicapped.

30 G. O. Johnson, A Comparative Study of the Personal and Social Maladjustment of Mentally Handicapped Children Placed in Special Classes with Mentally Handicapped Children Who Remain in Regular Grades, Syracuse, New York, Syracuse University, 1961, p. 67. (U.S.O.E. Cooperative Research Project, M-2514)

31 M. W. Turner, A Comparison of the Social Status of Mentally Retarded Children Enrolled in Special Classes, unpublished doctoral dissertation presented to Indiana University, 1958, vii-102 p.

32 J. B. Jordan, Intelligence as a Factor in Social Position, a Sociometric Study in Special Classes for the Mentally Handicapped, unpublished doctoral dissertation, University of Illinois, 1960.

Finally, a review by Dentler and Mackler³³ on the relationship between intelligence and sociometric status may be cited. The correlations reported ranged between .25 and .50, and the evidence again indicated lesser social acceptance of pupils of low IQ than of the brighter children, in regular classes, mixed classes and special classes.

Academic Achievement.- Since academic achievement shares a substantial variance with intelligence, it is not surprising that it has also been found related to sociometric status, as reported, for example, by Sears³⁴ and Richards.³⁵ In particular, Porterfield and Schlichting³⁶ obtained a significant correlation between reading achievement and sociometric status, and Hudgins, Smith and Johnson³⁷ between arithmetic achievement and status perception by

33 R. A. Dentler and B. Mackler, "Mental Ability and Sociometric Status Among Retarded Children", Psychological Bulletin, Vol. 59, 1962, p. 273-283.

34 P. S. Sears, The Effect of the Classroom Conditions on the Strength of Achievement Motive and Work Output of Elementary School Children, Stanford, California, Stanford University, 1963, p. 83. (U.S.O.E. Comparative Research Project, 873)

35 Richards, op. cit.

36 O. V. Porterfield and H. F. Schlichting, "Peer Status and Reading Adjustment", Journal of Educational Research, Vol. 54, 1961, p. 291-297.

37 B. B. Hudgins, L. M. Smith and T. J. Johnson, "The Child's Perception of his Classmates", Journal of Genetic Psychology, Vol. 101, 1962, p. 401-405.

classmates. Muma³⁸ found high acceptance and high rejection to be significantly related to high and low academic achievement respectively. A similar relationship was obtained³⁹ with achievement in non-academic "performance" classes (e.g., driver education, band, shop classes).

On possible relationships between academic achievement and sociometric status, Boocock⁴⁰ suggests two alternative hypotheses. A negative correlation indicates that high achievement is a mechanism of compensation for unhappy interpersonal relations. A positive correlation reveals confidence in interpersonal relations, with freedom from personal conflict shown in success at school. The empirical data seem to support the positive correlation; thus, pupils of low sociometric status can be expected to be doing poorly at school and to be lacking in proper interpersonal adjustment.

Interpersonal Adjustment.- Inadequate interpersonal adjustment or poor social behaviour has also been a conspicuous

38 J. R. Muma, "Peer Evaluation and Academic Achievement", Personnel and Guidance Journal, Vol. 44, 1965, p. 405-409.

39 Idem, "Peer Evaluation and Academic Achievement in Performance Classes", Personnel and Guidance Journal, Vol. 46, 1968, p. 580-585.

40 S. S. Boocock, "Toward a Sociology of Learning, Peer Group Effects on Student Performance", Sociology of Education, Vol. 39, 1966, p. 1-45.

correlate of low sociometric status. That unaccepted children act out in behaviours that disturb others around them has been pointed out by Johnson and Kirk⁴¹ and by Baldwin.⁴² Such children are described by Forlano and Wrightstone⁴³ and by Richards⁴⁴ as restless, emotionally unstable and irritating to others, while higher acceptance children are said to have desirable personality characteristics, as reported by Gronlund and Anderson,⁴⁵ Feinberg, Smith and Schmidt,⁴⁶ and Goertzen.⁴⁷

The unacceptable behaviour of unpopular children is found to be related to low social standards, reported Young and Cooper,⁴⁸ and to a lack of concern for social approval

41 Johnson and Kirk, op. cit.

42 Baldwin, op. cit.

43 G. Forlano and J. W. Wrightstone, "Measuring the Quality of Social Acceptability Within a Class", Educational and Psychological Measurement, Vol. 15, 1955, p. 127-136.

44 Richards, op. cit.

45 Gronlund and Anderson, op. cit.

46 M. R. Feinberg, M. Smith and R. Schmidt, "An Analysis of Expressions Used by Adolescents at Varying Economic Levels to Describe Accepted and Rejected Peers", Journal of Genetic Psychology, Vol. 93, 1958, p. 133-148.

47 S. M. Goertzen, "Factors Relating to Opinions of Seventh-Grade Children Regarding the Acceptability of Certain Behaviours in the Peer Group", Journal of Genetic Psychology, Vol. 94, 1959, p. 29-34.

48 L. L. Young and D. M. Cooper, "Some Factors Associated with Popularity", Journal of Educational Psychology, Vol. 35, 1944, p. 513-535.

claimed Guinouard and Rychlak,⁴⁹ and to insincerity noted Brown.⁵⁰ Other reasons for rejection, as determined by Brown in the same study of 2500 high school adolescents included: wrong conduct, low ideals, profane or obscene language, being snobbish. And, as Lorber⁵¹ warns, cause and effect cannot be inferred for it is difficult to determine whether the poor behaviour preceded the social acceptance or vice versa.

Barclay⁵² has drawn attention to certain low acceptance children who do not act out but remain shy, withdrawn and isolated. High sociometric status pupils on the other hand, are engaged in socializing activities such as dancing, music, sports and hobbies. In a study by Kuhlen and Lee,⁵³ of seven hundred pupils in grades six, nine and twelve, and

49 D. E. Guinouard and J. F. Rychlak, "Personality Correlates of Sociometric Popularity in Elementary School Children", Sociometry, Vol. 11, 1948, p. 346-355.

50 D. Brown, "Helping Adolescents Win Social Acceptance", The High School Journal, Vol. 38, 1955, p. 157-162.

51 N. M. Lorber, "Inadequate Social Acceptance and Disruptive Classroom Behavior", Journal of Educational Research, Vol. 59, 1966, p. 360-362.

52 J. R. Barclay, "Interest Patterns Associated with Measures of Desirability", Personnel and Guidance Journal, Vol. 45, 1966, p. 56-60.

53 R. G. Kuhlen and B. J. Lee, "Personality Characteristics and Social Acceptability in Adolescence", Journal of Educational Psychology, Vol. 34, 1943, p. 321-340.

using a sociometric test and a "Guess Who" test to determine social position and personality characteristics, it was found that the most acceptable pupils were cheerful, friendly and willing to participate in games. The emerging introversion-extraversion dichotomy seems to be supported by the work of Bonney and Powell⁵⁴ and by Elkins.⁵⁵ An earlier and pertinent study by Bonney⁵⁶ is cited by Chaires. Bonney had teachers and pupils provide trait ratings on fourth grade children. Using a sociometric test with a friendship criterion he then assorted the pupils into popular and unpopular groups. A comparison of traits and popularity showed that strong positive traits were more important than negative virtues. Thus, commented Chaires, what was done by a child to gain admiration seemed to provide more social acceptance than what he refrained from doing. And "Bonney concluded that moral or religious education, which places great emphasis on conformity and obedience, may be a handicap to social

54 M. E. Bonney and J. Powell, "Differences in Social Behavior Between Sociometrically High and Sociometrically Low Children", Journal of Educational Research, Vol. 46, 1953, p. 481-495.

55 D. Elkins, "Some Factors Related to the Choice Status of Ninety Eight-Grade Children in a School Society", Genetic Psychology Monographs, Vol. 58, 1958, p. 207-272.

56 M. E. Bonney, "Personality Traits of Socially Successful and Socially Unsuccessful Children", Journal of Educational Psychology, Vol. 34, 1943, p. 449-472, cited in Madelyn C. Chaires, op. cit.

acceptance".⁵⁷ Again, Feinberg⁵⁸ who studied two thousand pupils in high schools, noted that those who were rejected were the ones who spent their free time in isolated activities (e.g., reading, movies, individual hobbies). Yet, most of these pupils, Feinberg urged, would like to associate with their peers but were hindered by feelings of inadequacy. It required encouragement by an influential person (e.g., a teacher) to have them participate in school organizations. Brown⁵⁹ also found low acceptance children to be disinterested in school or extracurricular organizations, and Guinouard and Rychlak⁶⁰ observed them to be less enthusiastic and cheerful than popular children.

Further to the two categorizations of acting out and withdrawn, other variables have been delineated. Hartrup, Glazer and Charlesworth⁶¹ observed reinforcement patterns among children of low social acceptance and reported a positive correlation with frequency of positive reinforcement

57 Ibid., p. 8.

58 M. R. Feinberg, "Relation of Background Experience to Social Acceptance", Journal of Abnormal and Social Psychology, Vol. 48, 1953, p. 206-214.

59 Brown, op. cit.

60 Guinouard and Rychlak, op. cit.

61 W. W. Hartrup, J. A. Glazer and R. Charlesworth, "Peer Reinforcement and Sociometric Status", Child Development, Vol. 38, 1968, p. 1017-1024.

given by a pupil. Ramirez and Castaneda⁶² discerned two kinds of pupils of low sociometric status: those well known but disliked, and those unknown but not actively disliked. Blair and Ramirez⁶³ found that the unknown who was not disliked could be made to obtain higher acceptance ratings after being given structured opportunities to interact with their fellow classmates. Kuhlen and Lee⁶⁴ found physical attractiveness to be related to peer acceptance; Young and Cooper⁶⁵ reported that facial expression, good looks and neatness in appearance to be powerful factors while rejected pupils were often unkempt and unattractive. Williams and Eicher⁶⁶ studied type and style of clothes, and McDavid and Harari⁶⁷ found that a socially undesirable name could be a

62 M. Ramirez and A. Castaneda, "Paired-Associate Learning of Sociometrically Ranked Children's Names", Child Development, Vol. 38, 1967, p. 171-179.

63 M. J. Blair and M. Ramirez, "Increasing Sociometric Rank, Meaningfulness, and Discriminability of Children's Names through Reinforcement and Interaction", Child Development, Vol. 39, 1968, p. 349-955.

64 Kuhlen and Lee, op. cit.

65 Young and Cooper, op. cit.

66 M. C. Williams and J. B. Eicher, "Teenagers' Appearance and Social Acceptance", Journal of Home Economics, Vol. 58, 1966, p. 457-461.

67 J. W. McDavid and H. Harari, "Stereotyping of Names and Popularity in Grade-School Children", Child Development, Vol. 37, 1966, p. 453-459.

handicap.

Further, Rubenfeld and Stafford⁶⁸ noted that boys of low sociometric status in a residential corrective school were anxious and fearful. Brown⁶⁹ claimed to have found a significant relationship between social acceptance and socioeconomic status (as might be anticipated from the relation to intelligence and academic achievement). And finally, it may be pointed out that Guinouard and Rychlak⁷⁰ drew attention to a significant relationship between peer acceptance and self concept.

In brief, low sociometric status seems related to low intelligence, low academic achievement and poor social behaviour. If improvement in intellectual level and academic achievement may not be amenable to brief intervention techniques, especially in special classes, it seems reasonable in enhancing the social acceptance of the low sociometric status pupil, to aim for the attainment of some of the correlates of high acceptance, such as improved social standards, concern for social approval, outgoing behaviour, neat

68 S. Rubenfeld and J. W. Stafford, "An Adolescent Inmate Social System--a Psychosocial Account", Psychiatry, Journal for the Study of Interpersonal Processes, Vol. 26, 1963, p. 241-256.

69 D. Brown, "Factors Affecting Social Acceptance of High School Students", School Review, Vol. 62, 1954, p. 151-155.

70 Guinouard and Rychlak, op. cit.

appearance and cooperative group behaviour. Isolating correlates of social acceptance is, no doubt, a useful preoccupation, but reasonable timely progress appears to require also experimental intervention that may prove of practical importance to the youngster of low sociometric acceptance. The literature reveals some attempts at such an endeavour.

3. Enhancing Sociometric Status.

The literature indicates that some attention has been given to improving the social acceptance of pupils of low sociometric status. But there has been insufficient concern about systematic, objective and verifiable research. McIntosh,⁷¹ for example, has lamented the lack of controlled research on structured play in the attempt to facilitate social interaction among the educable mentally retarded. The scattered approaches in the literature may be subsumed under three general headings: a) studies providing speculative suggestions for improvement of social acceptability, without providing empirical evidence on which the recommendations may be said to lie; b) experimental studies without control groups, which therefore lack solid evidential support, and amount to the level of case studies; and c) studies

71 D. K. McIntosh, "Cooperative and Organized Play, a Research Design", paper presented at the meeting of the American Association on Mental Deficiency, Denver, 1967, 14 p.

involving control groups, which though more refined in scientific acumen reveal a number of important gaps or shortcomings.

Studies Providing Suggestions.- Brown⁷² has urged that unacceptable pupils be provided with frequent opportunities for displaying success; and Gronlund⁷³ has claimed that if classroom groups were arranged on a sociometric basis the pupils would feel more comfortable and consequently develop more satisfying social relations. But Sister Mary Grace⁷⁴ felt that a group of popular with shy children would prove profitable and the teacher should provide responsible tasks for problem children and ensure they receive adequate social reinforcement.

Markey and Herbkersmann⁷⁵ argued that subgroups based on sociometric choices can often show social gains and academic improvement if they are permitted some responsibility in influencing the curriculum. And Lutz⁷⁶ has

72 Brown, "Helping Adolescents Win Social Acceptance".

73 Gronlund, Sociometry in the Classroom.

74 Sister Mary Grace, "Developing Friendliness", Catholic School Journal, Vol. 66, 1966, p. 96-98.

75 O. B. Markey and G. Herbkersmann, "An Experiment in Student Responsibility", School Review, Vol. 69, 1961, p. 169-180.

76 F. W. Lutz, "Sociometry: Big Word for a Bright Idea", Grade Teacher, Vol. 83, 1965, p. 114-123.

suggested that in setting up sociometric groups in the classroom, the rejectees should be given their first choices but not placed with anyone who rejected them. Next, isolates can be grouped, and finally the popular pupils.

Further, Rothstein⁷⁷ has suggested dance instructions for the retarded in high school so they can cooperate better with their peers, and Mondschein⁷⁸ recommended day camping for problem children in the hope that more self control and peer relations become enhanced.

Experimental Studies Without Control Groups.- On the basis of sociometric scores, Atkinson⁷⁹ formed groups for an elementary social studies program, and placed one unpopular pupil in each work group. She encouraged the unpopular pupil to display special skills, and after two years she found a great reduction in the number of unpopular pupils in the class. It must be noted, however, that the teacher had made a special effort to direct favourable attention to the unpopular pupil. She allowed him, for example, to be a group

77 H. Rothstein, "Use of Dance Techniques to Influence Social Behavior", Digest of the Mentally Retarded, Vol. 1, 1965, p. 208-211.

78 D. Mondschein, "They Can: Camping", Academic Therapy Quarterly, Vol. 2, 1967, p. 100-103.

79 G. Atkinson, "The Sociogram as an Instrument in Social Studies Teaching and Evaluation", Elementary School Journal, Vol. 50, 1949, p. 74-85.

leader, so he would be conspicuously recognized. But a case study with opposite results has been reported. Reger⁸⁰ selected the least accepted among a cottage group of twenty-five boys at Wayne Training School, and employed him as special messenger for the director and cottage parent. But despite this conspicuous status of responsibility, two follow up sociometric evaluations showed he was still lowest in acceptance.

After discerning the twelve most rejected pupils in a homeroom group of thirty-five ninth grade pupils with IQ's 83 to 119 and ages 13 to 17, McLelland and Ratcliff⁸¹ provided them with special leadership roles and assignments in personality study. Later, only two of the twelve were found to be rejected. The investigators concluded that sociometric tests are very useful in determining an individual's social status, and by personality testings weak areas can be discovered so that action can be taken to overcome them. Later, sociometric tests can then indicate the degree of success attained.

80 R. Reger, "An Attempt to Integrate a Group Isolate", Journal of Educational Sociology, Vol. 36, 1962, p. 154-158.

81 F. M. McLelland and J. A. Ratcliff, "The Use of Sociometry as an Aid in Promoting Social Adjustment in a Ninth Grade Homeroom", Sociometry, Vol. 10, 1941, p. 147-153.

Taba and Elkins⁸² examined the possibility of the teacher enhancing social relations among pupils. In an eight grade class, school subjects were placed in a two and one half hour sequence and the teacher conscientiously tried to set a relaxed atmosphere. Selected stories were read and discussed so that social values and solutions to social problems were highlighted. Sociometric testings were done at intervals. It was then found that the social structure of the group underwent significant changes so that there were a smaller number of isolated pupils and an increase of cohesiveness among members. Amundson⁸³ reported a study in which a homeroom for sophomore high school class was organized by sociometric status. In a year there were increases in social acceptance. And Sister M. L. George⁸⁴ found improvement in sociometric scores after implementing particular seating patterns and providing individual counselling. Lund,⁸⁵ too, working with a sixth grade class on ways of

82 H. Taba and D. Elkins, With Focus on Human Relations, Washington, D.C., American Council on Education, 1950, x-227 p.

83 C. L. Amundson, "Increasing Interpersonal Relationships in the High School with the Aid of Sociometric Procedures", Group Psychotherapy, Vol. 6, 1954, p. 183-188.

84 Sister M. L. George, "An Experiment in Relationships Among Sixth-Grade Students", Catholic Education Review, Vol. 62, 1964, p. 603-616.

85 G. Lund, "Can We Help Children Gain Acceptance?", Elementary School Journal, Vol. 64, 1964, p. 205-209.

cooperation discussed problem areas and counselled low sociometric pupils for a year and was able to find improvement in peer acceptance of these children. And, in a classroom with high and low sociometric children placed together in groups, Lewis⁸⁶ had the groups set standards of behaviour and suggest ways of enhancing better relationships. Lewis reported that this technique produced more positive peer relations and much happier children.

It must be pointed out that the above experimental studies without control groups, lead only to results that remain tentative or ambiguous in interpretation. However, as Campbell and Stanley⁸⁷ have pointed out, when the introduction of an intervention or independent variable seems to lead to a sharp break in ongoing events and when such a phenomenon is repeatable, such studies are not without merit. But care must be taken against committing the lethal error of drawing cause-effect conclusions from inadequate data and procedures. With methodological problems, questions of statistical analyses become more acute. Appropriate evaluations with tests of significance require the testing of the difference between differences (among experimental and control

86 G. M. Lewis, "Interpersonal Relations and School Achievement", Children, Vol. 11, 1964, p. 235-236.

87 D. T. Campbell and J. C. Stanley, Experimental and Quasi-Experimental Designs for Research, Chicago, Rand McNally, 1973, ix-84 p.

groups) on two or more occasions. Further, not many of these studies seem to relate specifically to pupils in special classes, but they do provide additional suggestions for highlighting the unpopular pupil and making him more acceptable.

Controlled Investigations.- While most sociometric studies tend to be impressionistic as they lack proper statistical analyses and the use of control groups, there have been a few investigations attempting to surmount some of these shortcomings. Yet greater caution may be needed than in the obviously uncontrolled investigations. The introduction of control procedures may narrow the range of competing explanations sufficiently to permit inferences between the application of a treatment and the ensuing results but confounding errors are likely to be hidden in a complex of methodological and statistical procedures.

In an eight grade science program, Buck⁸⁸ obtained two classroom groups, equated on age, intelligence and years in school. One group, the experimental, was organized by sociometric preferences in regard to seating, work group and laboratory partner. After one semester, it was found that no difference was forthcoming between the experimental and control groups in regard to social structure; nor did the

88 J. V. Buck, "The Sociometric Technique and the Teaching of General Science", School Science and Mathematics, Vol. 52, 1952, p. 456-461.

experimental group show any superiority in learning science. However, Buck noted that the experimental group was able to show 16 mutual choices while the control group had only 11. The social climate seemed more cohesive where the sociometric grouping was employed. But it may be argued that a three-month period is too small an interval in which to ascertain learning differences.

Kranzler, Mayer, Dyer and Munger⁸⁹ formed three groups: a counselling group in which the pupils obtained eighteen weeks of client-centered therapy, a teacher-guidance group in which teachers offered responsibilities and social reinforcements, and a no-treatment control group. On a pre-test, posttest and seven month follow up evaluation, it was found that the first group was superior to the second, and the second superior to the third. The only significant difference was obtained between the counselling (or first) group and the control (or third) group. But it is also important to know whether or not the groups differed even at pretest for such differences can confound the establishment of solid evidence if not duly considered statistically.

Another interesting attempt at improving acceptance but aimed specifically at classes for the educable mentally

89 G. D. Kranzler, G. R. Mayer, C. O. Dyer and P. F. Munger, "Counseling with Elementary School Children, an Experimental Study", Personnel and Guidance Journal, Vol. 44, 1966, p. 944-949.

retarded was that of Chaires.⁹⁰ Using sociometric scales, she discovered the four pupils of lowest status in each of 16 special classes. In 8 classes, two of the four pupils of lowest status were selected randomly to participate in an experimental program and the remaining two were considered "inside-class controls". The two experimental pupils and two popular classmates were taken from the class twice a week for 15 minutes during which time they prepared a skit (a "Father's Day" play) to be performed in the class after five weeks of such preparation and practice. Following the skit presentation, candies were handed out to the class by the low status experimental subjects. The eight classes that did not participate in the treatment program, served as an "outside" control group. On reexamination sociometrically, the low status experimental pupils were found to have achieved significant improvement in status as compared with the "inside" and "outside" control groups (which did not differ).

This study by Chaires is important for not only is it one of the very few that attempted involvement of a systematic intervention program but it produced experimental data on its effectiveness. However, because of inadequate control of possible intervening variables the results remain

90 Chaires, op. cit.

equivocal. A number of significant variables could have been responsible for the results obtained. Most important, as Chaires herself noted, could have been: 1) the cooperative group experiences; 2) removal of the experimental subjects from the classroom twice weekly for five weeks; 3) interaction with the experimenter (who also conducted the phase of sociometric testings); 4) interaction with class members of high status; 5) successful public performance of a challenging task (the skit itself); 6) support, privately and publicly, by the teacher; 7) general increased salience of the experimental children for other class members; 8) concrete awards (candies) given to the class members at the conclusion of the performance.

If the importance of the skit itself was to be determined, the addition of a "placebo" group subjected to all the conditions of the experimental group except that of the skit presentation, and the absence of candy rewards in all groups, would have proven more appropriate. Again, in the avoidance of sources of bias and toward the rigor of data collection, it would have been more relevant if Chaires did not herself at times conduct both the administration of the sociometric testings in the classrooms and the preparation of the skit with the experimental pupils. In other words, the experimenter conducting the preparation of the skit and therefore knowing what students constituted the experimental

group, should not be the person evaluating the sociometric ratings. Further, close inspection of the tables in her report reveals some discrepancies. For example, in Table 3 the mean pretest and posttest sociometric scores on a group are mentioned as 1.2444 and 1.3516 respectively. Thus a mean gain of .1072 was obtained but she reported the increase as .0693 in Table 4. Further, Chaires' work was limited to a Negro population. Importantly, too, like most sociometric studies, it conveyed no hint of a theoretical niche or platform.

In The International Review of Research in Mental Retardation, Guskin and Spicker remarked: "If there are few good studies demonstrating improvements in the social status of poorly accepted children in regular classes, it is hard to find any studies at all which demonstrate techniques for working with isolates or rejected children in special classes."⁹¹ They then cited Chaires' study as an attempt to reduce the void in the area but lamented some of its shortcomings. It was urged, however, that the study contained a promising, germinal idea worthy of serious controlled investigation.

⁹¹ S. L. Guskin and H. H. Spicker, "Educational Research in Mental Retardation", International Review of Research in Mental Retardation, Vol. 3, 1968, p. 253.

It is remarkable that such a comment has to date remained largely unheeded. It is difficult to find in the literature studies attempting to improve on Chaires' work. But one study is noteworthy. In a brief report, Rucker⁹² stated that with ninety-five pupils from four intermediate and two junior high educable special classes (and with the mean IQ and CA for the 24 least sociometrically accepted pupils as 65 and 11-7 respectively) he was able to produce a significant rise in acceptance at post testing. But in a one-month follow up evaluation the acceptance level, though higher than at pretesting, was no longer significant. The control group showed small gains in acceptance at post testing and still more at follow up, but never of significant degree and not at the same level of the experimental group. Indeed, the experimental and control groups differed in acceptance level even at pretesting but Rucker seems to have overlooked the significance of this. In reference to the intervention technique employed with the experimental group, he concluded "the effort does not appear to be justified in light of the failure of the students to maintain their gains in acceptance".⁹³ But such a conclusion may be premature

92 C. N. Rucker, "Maintaining Social Acceptance Gains Made by Mentally Retarded Children", Exceptional Children, Vol. 36, 1970, p. 679-680.

93 Ibid., p. 680.

especially when it is considered that his intervention technique was quite different from that of Chaires and it entailed a time element not allowing for proper generation and saturation of gains in acceptance. His technique involved a total of only four sessions (i.e., 45-minute sessions, twice a week for two weeks) and was of the nature of an elaborate carnival presentation to the class with the room decorated with balloons, crepe paper and signs. Rucker himself noted that his "method would be impractical in many special class situations".⁹⁴

4. Summary and Conclusion.

Various studies have revealed acceptable reliability and validity in sociometric testings, even when used in special classes for the educable mentally retarded. A positive relationship between sociometric test scores and intelligence, and academic achievement, and interpersonal adjustment, has been demonstrated. A considerable number of investigations have emphasized the discernment of correlates of low sociometric status, such as low social standards, acting out or withdrawal, and what may be summarized as a lack of coordinated, appropriate behaviour.

94 Ibid.

There is a need for intervention studies, and some attempts have been made in this direction with the provision of suggestions and the execution of experiments though often without control groups. Sociometric groupings, the delegation of responsible assignments, social reinforcement and individual counselling have been tried, but these studies have very limited theoretical or inferential value since they lack appropriate experimental controls. The absence of a no-treatment control group prevents the establishment of proper outcome conclusion. A few studies have emerged with a concern for systematic research, and the work by Chaires is significant. Yet, since her study in 1966 there has hardly been any related work in the literature despite suggestions that even brief intervention techniques of planned activities may generate increased social acceptance of pupils in special classes. The frontier of knowledge and practical application may move ahead with more controlled studies, preferably linked to a theoretical base.

5. The Problem and Basic Hypotheses.

Moving beyond the level of the many studies on correlates of low sociometric status and extending the field of intervention techniques, it seemed worthwhile to implement a more controlled and meaningful investigation (than that of Chaires and others) by involvement of proper control

measures and delimitations, a placebo group, and a guiding theoretical perspective. The study, applied to special classes, would not be restricted to a Negro population nor be limited to students with IQ's less than 70 as was the case in the Chaires' study. A more practical intervention technique and longer follow up period than used by Rucker would also be implemented.

Most studies in the area, it was noted, fail to specify a theoretical position either as a spring base for experimentation or an explanatory unifying concept. It appears that little stress has so far been laid on a practical approach that would emphasize organized, appropriate behaviour, though most of the suggestions in the literature for improving acceptability seem to fall within this terminology. Barclay⁹⁵ and Johnson⁹⁶ concur in stating that the reason retarded children are rejected by others is because of inappropriate, unacceptable behaviour which is compensatory. Johnson explains that a behaviour problem results from a discrepancy between a child's behavioural capacity and the environmental demands. The mentally handicapped child is expected to be one of the group or class

95 Barclay, op. cit.

96 Johnson, "A Study of the Social Position of Mentally Handicapped Children in the Regular Grades".

though the subject matter in class is not scaled down to his restricted capacities. He must show discriminative standards between right and wrong in group activities, games, social etiquette and cooperation, all beyond his abilities. With heavy discriminative strain his integration breaks and bizarre behaviours follow, such as bullying, teasing and swearing. Thus if an intervention technique gently solicits his cooperation with others as he is given preparation in a task which is at the level of his ability and in which success may engender enviable positive valence between observers and himself, he may bridge the discrepancy gap and feel encouraged to display better habits and improved social adjustment.

It seems to follow therefore that if preparation and presentation of a skit demonstrate, interesting, cooperative and acceptable behaviour the participants should thus enhance their social status. The present investigation was governed by such a theoretical consideration. The resulting data could be informative to educators, teachers and psychologists in the understanding, acceptability and guidance of pupils of low sociometric status in special classes.

The investigation therefore aimed at selecting unpopular pupils in special classes, attempted to enhance their social acceptability through organized, participative and cooperative group activities (in the preparation and

presentation of a skit, a simple magic show), and then to compare their improvements, as monitored on a peer-rated sociometric scale, with changes in placebo and control subjects. In addition, this research sought to determine, on a self-perception sociometric scale, whether or not as a result of such activities the unpopular, experimental pupils would see themselves as more acceptable by their peers. In order to assess the maintenance of gain in scores on the sociometric scales, an eight-week follow up evaluation would be conducted.

To investigate these questions the following experimental null-hypotheses were put forth:

1. There is no significant difference in peer-rated, sociometric social acceptance of low status pupils on pretreatment and posttreatment evaluations.
2. There is no significant difference in peer-rated, sociometric social acceptance of low status pupils on pretreatment and follow up evaluations.
3. There is no significant difference in self-perceived, sociometric social acceptance of the low status pupils on pretreatment and posttreatment evaluations.
4. There is no significant difference in self-perceived, sociometric social acceptance of the low status pupils on pretreatment and follow up evaluations.
5. Any increase in peer-rated social acceptance and self-perceived status is not significantly different from increases which may occur with comparable unpopular children in a placebo group, in an "inside" class control group and in an "outside" class control group.

CHAPTER II

EXPERIMENTAL DESIGN

The design of the study consisted mainly of pre-treatment (or pretest), posttreatment (or posttest), and follow up evaluations on two sociometric scales, peer-rated or Scale 1, and self-perception or Scale 2. Subjects were assigned to treatment, placebo, and control groups. Details of the design are presented in this chapter in five sections. In the first, the subjects who participated in the study are described. The experimental treatment variable under investigation, and a number of other conditions are elucidated in section two. Following these operational definitions, the tools used in the study are noted in section three, and the criteria for their selection are given along with some tangible support for their reliability and validity. The experimental procedures are outlined in section four, and the chapter is concluded with a brief description of the statistical approaches used in the analysis of the results.

1. Subjects.

The pupils participating in this investigation were from two high schools for the educable mentally retarded in the city of Ottawa. All classes in these schools are considered special classes. The two principals affirmed the

schools were meant to accommodate the educable mentally retarded with IQ's between 60 to 90, but that IQ's outside that range could be found among the pupils. They agreed that the common denominator "slow learner" would be a more appropriate description than that of "educable mentally retarded", especially if the latter term would delimit the upper level of IQ at 70 (as in the Chaires study). A pupil with an average or normal IQ might be in attendance in such a school because of an emotional or other difficulty hindering actualization of his intellectual potential. Pupils are sent to these schools on the recommendation of the elementary school principals when it is decided that a regular high school curriculum would be insurmountable for such pupils, whatever may be the reason for their slow academic progress.

In order to minimize the possibility of extraneous classroom variables affecting social acceptance several classrooms were needed in the current investigation. Experimental and placebo groups of subjects were selected in a set of experimental classes. Control subjects were also identified within these classes. And, to control generalization or unknown possible variables influencing such control subjects, "outside" control pupils were designated in certain other classes.

A total of 16 classes were used in this project. Eight were obtained from one high school and eight from the

other, in the following manner. Four classes in each of two grade levels, first year and second year, in each school were selected at random (from class names on slips of paper shuffled in a hat). Classes of the third year were not used because of reported frequency of absenteeism due particularly to gradual phasing out of pupils into outside job situations as the academic year progresses. Absenteeism would prevent adequate follow up evaluation. Of the four classes in each grade level, two were randomly assigned¹ to the "experimental" set of classes and the other two to the "outside" control group of classes.

From each of the eight experimental set of classes, the six pupils rating lowest on the sociometric pretest evaluations on the peer-rated scale or Scale 1, and the three pupils rating highest were selected. Two of the 6 lowest rated pupils were randomly assigned to the experimental, two to placebo and two to "inside" control groups. Thus the eight experimental classes provided totals of: 16 subjects as an experimental group, 16 as a placebo group and 16 as an "inside" control group.

One of the 3 highest rated pupils in a class was randomly chosen to participate with the 2 experimental subjects

¹ All randomizations in this project were achieved by drawing out names on slips of paper placed and shuffled in a hat.

of his class as part of the experimental treatment. Similarly, another of the highest ranking pupils was placed with the 2 placebo and the third with the two control pupils of their class.

In regard to the eight "outside" control classes, the 6 lowest rated pupils were discerned from pretest evaluations (on Scale 1). Thus 48 pupils formed the "outside" control subjects. The 6 lowest rated pupils were also randomly subdivided into "pseudo-experimental", "pseudo placebo" and "pseudo inside control" groups for certain statistical analyses.

In every class, after the assignment of pupils to the various groups, the next lowest ranking and the next highest ranking pupils were selected (on paper) as alternates for possible replacements of pupils at corresponding levels in the assigned groups who might be absent too frequently. Only in two classes were a low status replacement necessary. The scores of the two former pupils were completely replaced by those of the substitutes.

Altogether, a total of 264 pupils from the 16 classes were used in this study. There were 192 males and 72 females. Their IQ's ranged from 55 to 109, with a mean of 85 (Mdn=86, s.e.=.57). Their ages ranged from 15 to 19, with a mean of 16 (Mdn=16, s.e.=.06). The number of pupils in each class ranged from 15 to 19.

Some of the 16 classes had a few more pupils (one to four) but all data on these pupils were eliminated from the experiment because such students were absent from one or more of the occasions when sociometric evaluations were conducted. Thus, only those pupils who were able to provide scores at pretest, posttest and follow up were utilized.

A further total of four pupils were not included in the study because they were unable to procure parental permission to participate in the experiment. A parental consent form, drafted by the Ottawa Board of Education Research Committee and modified slightly, was used in order to obtain such permission. A copy of the form appears as Appendix 1 in this report.

2. The Treatment Conditions.

The impact of the experimental treatment applied to the experimental group of students in a class was assessed against a background of three other conditions: a placebo condition used with the placebo pupils, an "inside" control condition in relation to the inside control group, and an "outside" control condition in conjunction with the outside control group. A description of each of the four "treatment conditions" follows.

Experimental Treatment.- This intervention technique consisted of a group activity. From each of the 8 experimental

classes, the two lowly rated experimental pupils and their associated highly rated classmate were removed for 20 minutes twice weekly, with at least one intervening day, for four weeks to interact, cooperate and participate in the preparation of a simple dramatic magic skit to be presented to their whole class. The preparation, conducted by the experimenter was done in a separate room away from the classroom. Throughout the preparation the experimenter emphasized neatness in appearance, tolerance, proper organization and cooperation in the various activities.

The structured lesson plans for the eight sessions are indicated in Appendix 2. In session 1, the experimenter introduced himself and pupils to one another. He explained the need for a show that would give students, selected at random, a chance to do some acting. He then demonstrated the repertoire of tricks in the hope they would fascinate and hold the interest of the pupils. In session 2, the assignment of tricks and order of presentation were formulated. The show would consist of the presentation of two tricks by each of the three pupils in the experimental group. But a pupil would present only one trick at first, followed in turn by the other two pupils. Then the first pupil would present his second trick followed in same sequence, by the other pupils. The order of presentation was by random selection by the pupils (from names on slips of paper shuffled in

a hat). The assignment of tricks to the three pupils was also done on a similar random basis. Sessions 3 to 7 were devoted to pupils practising and mastering their tricks under supervision of the experimenter. Emphasis was laid on the pupils helping one another with suggestions and cooperating as they performed and acted as audience for one another. Session 8 involved a complete dress rehearsal, and the pupils were informed that the class presentation would be under the supervision of the class teacher and not the experimenter who would be absent so that the performance would take place in a natural setting of teacher and pupils. This change was adopted in order to avoid the influence of any experimenter variable on the impact of the class presentation on the pupils of the class. The teacher was advised of his or her supervisory role and informed that the experimenter would be observing the show from an inconspicuous position outside the classroom. Should any unforeseen problem arise the teacher could contact the experimenter outside the classroom.

On the appointed day for the presentation of the show the class teacher announced that the class period would be devoted to a special program of mystery and intrigue to be provided by some fellow classmates in the form of a magic show. The first performing pupil then stated that the tricks about to be seen were meant not as a challenge but as a pleasant pastime to entertain and show how cooperation in

practice can reveal good talent and that if anyone in the class happened to know the secret to any of the tricks he should keep it quiet until after the show. The tricks were presented. Members of the cast assisted one another as needed. The last performing pupil thanked the class for their attention and interest. At the conclusion of the show the teacher led the class in the applause.

The Placebo Condition.- This involved, as with the experimental, removing two lowly rated pupils and a highest rated one, to meet with the experimenter for the same periods of time in the same outside room. No attempt was made to encourage or discourage cooperative behaviour or activities between these students. The experimenter endeavoured to hold a neutral attitude, without being unfriendly, and discussions covered a variety of topics such as the experimenter being desirous of meeting young people at school to find out how they felt about various world wide topics. Some of the major topics discussed included inflation, unemployment, the virtues of regular class attendance, the oil embargo from the Middle East and President Nixon of the U.S.A.

In the first session, the experimenter introduced himself and pupils to one another. He explained that he was meeting with various class groups and doing somewhat different things with the groups, and that with this particular group, chosen at random, he hoped to learn a great deal about

young people. In all sessions except the last, stress was laid on a need for regular attendance at succeeding sessions.

The placebo condition resembled the experimental treatment except that no class show was prepared or presented, no magic tricks were taught and no conscientious effort at cooperative activities was attempted.

The placebo condition would serve, as a helpful background in evaluating the experimental treatment for it would provide controls on the following factors: increased salience of the experimental pupils, attention given by the experimenter, interaction with high status peers, removal of pupils from the class twice a week for four weeks.

The "inside" control condition.- This was one of letting the inside control group go about its regular activities. Thus this group was given no intervention attention except for sociometric evaluations conducted about the same time as those for the experimental and placebo groups (i.e., at pretest, posttest and follow up times).

This inside control group would provide a baseline for comparative evaluation of the placebo condition, and of the experimental treatment in particular.

The "outside" control condition.- This condition was exactly the same as that adopted with the inside control group. However, by being external to the experimental set of classes, this condition provided a background against

which the operation of within-class generalizations on the inside control group in the experimental set of classes, might be gauged.

For simplicity, particularly in relation to later statistical analyses, the experimental treatment can be referred to as "treatment 1", the placebo condition as "treatment 2", the inside control condition as "treatment 3", and the outside control condition as "treatment 4".

3. The Sociometric Instruments.

The two sociometric scales employed in this project, Scale 1 concerning social acceptance as rated by peers, and Scale 2 pertaining to perception of acceptance of one's self by others, were those used by Chaires.² Chaires selected the scales because not only do they indicate competitive status but more importantly they are sensitive to changes in preference even for the lowest ranked pupil though he may not rank higher than the next lowest ranked pupil. In other words, rating, more than ranking, was an objective as it was also a desired criterion in the current project. Rating, rather than ranking, also permits an examination of whether

² Madelyn C. Chaires, Improving the Social Acceptance of Educable Mentally Retarded Pupils in Special Classes, unpublished doctoral dissertation presented to the School of Education of Indiana University, 1966, v-90 p.

or not all class members show an increase in acceptance in comparison with other classes. The two scales of Chaires were adaptations of scales originally used by Miller.³ In modifying the scales Chaires adjusted them for comprehension by retarded children and found them useful with her Negro sample of pupils (with IQ's 50 to 70 and CA 12 to 16). In a pilot study of 15 pupils she obtained a four-day test-retest rank order correlation coefficient of .74 for Scale 1 and .69 for Scale 2. Pretest scores on Scale 1 and teachers' judgment were reported to agree on the pupils selected as the most and the least accepted.

The present study yielded test-retest data on a larger sample of subjects and larger intervals than obtained in the Chaires' study. Using both scales, scores of the total of 129 pupils in the eight outside control classes on the pretest were correlated with posttest scores and with follow up scores. As no treatment was involved the correlation provided four-week and twelve-week reliability indices. For Scale 1, Pearson product moment correlation coefficients were .93 and .89 respectively. Similarly, Scale 2 yielded coefficients of .71 and .62. At the time of pretesting of the pupils, the teachers were asked to rank their pupils on

3 R. V. Miller, "Social Status and Socioemphatic Differences Among Mentally Superior, Mentally Typical, and Mentally Retarded Children", Exceptional Child, Vol. 23, 1956, p. 114-119.

a criterion of friendliness. A close association was found between the teachers' rankings and the pretest scores for Scale 1 for all 264 subjects involved, as determined on a class basis. For 15 of the 16 classes the correlation coefficients were found to be between .90 and .98. In the remaining one class, the coefficient was only .38, perhaps a spurious result from poor communication or cooperation with the people involved. For Scale 2 the coefficients were ranged from .19 to .84, an understandable lower level than in Scale 1 since the task in Scale 2, attempting to perceive the feelings of others toward one's self, is more vulnerable to the operation of subjective factors.

Tables 1 and 2 illustrate the basic formats of Scales 1 and 2 respectively. Instructions accompanying the scales and examples of the complete scales are shown in Appendix 3. Scale 1 bears a list of names of the class members with four choices beside each name to reveal the degree of desirability for the named classmate as a friend. The various answers are given scores ranging from 3 (for a YES answer) to 0 (for a ? answer). A composite score for each pupil in the class is obtained. With a list of pupil names placed vertically on the left of a sheet and the names of the raters (or judges) placed horizontally at the top of the sheet, the scores given by a rater to each pupil is placed column-wise beside the corresponding names (the ratees). Thus in totalling

Table I.-
Format of Sociometric Scale 1

Circle YES	if you want that person as a friend very much
Circle Yes	if you want that person as a friend
Circle yes	if it matters only a little whether that person is a friend
Circle ?	if you do not care for that person as a friend at all.
1. YES	Yes yes ? Peter Smith
2. YES	Yes yes ? Anne Vade

Adopted from Chaires, op. cit.

Table II.-
Format of Sociometric Scale 2

Circle YES	if that person wants you as a friend very much
Circle Yes	if that person wants you as a friend
Circle yes	if it matters only a little to that person whether you are his (or her) friend
Circle ?	if that person does not care to have you as a friend at all.
1. YES	Yes yes ? Peter Smith
2. YES	Yes yes ? Anne Vade

Adopted from Chaires, op. cit.

horizontally the ratings obtained by a pupil from the several raters and obtaining the mean, the composite score is derived.⁴

Scale 2 is similar to Scale 1 except that the pupil is asked to indicate the extent to which he feels the other pupils want him as a friend, thus yielding a measure of self perception of social acceptance. In the procedure for obtaining the composite scores in Scale 2 the judges or raters are placed vertically at the left of a sheet and the rates are located horizontally across the page (thus in reverse of what is done in Scale 1). Scores by the judges are placed horizontally under the names of the pupils rated. Again, a totalling of scores horizontally and determination of the mean provides the composite score for a pupil.

The sociometric testings were conducted in the same manner in each class by two assistants to the experimenter and not by the experimenter himself. They were strangers to the pupils. The testings were done at pretest, four-weeks later at posttest, and following this, eight-weeks later at follow up times. The assistants (one a university lecturer and the other a university student working with retarded adults in another setting) remained blind as to what pupils constituted the experimental, placebo and control groups. The pupils seemed to relate the parental permissions with the sociometric testings and were generally quite cooperative. No attempt was made by the assistants to link the testings with

⁴ (Sometimes, unlike the case here, later scores by members for one another participating in a subgroup, e.g., experimental group, are eliminated or treated specially since such scores may bear specific effects from close group association.)

the experimental treatment program.

In the testing sessions, two sheets (Scale 1 and Scale 2) were handed out to each pupil by an assistant. Starting with Scale 1, the other assistant briefly outlined the procedures and stressed the need for absolute confidentiality in the ratings and assured the pupils that the ratings would be kept away from the teacher and school. The assistant asked that each pupil locate his name on the list and draw a line across it so the pupil would not rate himself. The assistant then read each name on the list and the four alternate choices. The pupils responded accordingly. The total administration time for both scales was in every case less than a class period of 40 minutes.

4. Design and Procedure.

The design and procedure employed in the investigation are manifest from the foregoing discussions in this chapter. However, an overview or summary is presented in Table 3.

On the basis of results on Scale 1, pupils of low sociometric status were randomly assigned to three groups within the experimental set of classes: the experimental (to receive the intervention technique), the placebo (to receive pseudo treatment) and the inside control (with no treatment). The intervention technique or magic show was

Table III.-
Overall Design

Group	N	Pretest	Interval	Treatment	Posttest	Interval	Follow up
Experimental Classes							
Experimental	16	Scales 1&2	4 weeks	skit	Scales 1&2	8 weeks	Scales 1&2
Placebo	16	ditto	ditto	placebo	ditto	ditto	ditto
Inside Control	16	ditto	ditto	nil	ditto	ditto	ditto
Outside Control Classes	48	ditto	ditto	nil	ditto	ditto	ditto

the main independent variable of interest and consisted of a set of cooperative activities ending in a class presentation. Following the presentation of the show by the experimental pupils, all groups (classes) were again evaluated sociometrically within two days following the show in order to determine whether or not the dependent variables, the sociometric ratings, had changed at this posttesting. Eight weeks later, follow up evaluations were done with all groups so that gains in scores could be checked for maintenance (stability). Changes in scores for a group of subjects, or within group comparisons in a horizontal plane (Table 3), could be done. At the same time, comparisons between groups, a vertical dimension, could also be done. Thus all the hypotheses enunciated would be examined, with the application of appropriate statistics.

5. Statistical Analyses.

Traditional researches, and specifically the study by Chaires, have used an analysis of variance in examining sociometric scores. The consistent agreements in directionality of results, together with the particular descriptions accompanying each point on the scales (rather than, for example, simply providing a term "friendship" and asking that it be rated 0 to 3), and the scales being sensitive enough to bring out repeatable results, all favour the more

robust parametric approach.⁵

In the present study, an analysis of variance was determined for the mean scores at pretest, posttest and follow up for the three groups, experimental, placebo and inside control, for both Scale 1 and Scale 2. The primary reason was to check the pretest scores to ensure that the treatment subjects were statistically non-significantly different. If non-different, this would mean that should differences be found later in the main section of the experiment (i.e., where treatment is applied to the experimental group) these differences would be attributable to the experimental treatment and not the subjects themselves.

The improvement scores for both scales were subjected to an analysis of variance in order to estimate what fraction of the total variation could be attributed to various known possible causes, these being the effects of experimental treatment within and between classes, the effects of experimental treatment within and between schools, and the interactions among these variables, and what fraction could be attributed solely to chance, and to identify the estimate of the error variance (mean square error). More sensitive and reliable tests are obtained by the use of pooled error

⁵ J. P. Guildford, Fundamental Statistics in Psychology and Education, 5th ed., Toronto, McGraw-Hill, 1973, xii-546 p..

as given by the analysis of variance. This was the primary goal. A secondary reason was that the factors could be tested for significant differences by means of an F-test.

The major comparisons involved t-tests on the difference between means of experimental, placebo and control conditions and t-tests on the significance of improvement scores for the experimental group.

CHAPTER III

PRESENTATION OF RESULTS

In this chapter the results of the investigation are presented. From a general overview of basic considerations involving the analyses of variance depicted in Tables VI to XV and obtained means shown in Tables XVI to XIX in Appendix 4, attention is then focussed to the specific hypotheses in question.

The analysis of variance for mean scores of Scale 1 at pretest indicates that none of the F-ratios for any of the main factors are significant at or higher than the 95% confidence level as seen in Table VI. Thus the pupils in the experiment did not differ from class to class (experimental or outside control set of classes), school to school or in grade (year) level. The same situation existed for Scale 2 at pretest as reflected in Table VII.

At posttest, however, there are significant F-ratios on Scale 1 for treatments, classes and the interaction between classes and treatments at a level of confidence higher than 95% as observable in Table VIII. This implies that the experiment (treatments) changed the social status of the pupils. Further, the changes produced by the treatments were not of the same order in that the classes at posttest were no longer homogeneous across groups. The significant

value for the F-ratio of the interaction further indicates that the change in social status was related to the set of classes (experimental or outside control) from which the students were selected. Again, the same situation obtained with Scale 2 at posttest as shown in Table IX.

The analysis of variance on Scale 1 at follow up is shown in Table X. F-ratios are also significant at a level of confidence higher than 95% for treatments and class sets. However, the relationship between the change in social status and class set does not exist as it did at posttest. A similar set of results are forthcoming at follow up with Scale 2, as shown in Table XI, except that the relationship between the change in social status and class type continues to exist.

Of greater moment are the analyses of variance carried out for the improvement in mean scores of posttest and follow up data over the pretest data for Scale 1 and Scale 2. This analysis on improvement on mean scores is the combination of six tables, VI to XI, into four tables. Improvements at posttest over pretest in Scale 1, the F-ratios for sets of classes, treatments and interaction between them, are significant at higher than the 95% confidence level as seen in Table XII. The implication is that the experiment has definitely improved the social status of the treated pupils with low social status. Further, the degree of improvement

is not the same for all sets of classes. The same situation resulted for improvement in self perception for Scale 2 as indicated in Table XIII. Again, in regard to improvement in mean scores at follow up over pretest data on Scale 1, the F-ratios for sets of classes, treatments and interaction are significant at higher than the 95% confidence level as shown in Table XIV. Thus, improvement in social status was maintained at follow up time, and the degree of retention differed between treatments and class sets. Similar results were forthcoming with Scale 2, as seen in Table XV.

More specifically, the mean scores from data on Scales 1 and 2 at pretest, posttest and follow up for experimental, placebo, inside control and outside control groups are presented in Table IV. The standard error values of the treatment mean scores are also shown in the table. In graphical form, the mean scores are shown in Figures 1 and 2 for scales 1 and 2 respectively.

The mean scores obtained for Scales 1 and 2 follow a similar, general pattern from pretest, through posttest to follow up as shown in Figures 1 and 2. Considering the inside control group (with "treatment 3") and the outside control group (with "treatment 4") there is very little difference between the two groups. The experimental (with "treatment 1") and placebo (with "treatment 2") groups show a general increase from pretest to posttest and then a

Table IV.-

Mean Scores for all Groups at Pretest, Posttest and Follow up.

Condition	N	Scale 1			Scale 2		
		Pretest	Posttest	Follow up	Pretest	Posttest	Follow up
Experimental	16	1.349	1.972	1.752	1.674	2.122	1.850
		.040 ^a	.048	.060	.020	.022	.019
Placebo	16	1.352	1.620	1.508	1.657	1.788	1.696
		.040	.048	.060	.020	.022	.019
Inside Control	16	1.341	1.390	1.400	1.697	1.682	1.658
		.040	.048	.060	.020	.022	.019
Outside Control	48	1.353	1.389	1.405	1.676	1.686	1.662
		.040	.048	.060	.020	.022	.019

a Lower numbers indicate standard errors.

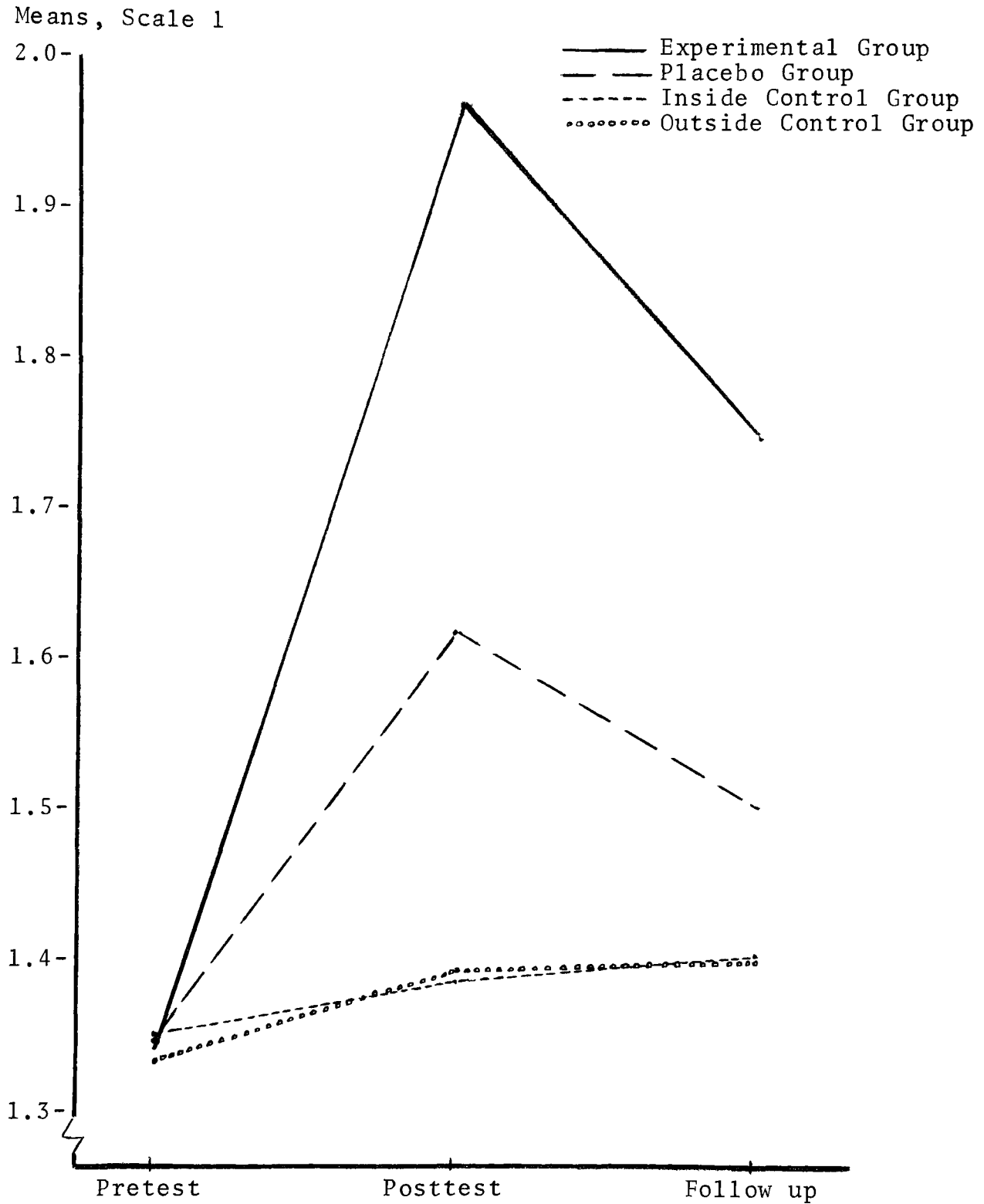


Figure 1.- Comparison of Mean Scores for All Groups at Pretest, Posttest and Follow up on Scale 1.

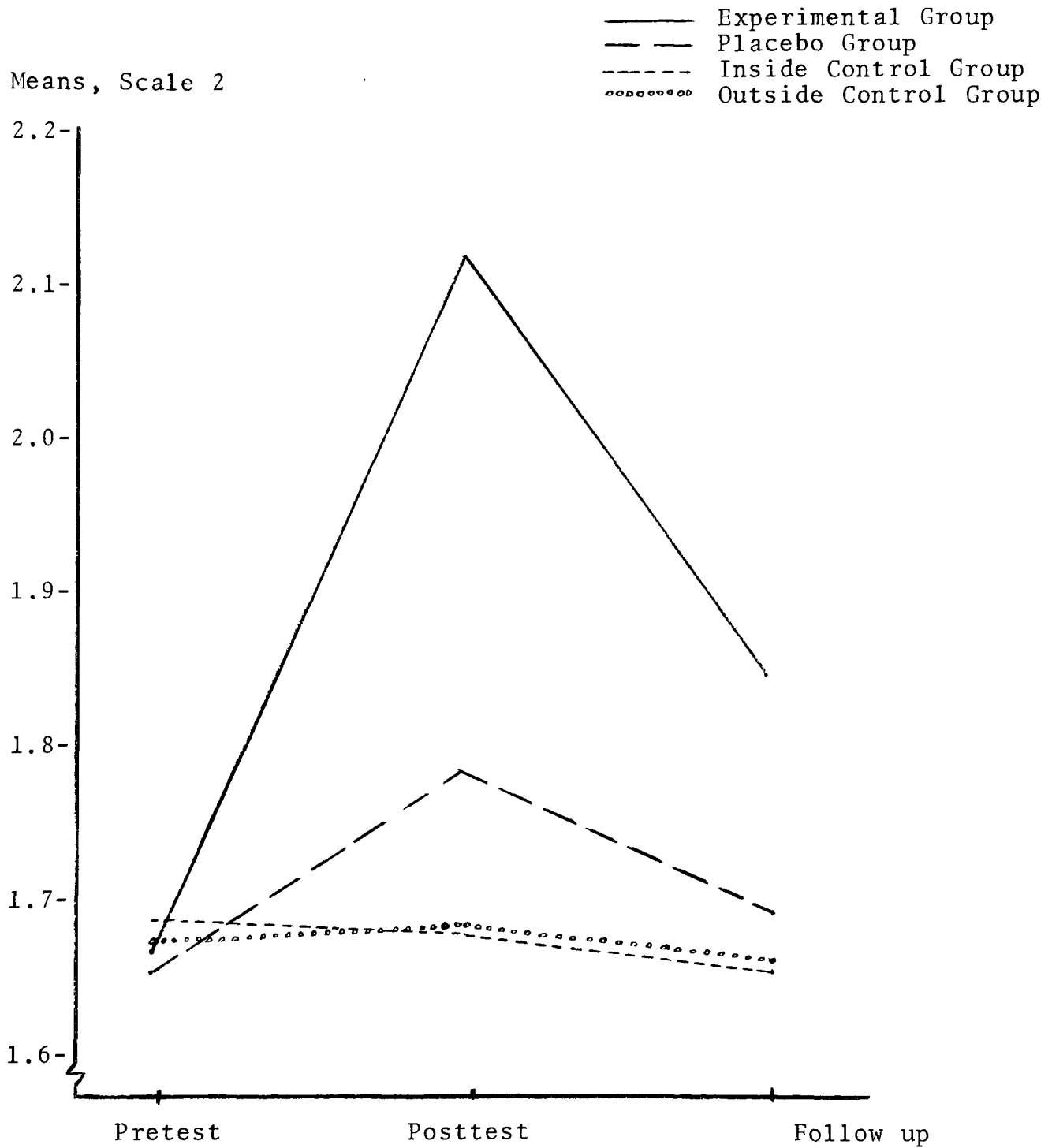


Figure 2.- Comparison of Mean Scores for All Groups at Pretest, Posttest and Follow up on Scale 2.

falling off at follow up but with much larger responses at posttest and follow up than are found with the two control groups.

From Table IV (and Tables XVI to XIX in Appendix 4), Table V is derived. In this table, the increase in mean score values for Scales 1 and 2 of posttest and follow up results over the pretest results (improvement 1 and improvement 2 respectively, are given. The table also provides the values of t-statistics calculated to compare the increase in mean values between experimental, placebo, inside and outside control groups. The mean improvement scores are shown graphically in Figures 3 and 4.

It is evident that a significant difference occurs between the experimental and control classes in magnitude and somewhat in direction as seen in Figure 3 (Scale 1). Both improvement 1 and improvement 2 in the experimental classes have a different direction from improvement 1 and improvement 2 in the outside control classes. Both improvement 1 and improvement 2 of the experimental classes have a similar trend, and both improvement 1 and improvement 2 of the outside control classes have a similar trend. Among the subject groups for the experimental classes, there is a falling off in response as each subject group was exposed to less experimental treatment. This suggests that strength (improvement) decreases with decreased application.¹ This

¹ (Interestingly, a significant linear trend may be calculated on improvement scores from inside control condition, to placebo to experimental treatment.)

Table V.-
Mean Improvement Scores and Tests of Significance.

Condition	N	Scale 1		Scale 2	
		Imp. 1	Imp. 2	Imp. 1	Imp. 2
Expt1	16	.623	.403	.448	.176
Placebo	16	.268	.156	.131	.039
Ctl. In	16	.049	.060	-.015	-.039
Ctl. Out	48	.036	.053	.010	-.014
mse		.01079	.01293	.00839	.01215
DF					
<u>t</u> ,Exp vs. 0.0	15	23.99***	14.17***	19.56***	6.38***
<u>t</u> ,Exp vs. C.I.	30	35.63***	8.53***	14.29***	5.516***
<u>t</u> ,Exp vs. Plac	30	9.66***	6.14***	9.78***	3.51***
<u>t</u> ,Plac vs.C.I.	30	5.96***	2.38*	4.508***	2.00
<u>t</u> ,C.I. vs.C.O.	62	.434	.21	-.945	-.786

* Significant at $\alpha = .050$
 ** Significant at $\alpha = .010$
 *** Significant at $\alpha = .001$

The mse is taken from the corresponding analysis of variance table (Tables XII to XV in Appendix 4).

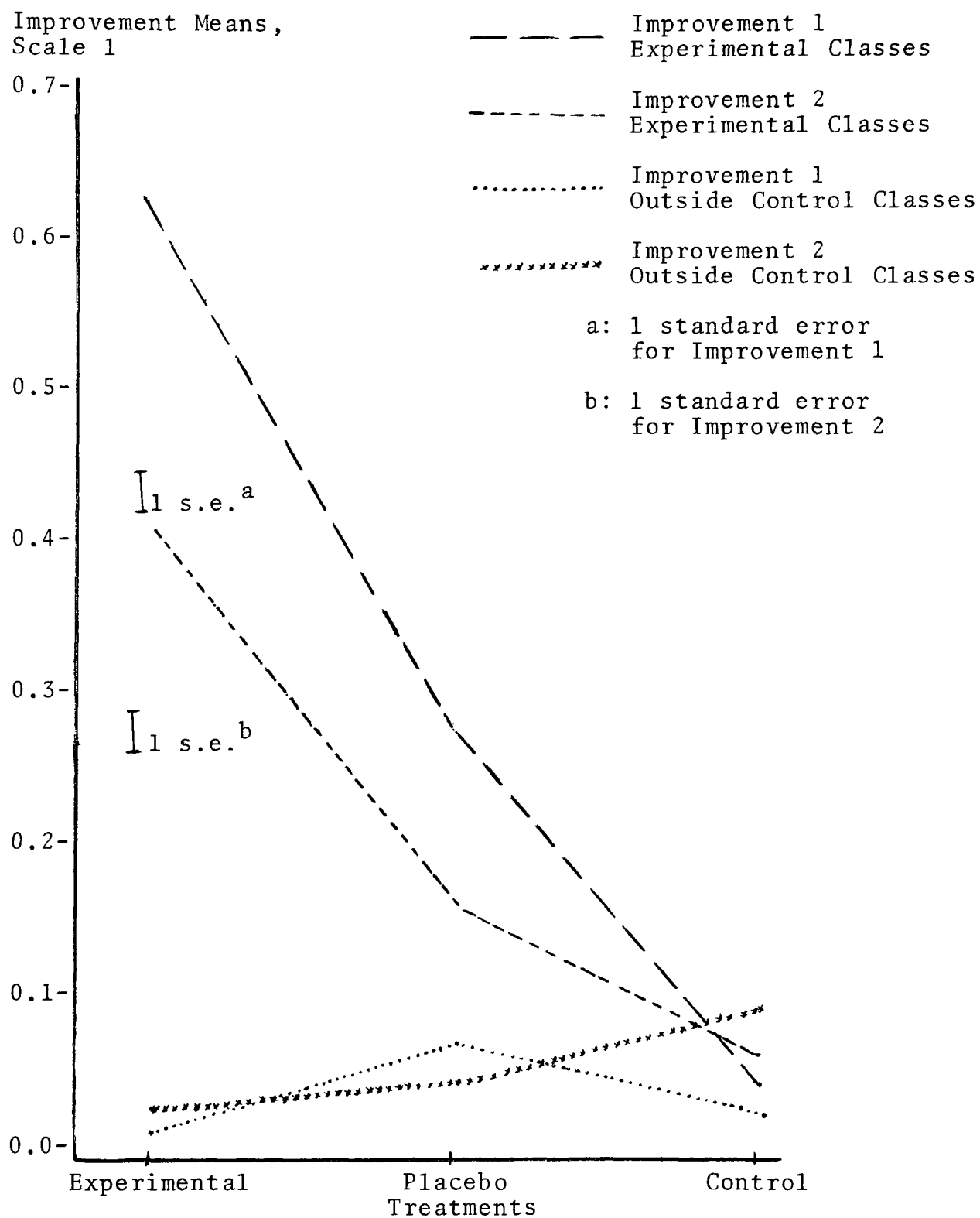


Figure 3.- Comparison of Mean Improvement Scores for all Groups on Scale 1.

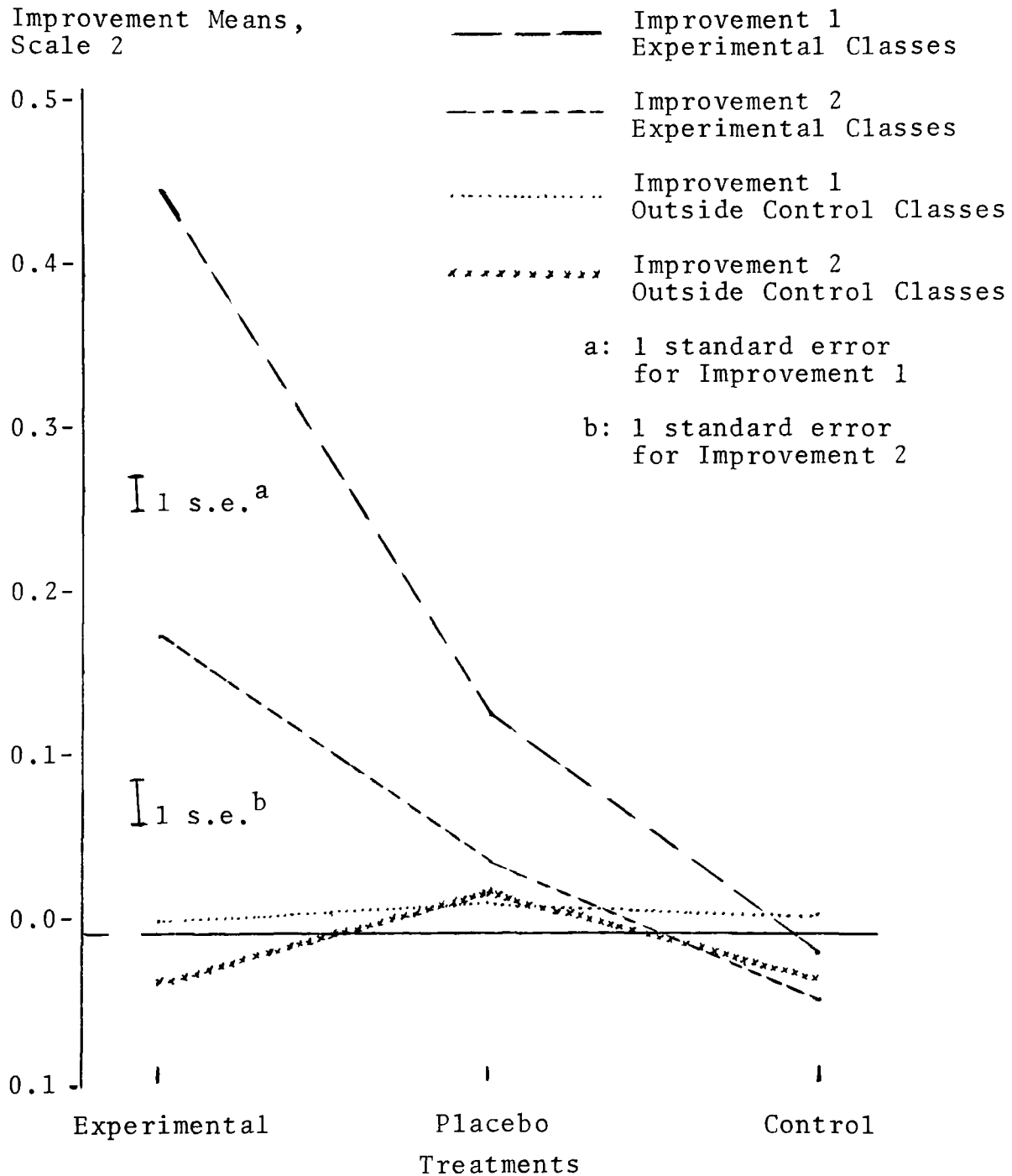


Figure 4.- Comparison of Mean Improvement Scores for all Groups on Scale 2.

occurred for both improvement scores.

The control classes show no definite trend in their improvement scores, and there is no difference between the control groups (inside and outside). There also exists a general decrease in improvement 2 scores over improvement 1 scores. This could be expected since a falling off might occur after the initial peak and novelty. However, the improvement is substantial indicating the worthiness of a follow up.

There is a focussing of scores as they are widespread at treatment 1 (experimental subjects) and this dispersion diminishes from treatment 1 to 2 to 3 where at treatment 3 (with inside control subjects) they are close together.

The above analysis is similar for Scale 2 as seen in Figure 4, except for the following added information. The range of the improvement scores for Scale 2 has shifted from that of Scale 1 and includes negative scores. This may be a reflection of the greater subjectivity involved in answering the questions in Scale 2.

Test of Hypothesis 1: There is no significant difference in peer-rated, sociometric social acceptance of low status pupils on pretreatment and posttreatment evaluations.- The experimental subjects obtained a pretest mean score of 1.349 and a posttest mean score of 1.972 as shown in Table IV. The gain of .623 points is statistically significant

($t=23.99$, $p<.001$) as seen in Table V. Therefore the null-hypothesis is rejected. A significant improvement in scores (social acceptance) obtained by unpopular pupils, follows the intervention technique.

Test of Hypothesis 2: There is no significant difference in peer-rated, sociometric social acceptance of low status pupils on pretreatment and follow up evaluations.- The experimental subjects obtained a pretest mean score of 1.349 and a follow up mean score of 1.752 as shown in Table IV. The gain of .403 points is statistically significant ($t=14.17$, $p<.001$) as seen in Table V. Thus the null-hypothesis is rejected. There is a significant maintenance of increase in social status of the unpopular pupils even after an eight-week period of time.

Test of Hypothesis 3: There is no significant difference in self-perceived, sociometric social acceptance of the low status pupils on pretreatment and posttreatment evaluations. On Scale 2 the experimental subjects obtained a pretest mean score of 1.674 and a posttest mean score of 2.122 as shown in Table IV. The gain of .448 points is statistically significant ($t=19.56$, $p<.001$). The null-hypothesis is rejected. A significant increase in self-perceived acceptance by unpopular pupils follows the intervention technique.

Test of Hypothesis 4: There is no significant difference in self-perceived, sociometric social acceptance of the low

status pupils on pretreatment and follow up evaluations.-

On Scale 2 the experimental subjects obtained a pretest mean score of 1.674 and a follow up mean score of 1.850 as shown in Table IV. The gain of .176 points is statistically significant ($t=6.38$, $p<.001$). The null-hypothesis is rejected. A significant maintenance of increase in self-perceived acceptance by unpopular pupils is forthcoming even after an eight-week period of time.

Test of Hypothesis 5: Any increase in peer-rated social acceptance and self-perceived status is not significantly different from increases which may occur with comparable unpopular children in a placebo group, in an "inside" class control group and in an "outside" class control group.- The increase in mean score values for experimental, placebo, inside and outside control groups for Scale 1 and Scale 2 are indicated in Table V. The possible comparisons of increase in mean score for the experimental group with the other groups, and for the placebo with control groups are also shown in Table V.

The results indicate that the increases in the experimental group in comparison with increases in the placebo and in the control groups are significantly high. The null-hypothesis is therefore rejected. Also noticeable is that the increases in the placebo group in comparison with those of the control groups are also significantly high (except in

the case of improvement 2 in Scale 2). Thus there is a significant increase in social status of unpopular pupils in the experimental and placebo groups in ratings by their peers (Scale 1) and their own self-perceived acceptance ratings (Scale 2) at posttest and, generally, at follow up. But the experimental group is significantly higher than the placebo group at posttest and at follow up. The inside and outside control groups showed no difference either at posttest or at follow up.

Summary.- In brief, the null-hypotheses in this investigation are all rejected. The unpopular, experimental subjects showed significant enhancement in the acceptance ratings received from their peers and in their own self-perceived acceptance ratings, at posttesting following the magic show intervention and at follow up (though of less degree). The increases obtained in both scales were significantly greater than any improvement occurring in the placebo or control conditions. Interestingly, the placebo group also showed greater improvement than obtained with the inside and outside control groups. The significant improvement 2 with the experimental group indicates the fruitfulness of a continuous program and of follow up studies.

CHAPTER IV

DISCUSSION OF RESULTS

The results of the experiment provide further evidence that at least some types of participative, cooperative group activities by pupils of low social acceptance, peer- and self-perceived, can be highly efficacious in enhancing and maintaining social acceptance. In this chapter the results are discussed, and particularly in relation to possible mechanisms of change and limitations of the study. Following this, certain implications from the study are noted. In the final section suggestions for further research are presented.

1. The Results and Possible Mechanisms of Change.

It seems clear that the intervention technique significantly raised the social acceptance of the experimental group. Improvements in the experimental group must be seen against changes in the control groups.

Of the three groups in the experimental set of classes, the inside control produced, on Scale 1, the least within-group change from pretest to posttest (.049 points) and from posttest to follow up (.060 points) as seen in Table V. It is evident that the passage of time did not appreciably alter the social status of the pupils. But it is reasonable to

suspect that the gains made by the inside control group, though small, could have been the result of a generalization effect from the saliency of the experimental and placebo groups. However, such speculation becomes unwarranted when it is considered that the outside control group itself obtained small increases in time (.036 at posttest, and .053 at follow up) and the gains by both inside and outside control groups are not significantly different. But the gains tend to favour the inside control group and this may be ascribable to unknown particular events or idiosyncrasies. Of importance, however, is the observation that the inside control showed no decline in status despite any contrast with the conspicuous performing experimental group. Such findings lead to the practical implication that even when certain pupils, such as the experimental group here, are helped in the improvement of their social status, other pupils in the class are also likely to benefit.

On Scale 2 the inside control is also similar to the outside control but the within-group differences tend to be increasingly negative. Thus improvements on Scale 1 tend to show an inverse relation with improvements on Scale 2. Perhaps, as students become more acceptable by their peers they become more aware of themselves and their social behaviour, and subjectively they are apt to underestimate their self-acceptance. But the values are too small to provide

any inference other than a mere suspicion perhaps worthy of future investigation.^{1a}

That high test-retest coefficients of reliability were obtained with the outside control and as this group was not unlike the inside control, this latter group provided an adequate baseline on which to evaluate the experimental group.

The success of the experimental group is ascribed to the experimental treatment. But the placebo group also showed significant improvements over the inside control. It is sensible therefore to examine what features of the intervention treatment were shared by both the experimental and the placebo groups and what additional aspects in the experimental treatment led to significant differences between the experimental and placebo groups in favour of the experimental group.

The placebo group was intended to control for factors that may appear associated with, but are actually extraneous to the experimental treatment. These include the following: 1) Attention by the particular experimenter, which could have increased the salience of the placebo group members and promote an enhanced feeling of self-worth. 2) Placebo group activity. That students would be removed from the class would give rise to a curiosity and envy since it is common knowledge that special class pupils enjoy the

1a (In a comparison of scores in both scales, r for the experimental, placebo, inside and outside control groups were, respectively, at pretest .24, .09, -.17, .26; posttest .40, .18, .46, .13; follow-up .24, -.32, .01, .19.)

escape from class periods. 3) Association between highly rated and lowly rated peers. Again the conspicuous interaction would lead students to rate more highly those students seen or known to be associating with the more favoured students in the class. 4) Support by the teacher. The teacher's interest and curiosity in events of the experiment could have unwittingly caused the students to perceive themselves with increased social status.

In addition, it is noteworthy that in the discussions with the placebo students, while the experimenter did not attempt to convey any idea of a need for neatness, orderliness or cooperation, some of these features would inevitably emerge as students tended to view the experimenter as a respectable adult and become more tolerant and understanding of each other as they spoke with him. Thus some cooperation intervened and this could have carried over to the classroom. In addition, removal of the placebo subjects from the classroom could have been regarded by the rest of the class as following a program like that of the experimental group. Thus the impact of the magic show with the experimental group could readily have generalized in considerable degree to the placebo group. It would appear that the placebo group was actually more of a "partial treatment" group and the name "placebo" is erroneous. As a group using part of the intervention treatment, it is understandable that the group

attained improvements in both sociometric scales significantly above those of the control groups.

The experimental group, apart from being subject to those aspects of the placebo group, received in addition:

- 1) Preparation and practice in an organized, participative set of activities generally interesting to all pupils.
- 2) Presentation of the organized magic show.

Both of these constituted the intervention technique and they seemed of crucial importance in producing improvements in Scale 1 and Scale 2 beyond those obtained by the placebo group. A strong inference is that such social behaviour as observed in the intervention technique can promote better acceptance of special class pupils by their peers and improve self-esteem. But whether an increase in self-acceptance is a consequence of an improvement in peer-acceptance or vice versa, is difficult to discern. It is also difficult to isolate which of the above factors suggested to account for success in the placebo and experimental groups or what combination of factors was responsible for the improvements obtained. The present investigation is therefore limited in this regard. Future studies with emphasis on process rather than outcome, may determine the relative weights of contributory factors. The intervention technique, however, is simple enough to be conducted by almost any teacher or psychologist.

The empirical evidence strongly supports the theoretical position of Barclay¹ and Johnson² who affirm that most of the suggestions in the literature for enhancing social status of the special class pupil could be woven into a conceptualization of organized, appropriate, participative behaviour. In the magic show, the experimental pupils were seen in interaction desirable of imitation. The success in performance could generate feelings of worth and competence in the performing students.

The mean pretest to posttest improvement score in Scale 1 (.623 points) and that for Scale 2 (.448) for the experimental group in this experiment is greater than the improvement (of .4719 and .3113) obtained in the Chaires' study,³ though Chaires had an additional factor, candies handed out by the low status experimental pupils immediately following the class presentation of their skit. The improvement reported by Rucker⁴ in his study is also less (as

1 J. R. Barclay, "Interest Patterns Associated with Measures of Social Desirability", Personnel and Guidance Journal, Vol. 45, 1966, p. 56-60.

2 G. O. Johnson, "A Study of the Social Position of Mentally Handicapped Children in Regular Grades", American Journal of Mental Deficiency, Vol. 55, 1950, p. 60-89.

3 Madelyn C. Chaires, Improving the Social Acceptance of Educable Mentally Retarded Pupils in Special Classes, unpublished doctoral dissertation presented to the School of Education of Indiana University, 1966, v-90 p.

4 C. N. Rucker, "Maintaining Social Acceptance Gains Made by Mentally Retarded Children", Exceptional Children, Vol. 36, 1970, p. 679-680.

discernible from a graph as he did not report the actual figure). The greater improvements in the present investigation are likely related to the higher IQ and age levels of the pupils than found in the work of Chaires or Rucker. But all three studies agree on a significant posttest improvement following an intervention technique. At follow up, however, Rucker found his experimental group (N=12) unable to maintain a superiority in scores over the control group. His intervention technique, an elaborate carnival with only four preparation sessions, perhaps attempted to encompass too much in too short a time so that whatever gains were attained at posttest, quickly dissipated as not sufficient time was allowed in preparation and length of follow up to permit consolidation of gains among raters. The significant follow up findings in both the placebo and experimental groups in the present investigation suggest a need for further studies aimed at verifiability and replicability of results.

2. Implications from the Study.

A number of theoretical and practical implications stem from this study.

- 1) The favourable results with the experimental group indicate that peer-acceptance and self-perceived acceptance of low status children in special classes may be enhanced by the provision of a relatively simple, participative set of

activities.

2) At the theoretical level, not only the hunches of Barclay⁵ and Johnson⁶ need to be implicated, but other theoretical viewpoints may be involved despite an apparent reluctance in the literature on sociometry for researchers to link their work to a theoretical frame of reference. The elevation in social acceptance, for example may be explained by Bandura and Walters⁷ as resulting from a desire by the classmate observers to imitate the enviable magic show performers.

3) One of the greatest difficulties with retarded or emotionally disturbed children seems to be their inability to cope or adjust socially. A first step in attempting to help such pupils lies in realizing that social rejection generally stems from a display of inappropriate behaviour. Such social rejection can continue into adulthood and into job situations. On the practical level, an attendant psychologist can easily devise a set of group activities that will promote the social welfare and acceptance of individuals particularly if such individuals are noted to be conspicuously

5 Barclay, op. cit.

6 Johnson, op. cit.

7 A. Bandura and R. H. Walters, Social Learning and Personality Development, New York, Holt, Rinehart and Winston, 1963, ix-329 p.

isolated or rejected.

Thus the psychologist and the teacher can be very instrumental in the social and personality development of the socially inadequate and frustrated individual who without the available help may be left to feel his way through a regular or special class or community group and find his environment to be an ever-expanding, bewildering mass of difficulties.

4) Success with the placebo group itself further suggests that a full skit or class presentation may not be essential in obtaining a significant rise in social status. Perhaps the periodic attention by an authority figure may be an essential ingredient, but a class demonstration of adequate social behaviour, as noted with the experimental group, attains higher levels of social acceptance.

5) It is of particular interest, as noted previously, that while the experimental group showed considerable sociometric improvements the placebo and the inside control groups also showed positive increases on Scale 1. Thus time spent in assisting one set of students may also have positive "spin-off effects" on other students.

6) The study also suggests usefulness of the sociometric measures as diagnostic and evaluative procedures. In a school situation, the psychologist or guidance counsellor or teacher trained in the use of sociometric techniques, a

skill which is relatively easy to acquire,⁸ can periodically evaluate the social structure of the class and provide the social training that seems needed. While the regular student in a regular class can develop social abilities in his variety of everyday experiences, the special class student has a narrower context and may benefit substantially by periodic group instructions in neatness, orderliness, organization, etiquette and respect for one another, especially if the information is conveyed to him through his participation in a life-like play or skit. Such qualities in behaviour may be considered essential aspects in living as human beings yet they hardly find a place in the school curriculum.

7) Further, information obtained in sociometric evaluations can form part of the personal data on a student collected by a psychologist or teacher in order to understand and help the student succeed in his social milieu.

8) A psychiatrist or clinical psychologist in advising on management of the behavioural problems of a pupil, may find that suggestions to the teacher or principal for a small group involvement of other but more acceptable pupils in the class may prove rewarding and beneficial to the overall psychological growth of the pupil.

8 An interesting, simple guide may be found in: Mary Northway, A Primer of Sociometry, (2nd ed.), Toronto, University of Toronto Press, 1967, ix-58 p.

9) The current investigation also implies that a brief intervention technique, different from that used by Chaires or Rucker, and applied to a somewhat different population sample significantly enhanced social acceptance. Such a study helps fill the gap that calls for controlled investigations. The successful follow up results, though less than at posttest, suggest the feasibility of further follow up studies.

10) In addition, the implication for ongoing reinforcements following posttest time, with practical intervention variables, is a reasonable consideration.

3. Suggestions for Further Research.

The present investigation provides directions for future research that may solve some of the associated problems and expand the frontier of experimental interrogation. The more important and relevant issues include the following:

1) The improvements in social acceptance in this study being higher than those reported in other experiments to date, strongly favours a need for a replication of studies such as this one.

2) The discrepancy between the significant eight-week follow up evaluations obtained in this study and the non-significant four-week follow up findings reported by

Rucker⁹ is also worthy of further exploration.

3) As noted earlier, the apparent inverse relationship between scores on Scale 1 and on Scale 2 for the control groups (as may be gleaned from Table V), can provide an interesting hypothesis for study. Perhaps the changes in scores and the directions of such changes are indeed non-significant and no inverse relationship becomes discernible. Or a positive relationship may result though of small degree, since increased peer acceptance is likely to be accompanied by increased self-perceived acceptance (as occurred with the manipulated placebo and experimental groups in the present investigation).

4) Perhaps a more appropriate placebo group than employed in this study, is one that is exposed to all the circumstances to which the experimental group is subjected except that the experimental group presents the magic show to the class and the placebo group is not allowed to present its prepared magic show. In this way, the independent variable becomes more sharply defined as the organized show presented to the class.

5) In order to determine what factor or combination of factors is most responsible for the results in an experiment such as this, a number of "process" investigations may

9 Rucker, Op. Cit.

be devised to test the role of each factor. Among such factors the more important would include those in relation to the placebo group (i.e., attention by the experimenter, salience of the pupils, association with highly rated peers, support by the teacher) and those in association with the experimental group (i.e., participation in organized activities, class presentation of a show).

6) Research may also be aimed at improving the acceptance in regular classes of pupils who would be placed in special classes but because of a lack of facilities, or for some other reason (e.g., current emphasis on "normalization" or "mainstreaming" of retarded), must be integrated into regular classes.

SUMMARY AND CONCLUSIONS

The present investigation demonstrates that increases in social acceptance, and concomittantly in self-perceived acceptance, can result from a set of organized, cooperative, participative activities as employed in this study.

The experimental group has shown at posttest and at follow up an enhancement in peer-rated acceptance and self-perceived acceptance significantly beyond that attained by the placebo group. These two groups in turn manifested significantly higher improvements than obtained by the control groups. Further, the additional factors peculiar to the experimental treatment such as the organized participative preparation of a simple magic show and its class presentation, may have been responsible for the success of the experimental group above that achieved by the placebo group. An assessment of the differential efficacy of the components of treatment would require further research.

As a result of the significant findings with the experimental group, a psychologist or counsellor could periodically employ sociometric techniques in order to assess the sociometric structure of a class (be it a regular class in which retardates are being integrated, or a special class), an adult community group, or the personnel on a job situation, and use appropriate participative techniques to

alleviate the rejection or isolation of low status individuals. Such intervention techniques can be simple and economical.

While the posttest findings in this study are in general agreement with those of two other controlled studies reported in the literature, the positive follow up findings are unlike the unfavourable results obtained by one of those two studies. Replicability studies seem indicated, and additional, controlled investigations are needed. Further follow up studies may suggest means of reinforcement to promote maintenance of significant improvement in acceptance.

BIBLIOGRAPHY

Amundson, C. L., "Increasing Interpersonal Relationships in the High School with the Aid of Sociometric Procedures", Group Psychotherapy, Vol. 6, 1954, p. 183-188.

The reporter organized a class by sociometric status. In a year there were increases in social acceptance, and the teacher was said to have become more keenly observant of interpersonal relationships within the class group. Without a control group this study remains an example of poor design or, at best, amounts to no more than a case study.

Baldwin, W. K., "The Social Position of the Educable Mentally Retarded Child in the Regular Grades in the Public Schools", Exceptional Children, Vol. 25, 1958, p. 106-108.

In line with other studies reporting similar findings, this research depicts a significantly low acceptance of the educable mentally retarded by his fellow classmates in a regular class. Attention is drawn to his need for help.

Barclay, J. R., "Sociometry: Rationale and Technique for Effecting Behaviour Change in the Elementary School", Personnel and Guidance Journal, Vol. 44, 1966, p. 1067-1076.

The author describes sociometry as a method of analyzing interrelationships in a group and urges strongly that it be employed more often by psychologists and school counsellors as a device for assessing social desirability in students and as an interim criterion of behaviour change. The author adds that as social desirability is related to motivation to achieve, the social climate of a class ought to be assessed before procedures are implemented to improve learning.

-----, "Interest Patterns Associated with Measures of Social Desirability", Personnel and Guidance Journal, Vol. 45, 1966, p. 56-60.

This author, apart from noticing that teachers' judgments of pupils on a number of criteria do have validity, points out that low acceptance pupils are withdrawn and need to be more outgoing. Appropriate, socializing behaviour is seen as a worthy intervention in the promotion of acceptance.

Campbell, D. T. and J. C. Stanley, Experimental and Quasi-Experimental Designs for Research, Chicago, Rand McNally, 1973, ix-84 p.

The authors show that even in the nebulous periphery of the social sciences where measurements and proper controls can be elusive, certain methodological approaches are feasible in yielding reliable and valid information.

Chaires, Madelyn C., Improving the Social Acceptance of Educable Mentally Retarded Pupils in Special Classes, unpublished doctoral dissertation presented to the School of Education of Indiana University, 1966, v-90 p.

This is one of the few attempts involving an intervention method to improve social acceptance, but proper control of confounding variables is sorely lacking. However the study opens a path for further research and better systematic studies.

Grace, Sister Mary, "Developing Friendliness", Catholic School Journal, Vol. 66, Oct. 1966, p. 96-98.

In this report the writer proposes that a grouping of popular with shy children would enhance the sociability of the latter, especially if responsible tasks are provided. She also suggests that sociometric techniques be used to find out what youngsters are having social difficulties and are in need of help. These suggestions can be said to have found practical substantiation in the current project.

Grossman, H., and J. Wrighter, "The Relationship Between Selection-Rejection and Intelligence, Social Status, and Personality Amongst Sixth-Grade Children", Sociometry, Vol. 11, 1948, p. 346-355.

In this research, the authors found that compared with low acceptance children, high acceptance children are more intelligent, have greater reading ability, are of a higher socioeconomic status and have better personality integration. It amply demonstrates, like many other studies the search for psychological correlates of acceptance level, leaving a need for exploration of social, behavioural factors.

Hudgins, B. B., L. M. Smith and T. J. Johnson, "The Child's Perception of his Classmates", Journal of Genetic Psychology, Vol. 101, 1962, p. 401-405.

This may be considered as an example of a number of studies illustrating that peers can capably and reliably nominate certain abilities and that peers relate low social acceptance with poor academic ability. The study lends validity to sociometric scales.

Johnson, G. O., "A Study of the Social Position of Mentally Handicapped Children in the Regular Grades", American Journal of Mental Deficiency, Vol. 55, 1950, p. 60-89.

One of the very few studies that looks at behaviour in relation to social acceptance. The author reports that the mentally retarded is found to be isolated and rejected in the regular class. The social segregation stems not so much from poor intelligence but from unacceptable, bizarre behaviour. The writer is one of the few who attempt to link various discrete data into a theoretical conceptualization.

Lund, G., "Can We Help Children Gain Acceptance?", Elementary School Journal, Vol. 64, 1964, p. 205-209.

The author finds that peer acceptance of low sociometric pupils can be enhanced after a year of counselling involving discussions of problem areas. The study can serve as a good example of the many poorly controlled investigations in sociometry. No control group was used.

Moreno, J. L., Who Shall Survive?, Washington, D. C., Nervous and Mental Disease Publishing Co., 1934, xvi-440 p.
The basic introduction to sociometry, by the founder himself.

----- (Ed.), The Sociometry Reader, Glencoe, Illinois, Free Press, 1960, xxiv-733 p.

Presents an interesting compilation of sociometric studies since Moreno's introduction of the sociometric method. It provides basic considerations for the worker in the field and contains, for example, writings by Mouton, Blake and Fruchter on "The Reliability of Sociometric Measures" and on "The Validity of Sociometric Responses".

Murry, H., "The Sociometric Stability of Personal Relations Among Retarded Children", Sociometry, Vol. 16, 1953, p. 113-141.

This study examines the interpersonal relations among retardates and found them to be stable. It is significant in demonstrating not only that sociometric tests can be simplified for comprehension by retardates but that acceptable reliability coefficients are also forthcoming.

Northway, Mary, A Primer of Sociometry, 2nd Ed., Toronto, University of Toronto Press, 1967, ix-58 p.

In a few pages the writer introduces the practical basics of sociometry to the novice. Perhaps the expert, too, may find the lucid exposition a worthwhile set of reminders.

Reger, R., "An Attempt to Integrate a Group Isolate", Journal of Educational Sociology, Vol. 36, 1962, p. 154-158.

This investigator notes that despite granting a conspicuous status of responsibility to the least accepted of twenty-five boys in a cottage, this did not increase the lad's acceptance beyond being the least accepted. Such a negative finding jolts the imagination and serves as a timely reminder in respect to consideration of the exercise of proper controls measures.

Rucker, C. N., "Maintaining Social Acceptance Gains Made by Mentally Retarded Children", Exceptional Children, Vol. 36, 1970, p. 679-680.

While this study must be commended as being one of the very few in the area that have bothered to do follow up evaluations it must be criticized for using too impractical an intervention technique. Not surprisingly, its follow up results were disappointing and contrast with those of the current investigation, thus inviting further studies to resolve issues and advance the frontiers.

APPENDIX 1

PARENTAL CONSENT FORM



PLEASE RETURN THIS FORM TO YOUR SCHOOL AS SOON AS POSSIBLE

APPENDIX 2

STRUCTURED PLANS FOR EACH SESSION OF EXPERIMENTAL CONDITION

Experimental Treatment

The six tricks, available commercially at magic shops, were:

1) The mysterious cards.- The magician shows a regular pack of cards and asks any member of the class to place a finger in-between the pack at any point as the magician ruffles one end of the pack. The card immediately under the finger is raised for viewing by the audience but its identity is left unknown to the magician. The pack, with the selected card replaced, is shuffled and cut into three heaps. The magician states that if someone would point to any heap he would make the selected card, whatever it is, appear on the top of the heap, and he so does. He shows the card for verification and replaces it. He then comments that it does not matter which heap was chosen, for he now exposes the top card from another heap and shows it, too, is the selected card. He replaces the card and shows that the top card of the third heap is also made to be the selected card. Gathering the heaps together he explains that the reason for this strange phenomenon lies in the fact that the whole pack has turned into whatever card was selected. He ruffles the pack and shows all the cards to have turned into the selected card. He asks someone to blow on the pack and instantly the pack of cards changes back into a regular set of different cards.

2) The miraculous joining.- Both ends of a three-foot long string are joined by a knot and the circular string held in view and folded into two smaller circles. A member of the audience is invited to cut through the two circles with a pair of scissors. The audience member is asked to join two cut ends into a knot while the magician will join the other two cut ends with his mouth. Thus there would be two new knots, which together with the original would make a total of three. But when the magician reveals the one made by his mouth, instead of a knot a continuous restoration of the cut string is found, and only a total of two knots can be found in the string passed out for careful inspection.

3) Restoration of torn paper.- A foot long, by one-inch wide, piece of paper is held up to the class by the magician who then proceeds to tear it into small bits. He forms the bits into a ball, and taking hold of the end of a bit of the balled paper he slowly pulls it out of the ball and the audience observes the bit to lengthen into the original long paper as the ball unfolds and becomes the restored paper.

4) Card into matches.- A playing card is held up and shown to the class. The magician states that the card is able to grant certain wishes so that if, for example, he were a smoker and wished some matches the card would turn into matches. As he speaks the simple card is observed to

change instantly into a book of matches. Nothing else is in his hands. He then remarks that if sufficient time permitted he could have the card turn into a rifle or a lamp but a lack of time prevents such a performance.

5) ESP with a regular pack of cards.- A pack of cards is shuffled by a member of the audience and cut into three heaps. The magician remarks that by a strange coincidence the cards were cut at just the right places so he can now name the top card of each of the three heaps even before he touches any of them. And he proceeds so to do, with the three cards correctly named in advance.

6) Making money disappear.- A two-dollar bill is placed in a small envelope which in turn is folded into three larger envelopes. On reopening the envelopes the money is found to have disappeared and a rubber band appears in its place. The rubber band is folded into the envelopes and on reopening the envelopes the money reappears. The trick is repeated once more.

Session Plans

The eight 20-minute sessions of preparation with the experimenter consisted of the following plans.

Session 1

Purpose:

- 1) For experimenter to meet pupils.
- 2) Experimenter to explain need for magic show and essential attendant conditions.
- 3) To generate and hold interest of pupils in a magic show.

Procedures:

- 1) Experimenter introduces himself and pupils to one another.
- 2) Experimenter explains that pupils often have hidden desire to act in play and an opportunity is being provided for them, randomly selected, to participate in a very interesting magic show consisting of a number of tricks that compare with some that are seen on TV but which are very easy to learn and do.

Experimenter explains further that preparation for the show will be twice a week for four weeks after which time the show will be presented to the class, and a number of conditions are essential: a) that if any pupil knows of any reason that may prevent his continuation in school to the end of the term it would be appreciated if he would so state so

an alternate student can be substituted immediately in his place; b) that because some pupils tend to be absent often it would be appreciated if the ones selected would make it a point not to be absent on the days of preparation, and that after each session they would be told when the next meeting could take place; c) that pupils must look neat and well groomed at practice sessions and especially so when the show is presented to the class; d) that pupils are known to find some pupils difficult to get along with but the particular group must cooperate and help each other fully if success is to be attained; e) that two tricks will be given to each pupil and that the order of presentation will be determined at the next meeting; f) that the pupils are permitted to tell their classmates of the little show being prepared but under no circumstance are the secrets to the tricks to be revealed to anyone outside the immediate group of three pupils until about nine weeks after the class presentation since the force of a magic item lies in the suspense left with the viewer and revelation of the secret destroys the impact.

3) To hold interest of pupils, experimenter quickly demonstrates all the magic tricks.

Concluding activities:

- 1) Pupils are thanked for their cooperation.
- 2) They are reminded of basic essentials: attendance,

good grooming, need to cooperate, need to keep secrets of tricks absolutely confidential.

3) Next meeting time set.

Session 2

Purpose:

- 1) To distribute the tricks and determine order of presentation.
- 2) To instruct pupils in performance of tricks and supervise their practice.
- 3) To ensure pupils cooperate and abide by essentials pointed out in first session.

Procedures:

1) Each pupil is given two tricks, chosen at random by the pupil from names of tricks on slips of paper shuffled in a hat. The order in which the pupils present their tricks is similarly randomly determined.

2) Before instructing a pupil on a trick, the trick is presented by the experimenter to the group of pupils acting as an audience in order to demonstrate its smooth operation and startling effect. The simplicity of the secret is explained and the pupil is taught the performance. He is told that no special spoken lines need to be memorized for the trick and he is free to make any interesting remarks, especially funny ones but without embarrassing anybody (e.g., "I learned this magic secret in Tibet from a wise old Chinese

man named Ah Huey who had a twin brother named Ah Phoey"). A pupil rehearsing a trick is strongly encouraged to use the other two pupils as his practice audience as each pupil helps and advises the others toward a perfect performance. The first pupil to perform would announce to the class that the tricks about to be seen are not meant so much as a challenge to the class but as a pleasant pastime showing that with good tolerance and cooperation in practice with fellow pupils some fascinating talents are revealed, and that any pupil who happens to know the secret to any of the tricks should not reveal it until after the show. At the end of his first trick the first pupil draws attention to the second pupil, and the process continues to the third pupil, then back to the first, second and third. The last pupil concludes by thanking the class for their attention and interest. Throughout the show whenever participation by the class seems slow (e.g., in providing a two dollar bill for its disappearance, volunteering to cut the string), members of the cast provide the needed assistance.

3) Pupils practice their tricks and routine, with individual help from the experimenter. They are praised for being neat.

Concluding activities:

1) Pupils reminded of essentials: attendance, good grooming, cooperation, keeping the tricks secretive.

2) Next meeting time set.

Sessions 3, 4, 5, 6 and 7

Purpose:

- 1) To supervise repeated performances of tricks by pupils.
- 2) To ensure pupils cooperate with one another and abide by essentials pointed out earlier.

Procedures:

1) Pupils practise their tricks with suggestions for improvements from one another and the experimenter.

2) Pupils praised for practising the essentials required, and when asked what are the essentials they reply in unison: "Attendance, good grooming, cooperation and not revealing the secrets of the tricks." The experimenter expresses continuing expectation of such good behaviour.

Concluding activities:

- 1) Essentials emphasized.
- 2) Next meeting time set.

Session 8

Purpose:

- 1) As in previous session but allowing pupils to put on a complete dress rehearsal.
- 2) To inform pupils experimenter will not be in classroom at time of class presentation.

Procedures:

1) Pupils put on a complete show with minimum assistance from the experimenter. Then corrections are suggested.

2) Pupils told that the experimenter will not be in the classroom when the show is presented but the teacher will introduce the magic show and be in charge though they are now capable of presenting the show without any supervision.

Concluding activities:

1) Pupils reminded of the essentials.

2) The time of the class presentation is set.

At some time between the last session and the class presentation (less than a week), the teacher is contacted and informed of his or her supervisory role in the class presentation and is thanked for cooperating. The teacher is told that while the experimenter will not be in the classroom so the show can take place in a usual setting of teacher and pupils, he will be situated inconspicuously outside the classroom from where he can peek in while the play is in progress. Should any major or unforeseen problem arise the teacher can contact the experimenter outside the classroom.

APPENDIX 3

SOCIOMETRIC SCALES

Instructions used with the Sociometric Scales¹

Good morning (afternoon), boys and girls. Today we would like to ask you to help us to learn more about you and your class. In order to do this, we would like you to give us some information on the forms that are being passed out to you. This is not a test, and the information that you give will not be seen by your teacher, or by anyone in your school. Your answers will not affect your school work in any way. Please give your own true answers, exactly the way you feel, and do not look at anyone's paper but your own.

1. The first thing we want you to do is to write your name in the space where it says name at the top of the first sheet.
2. Look at the names of all your classmates in the room; find your own name and draw a line through it. We do not want you to rate your own self. Turn over and also draw a line through your name on the second sheet.
3. Now let's look at the sentences at the top of your paper. The top sentence says to circle YES (notice the large YES) if you want that person as a friend very much. Look through the names of the members of your class and the size of the "yes's" and question mark beside their names. Now let's look at the next sentence at the top and read it; it says to circle the next size Yes if you want that person as a friend, but not very much. The next sentence says to circle the next size yes if it matters only a little to you whether that person is a friend or not, and the last sentence says to circle the question mark (?) if you do not care to have that person as a friend at all. (Give hypothetical examples using names not on the questionnaire.)
4. Does everyone understand what they are to do? Are there any questions?

¹ The instructions (with slight modifications) are those reported and presented by Chaires in her (1966) unpublished doctoral dissertation.

5. Now let's begin -- (Incorporate each person's name in each sentence, until you have verbally named each pupil in the room.)
6. Has everyone completed the sheet? Very good, you have all done this very well.
7. Now, let's turn over to the next page. We have some more of the same type of things to do, only the statements are different. Let's go through them (read through each sentence at the top of the page and explain carefully as before).
8. Now let's begin (read through each sentence, putting the pupil's name in the sentence that is being rated).
9. Have we all finished now? Please turn your papers face down and pass them to this side (collect all papers).
10. Thank you, Miss (Mr.) _____ and boys and girls, for letting us come in to see you. We will be coming back two more times later this Spring (vary according to which testing session is being completed). It has been a pleasure to be here with you.

Scale 1

Date _____ School _____

Name _____ Age _____

Circle YES if you want that person as a friend very much.

Circle Yes if you want that person as a friend.

Circle yes if it matters only a little whether that person
is a friend.Circle ? if you do not care for that person as a friend
at all.

- | | | | | | |
|-----|-----|-----|-----|---|--------------------------|
| 1. | YES | Yes | yes | ? | Henry Aiken ² |
| 2. | YES | Yes | yes | ? | Peter Barnard |
| 3. | YES | Yes | yes | ? | Mat Bowlby |
| 4. | YES | Yes | yes | ? | Joan Charry |
| 5. | YES | Yes | yes | ? | Art Donaldson |
| 6. | YES | Yes | yes | ? | Tom Drister |
| 7. | YES | Yes | yes | ? | Mary Feller |
| 8. | YES | Yes | yes | ? | Robert Geer |
| 9. | YES | Yes | yes | ? | John Gint |
| 10. | YES | Yes | yes | ? | James Horn |
| 11. | YES | Yes | yes | ? | Rodney King |
| 12. | YES | Yes | yes | ? | Anna List |
| 13. | YES | Yes | yes | ? | Elvis Luther |
| 14. | YES | Yes | yes | ? | Unus Malik |
| 15. | YES | Yes | yes | ? | Allen Neiger |
| 16. | YES | Yes | yes | ? | Rose Risba |
| 17. | YES | Yes | yes | ? | Jack Wise |

² The list of names provided here for illustrative purpose, is entirely fictitious. Any resemblance to any person alive or dead is accidental.

Scale 2

Circle YES if that person wants you as a friend very much.

Circle Yes if that person wants you as a friend.

Circle yes if it matters only a little to that person whether you are his (or her) friend.

Circle ? if that person does not care to have you as a friend at all.

1.	YES	Yes	yes	?	Henry Aiken
2.	YES	Yes	yes	?	Peter Barnard
3.	YES	Yes	yes	?	Mat Bowlby
4.	YES	Yes	yes	?	Joan Charry
5.	YES	Yes	yes	?	Art Donaldson
6.	YES	Yes	yes	?	Tom Drister
7.	YES	Yes	yes	?	Mary Feller
8.	YES	Yes	yes	?	Robert Geer
9.	YES	Yes	yes	?	John Gint
10.	YES	Yes	yes	?	James Horn
11.	YES	Yes	yes	?	Rodney King
12.	YES	Yes	yes	?	Anna List
13.	YES	Yes	yes	?	Elvis Luther
14.	YES	Yes	yes	?	Unus Malik
15.	YES	Yes	yes	?	Allen Neiger
16.	YES	Yes	yes	?	Rose Risba
17.	YES	Yes	yes	?	Jack Wise

APPENDIX 4

ANALYSES OF VARIANCE AND MEAN SCORES

Table VI.-
Analysis of Variance, Scale 1, Pretest

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	.000782	.000782	.030	.861
Year (Grade, Yr)	1	.006463	.006463	.254	.616
Class x Year	1	.000200	.000200	.007	.929
School	1	.008064	.008064	.317	.575
Class x School	1	.004823	.004823	.189	.664
Year x School	1	.108410	.108410	4.262	.043
Class x Year x School	1	.003617	.003617	.142	.707
Treatment (Trmt)	2	.025425	.012713	.499	.609
Class x Trmt	2	.012851	.006425	.252	.777
Year x Trmt	2	.014416	.007208	.283	.754
Class x Yr x Trmt	2	.007238	.003619	.142	.868
School x Trmt	2	.008600	.004300	.169	.845
Class x School x Trmt	2	.002209	.001104	.043	.958
Yr x School x Trmt	2	.020389	.010195	.400	.671
Class x Yr x School	2	.009986	.004993	.196	.822
Error	72	1.831080	.025431		
Total	95	2.064600			

Table VII.-
Analysis of Variance, Scale 2, Pretest

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	.000003	.000003	.001	.982
Year (Grade, Yr)	1	.000532	.000532	.082	.775
Class x Year	1	.001506	.001506	.232	.631
School	1	.000001	.000001	.000	.986
Class x School	1	.000410	.000410	.063	.802
Year x School	1	.000321	.000321	.049	.824
Class x Year x School	1	.000474	.000474	.073	.787
Treatment (Trmt)	2	.030343	.015172	2.342	.103
Class x Trmt	2	.000398	.000199	.030	.970
Year x Trmt	2	.000051	.000025	.004	.996
Class x Yr x Trmt	2	.000168	.000084	.013	.987
School x Trmt	2	.000169	.000084	.013	.987
Class x School x Trmt	2	.001093	.000546	.084	.919
Yr x School x Trmt	2	.000633	.000316	.048	.952
Class x Yr x School	2	.001771	.000885	.136	.872
Error	72	.466330	.006476	.136	.872
Total	95	.504210			

Table VIII.-
Analysis of Variance, Scale 1, Posttest.

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	1.771600	1.771600	51.244	<.001
Year (Grade, Yr)	1	.004520	.004520	.130	.719
Class x Year	1	.004146	.004146	.119	.739
School	1	.019723	.019723	.570	.453
Class x School	1	.009340	.009340	.270	.605
Year x School	1	.057997	.057997	1.677	.199
Class x Year x School	1	.001419	.001419	.041	.840
Treatment (Trmt)	2	1.476500	.738230	21.353	<.001
Class x Trmt	2	1.358200	.679120	19.643	<.001
Year x Trmt	2	.032395	.016198	.468	.628
Class x Yr x Trmt	2	.004365	.002182	.063	.939
School x Trmt	2	.004604	.002302	.066	.936
Class x School x Trmt	2	.006685	.003342	.096	.908
Yr x School x Trmt	2	.052975	.026487	.766	.469
Class x Yr x School	2	.014497	.007248	.209	.811
Error	72	2.48917	.034571		
Total	95	7.308			

Table IX.-
Analysis of Variance, Scale 2, Posttest.

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	.760980	.760980	94.826	<.001
Year (Grade, Yr)	1	.003667	.003667	.457	.501
Class x Year	1	.000819	.000819	.102	.750
School	1	.000058	.000058	.007	.932
Class x School	1	.000214	.000214	.026	.870
Year x School	1	.000712	.000712	.088	.767
Class x Year x School	1	.001392	.001392	.173	.678
Treatment (Trmt)	2	.77125	.385630	48.053	<.001
Class x Trmt	2	.937200	.468600	58.392	<.001
Year x Trmt	2	.003945	.001972	.245	.783
Class x Yr x Trmt	2	.002389	.001194	.148	.862
School x Trmt	2	.000758	.000379	.047	.954
Class x School x Trmt	2	.004792	.002396	.298	.743
Yr x School x Trmt	2	.002280	.001140	.142	.868
Class x Yr x School	2	.004636	.002318	.288	.750
Error	72	.577800	.008025		
Total	95	3.072900			

Table X.-
Analysis of Variance, Scale 1, Follow up

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	.524040	.524040	13.910	<.001
Year (Grade, Yr)	1	.002999	.002999	.079	.779
Class x Year	1	.003075	.003075	.081	.776
School	1	.030253	.030253	.803	.373
Class x School	1	.024903	.024903	.661	.419
Year x School	1	.110540	.110540	2.934	.091
Class x Year x School	1	.001510	.001510	.040	.842
Treatment (Trmt)	2	.461220	.230610	6.121	.004
Class x Trmt	2	.587090	.293540	7.841	.001
Year x Trmt	2	.092936	.046468	1.233	.297
Class x Yr x Trmt	2	.058365	.029183	.774	.465
School x Trmt	2	.017323	.008661	.229	.795
Class x School x Trmt	2	.010478	.005239	.139	.870
Yr x School x Trmt	2	.101250	.050623	1.343	.267
Class x Yr x School	2	.001895	.000947	.025	.975
Error	72	2.712500	.037673		
Total	95	4.740400			

Table XI.-
Analysis of Variance, Scale 2, Follow up

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	.130810	.130810	21.720	<.001
Year (Grade, Yr)	1	.000022	.000022	.004	.950
Class x Year	1	.000792	.000792	.132	.717
School	1	.000697	.000697	.116	.734
Class x School	1	.000904	.000904	.150	.700
Year x School	1	.001157	.001157	.192	.663
Class x Year x School	1	.002099	.002099	.349	.557
Treatment (Trmt)	2	.124040	.062019	10.298	<.001
Class x Trmt	2	.213190	.106600	17.700	<.001
Year x Trmt	2	.000442	.000221	.037	.964
Class x Yr x Trmt	2	.003343	.001671	.278	.758
School x Trmt	2	.001002	.000501	.083	.920
Class x School x Trmt	2	.000916	.000458	.076	.927
Yr x School x Trmt	2	.004526	.002263	.376	.688
Class x Yr x School	2	.009589	.004794	.796	.455
Error	72	.433630	.006022		
Total	95	.927160			

Table XII.-

Analysis of Variance, Scale 1, Improvement 1 (Pre to Post)

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	1.846600	1.846600	171.139	<.001
Year (Grade, Yr)	1	.000171	.000171	.015	.900
Class x Year	1	.002528	.002528	.234	.630
School	1	.002556	.002556	.236	.628
Class x School	1	.027588	.027588	2.556	.114
Year x School	1	.007826	.007826	.725	.397
Class x Year x School	1	.000506	.000506	.046	.946
Treatment (Trmt)	2	1.209100	.604570	56.030	<.001
Class x Trmt	2	1.502000	.751000	69.601	<.001
Year x Trmt	2	.004774	.002387	.221	.802
Class x Yr x Trmt	2	.01906	.009533	.883	.418
School x Trmt	2	.001622	.000811	.075	.928
Class x School x Trmt	2	.016578	.008289	.768	.468
Yr x School x Trmt	2	.010730	.005365	.497	.610
Class x Yr x School	2	.002267	.001133	.105	.900
Error	72	.776880	.010790		
Total	95	5.430800			

Table XIII.-

Analysis of Variance, Scale 2, Improvement 1 (Pre to Post)

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	.749280	.749280	89.279	<.001
Year (Grade, Yr)	1	.006185	.006185	.737	.393
Class x Year	1	.000025	.000025	.003	.956
School	1	.000001	.000001	.000	.991
Class x School	1	.001597	.001597	.190	.664
Year x School	1	.000013	.000013	.001	.968
Class x Year x School	1	.002906	.002906	.346	.558
Treatment (Trmt)	2	.845150	.422580	50.352	<.001
Class x Trmt	2	.954310	.477160	56.855	<.001
Year x Trmt	2	.004939	.002469	.294	.746
Class x Yr x Trmt	2	.003434	.001717	.204	.815
School x Trmt	2	.000950	.000475	.056	.945
Class x School x Trmt	2	.002785	.001393	.166	.847
Yr x School x Trmt	2	.000839	.000419	.050	.951
Class x Yr x School	2	.008162	.004081	.486	.617
Error	72	.604260	.008392		
Total	95	3.184800			

Table XIV.-

Analysis of Variance, Scale 1, Improvement 2 (Post to Follow up)

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	.565340	.565340	43.710	<.001
Year (Grade, Yr)	1	.000657	.000657	.050	.822
Class x Year	1	.000484	.000484	.375	.542
School	1	.007076	.007076	.547	.462
Class x School	1	.051662	.051662	3.994	.049
Year x School	1	.000010	.000010	.001	.978
Class x Year x School	1	.000454	.000454	.035	.852
Treatment (Trmt)	2	.350320	.175160	13.543	<.001
Class x Trmt	2	.684870	.342440	26.476	<.001
Year x Trmt	2	.037028	.018514	1.431	.246
Class x Yr x Trmt	2	.025388	.012694	.981	.380
School x Trmt	2	.042699	.021349	1.651	.199
Class x School x Trmt	2	.017988	.008993	.695	.502
Yr x School x Trmt	2	.037942	.018971	1.467	.237
Class x Yr x School	2	.019216	.009608	.743	.479
Error	72	.931230	.012933		
Total	95	2.776700			

Table XV.-

Analysis of Variance, Scale 2, Improvement 2 (post to Follow up)

Source of Variation	df	Sum of Squares	Mean Square	F-Ratio	Significance
Class Set	1	.125980	.125980	10.365	.002
Year (Grade, Yr)	1	.000519	.000519	.042	.837
Class x Year	1	.000030	.000030	.002	.960
School	1	.001088	.001088	.089	.766
Class x School	1	.003066	.003066	.252	.617
Year x School	1	.000121	.000121	.010	.921
Class x Year x School	1	.003898	.003898	.320	.573
Treatment (Trmt)	2	.180440	.090218	7.423	.001
Class x Trmt	2	.224840	.112420	9.250	<.001
Year x Trmt	2	.000445	.000222	.018	.982
Class x Yr x Trmt	2	.003389	.001694	.139	.870
School x Trmt	2	.000457	.000228	.018	.981
Class x School x Trmt	2	.003395	.001697	.139	.870
Yr x School x Trmt	2	.003985	.001992	.163	.849
Class x Yr x School	2	.019348	.009673	.796	.455
Error	72	.875050	.012153		
Total	95	1.446100			

Table XVI.-

Mean Scores for all Groups by Class Set and Grade (Year) Level
for Scale 1

Group	<u>Exptl Classes</u>		<u>Outside Ctl Classes</u>		<u>Total Mean</u>	
	<u>Yr 1</u>	<u>Yr 2</u>	<u>Yr 1</u>	<u>Yr 2</u>	<u>Exptl Cl</u>	<u>Out.C.Cl</u>
<u>Mean Pretest Scores</u>						
Exptl	1.334	1.364	1.370	1.357	1.349	1.364
s.e.	.056	.056	.056	.056	.040	.040
N	8	8	8	8	16	16
Placebo	1.363	1.341	1.377	1.383	1.352	1.380
s.e.	.056	.056	.056	.056	.040	.040
N	8	8	8	8	16	16
Inside Ctl	1.374	1.308	1.331	1.298	1.341	1.314
s.e.	.056	.056	.056	.056	.040	.040
N	8	8	8	8	16	16
<u>Mean Posttest Scores</u>						
Exptl	1.969	1.975	1.344	1.400	1.972	1.372
s.e.	.068	.068	.068	.068	.048	.048
N	8	8	8	8	16	16
Placebo	1.636	1.603	1.443	1.450	1.620	1.447
s.e.	.068	.068	.068	.068	.048	.048
N	8	8	8	8	16	16
Inside Ctl	1.417	1.363	1.380	1.315	1.390	1.347
s.e.	.068	.068	.068	.068	.048	.048
N	8	8	8	8	16	16
<u>Mean Follow up Scores</u>						
Exptl	1.695	1.808	1.412	1.364	1.752	1.383
s.e.	.069	.069	.069	.069	.048	.048
N	8	8	8	8	16	16
Placebo	1.507	1.508	1.394	1.459	1.508	1.426
s.e.	.069	.069	.069	.069	.048	.048
N	8	8	8	8	16	16
Inside Ctl	1.457	1.344	1.445	1.360	1.400	1.402
s.e.	.069	.069	.069	.069	.048	.048
N	8	8	8	8	16	16

Exptl = experimental; Yr = Grade or year level;
Ctl = Control; Out.C.Cl = Outside control classes.
Where N=8, the number 8 consists of 4 observations
(pupils) from each of two schools.

Table XVII.

Mean Scores for all Groups by Class Set and Grade (Year) Level
for Scale 2

Group	<u>Exptl Classes</u>		<u>Outside Ct1 Classes</u>		<u>Total Mean</u>	
	<u>Yr 1</u>	<u>Yr 2</u>	<u>Yr 1</u>	<u>Yr 2</u>	<u>Exptl Cl</u>	<u>Out.C.Cl</u>
<u>Mean Pretest Scores</u>						
Exptl	1.672	1.675	1.685	1.669	1.674	1.677
s.e.	.028	.028	.028	.028	.020	.020
N	8	8	8	8	16	16
Placebo	1.655	1.660	1.659	1.644	1.657	1.651
s.e.	.028	.028	.028	.028	.020	.020
N	8	8	8	8	16	16
Inside Ct1	1.696	1.698	1.702	1.695	1.697	1.699
s.e.	.028	.028	.028	.028	.020	.020
N	8	8	8	8	16	16
<u>Mean Posttest Scores</u>						
Exptl	2.109	2.135	1.664	1.694	2.122	1.679
s.e.	.032	.032	.032	.032	.022	.022
N	8	8	8	8	16	16
Placebo	1.782	1.794	1.659	1.672	1.788	1.665
s.e.	.032	.032	.032	.032	.022	.022
N	8	8	8	8	16	16
Inside Ct1	1.674	1.690	1.725	1.702	1.682	1.714
s.e.	.032	.032	.032	.032	.022	.022
N	8	8	8	8	16	16
<u>Mean Follow up Scores</u>						
Exptl	1.852	1.848	1.646	1.646	1.850	1.647
s.e.	.027	.027	.027	.027	.019	.019
N	8	8	8	8	16	16
Placebo	1.686	1.707	1.679	1.654	1.696	1.666
s.e.	.027	.027	.027	.027	.019	.019
N	8	8	8	8	16	16
Inside Ct1	1.656	1.660	1.666	1.677	1.658	1.672
s.e.	.027	.027	.027	.027	.019	.019
N	8	8	8	8	16	16

Exptl = experimental; Yr = Grade or year level;
Ct1 = Control; Out.C.Cl = Outside control classes.

Table XVIII.-

Mean Improvement Scores for all Groups by Class Set and Grade
(Year) Level for Scale 1

Group	<u>Expt1 Classes</u>		<u>Outside Ct1 Classes</u>		<u>Total Mean</u>	
	<u>Yr 1</u>	<u>Yr 2</u>	<u>Yr 1</u>	<u>Yr 2</u>	<u>Expt1 Cl</u>	<u>Out.C.Cl</u>
<u>Mean Improvement 1 (Pretest to Posttest)</u>						
Expt1	.6352	.6110	-.02619	.04294	.6231	.008375
s.e.	.037	.037	.037	.037	.026	.026
N	8	8	8	8	16	16
Placebo	.2737	.2625	.06646	.06749	.2681	.06697
s.e.	.037	.037	.037	.037	.026	.026
N	8	8	8	8	16	16
Inside Ct1	.04292	.0556	.04862	.01727	.04916	.03295
s.e.	.037	.037	.037	.037	.026	.026
N	8	8	8	8	16	16
<u>Mean Improvement 2 (Pretest to Follow up)</u>						
Expt1	.3617	.4442	.04146	.006762	.4029	.02411
s.e.	.040	.040	.040	.040	.028	.028
N	8	8	8	8	16	16
Placebo	.1447	.1676	.01685	.07641	.1561	.04663
s.e.	.040	.040	.040	.040	.028	.028
N	8	8	8	8	16	16
Inside Ct1	.08341	.03638	.1137	.06190	.0599	.08779
s.e.	.040	.040	.040	.040	.028	.028
N	8	8	8	8	16	16

Expt1 = experimental; Yr = Grade or year level;
Ct1 = Control; Out.C.Cl = Outside control classes.

Table XIX.

Mean Improvement Scores for all Groups by Class Set and Grade
(Year) Level for Scale 1

Group	<u>Expt1 Classes</u>		<u>Outside Ct1 Classes</u>		<u>Total Mean</u>	
	<u>Yr 1</u>	<u>Yr 2</u>	<u>Yr 1</u>	<u>Yr 2</u>	<u>Expt1 Cl</u>	<u>Out.C.Cl</u>
<u>Mean Improvement 1 (Pretest to Posttest)</u>						
Expt1	.4369	.4601	.02065	.02515	.4485	.002250
s.e.	.032	.032	.032	.032	.023	.023
N	8	8	8	8	16	16
Placebo	.1274	.1340	.00657	.02784	.1307	.01701
s.e.	.032	.032	.032	.032	.023	.023
N	8	8	8	8	16	16
Inside Ct1	.02262	-.00735	.023	.006762	.01499	.01488
s.e.	.032	.032	.032	.032	.023	.023
N	8	8	8	8	16	16
<u>Mean Improvement 2 (Pretest to Follow up)</u>						
Expt1	.1800	.1733	.0393	.02336	.1767	.03133
s.e.	.039	.039	.039	.039	.028	.028
N	8	8	8	8	16	16
Placebo	.03174	.04667	.0261	.01004	.03922	.01811
s.e.	.039	.039	.039	.039	.028	.028
N	8	8	8	8	16	16
Inside Ct1	-.04008	.03774	.0359	-.01838	.03891	-.02715
s.e.	.39	.039	.039	.039	.028	.028
N	8	8	8	8	16	16

Expt1 = experimental; Yr = Grade or year level;
Ct1 = Control; Out.C.Cl = Outside control classes.

APPENDIX 5

ABSTRACT OF

Social Acceptance Enhancement of Low Sociometric
Status Pupils in Special Classes

ABSTRACT OF

Social Acceptance Enhancement of Low Sociometric
Status Pupils in Special Classes¹

This study aimed at enhancing and maintaining social acceptance and self-perceived acceptance of pupils of low sociometric status. The project hoped to improve on reported studies that lack systematic research, control of extraneous variables, follow up evaluations and practical measures.

Sixteen special classes provided 264 pupils with a mean IQ of 85 and mean age of 16. Eight classes served as an experimental set and the remaining eight provided an outside control group. Based on pretest scores on a peer-rated sociometric scale the six least accepted pupils in each of the experimental set of classes were divided into an experimental, a placebo and an inside-class control group, with one of the three most highly rated pupils in each class assigned to each group. At pretest all classes were also given another sociometric scale in which each pupil indicated the degree to which he felt his classmates wanted him as a friend. Both scales were again administered to all classes four weeks later following the experimental treatment applied to the experimental group, and again eight weeks later at follow up time.

¹ Rakib Buckridan, doctoral thesis presented to the Faculty of Psychology of the University of Ottawa, Ontario, September, 1974, ix-125 p.

The experimental treatment consisted of cooperative, participative experiences with the lowly rated pupils interacting with the high status pupil in preparation (20 minutes twice a week for 4 weeks) of a magic show, under guidance of the experimenter, and presentation of the show to the class. The placebo condition was similar in that the group met with the experimenter for the same lengths of time but no planned activity took place. Instead, there were discussions on any topic (e.g. inflation). There was no class presentation. The inside and outside control groups were given no attention except for sociometric evaluations.

It was found that the experimental group showed at posttest and at follow up an improvement in both sociometric scales significantly beyond that attained by the placebo group. These two groups in turn manifested significantly higher improvements than obtained by the control groups. Assessment of the differential efficacy of the components of treatment would require further research. However the present investigation demonstrates that enhancement, and some follow up maintenance, of social acceptance and of self-perceived acceptance can result from a set of organized, cooperative, participative activities as employed in the study. The findings may have implications for understanding interpersonal relationships and social behaviour and in assisting the isolated person in a class, community group or job situation.