Please do this for each of the following lines.

	Very	Moderately	Slightly	Slightly	Moderately	Very	
friendly							not friendly
happy							sad
loving							not loving
interesting							boring
tense							relaxed
nervous							not nervous
excitable							calm
fearful							not fearful
demanding							not demanding
gets angry easily							does not get angry easily
temper tantrums							no temper tantrums
impatient							patient
strong willed							weak willed
leader							follower
independent							dependent
adventurous							timid
always on the go							not active
never seems to tire							tires easily
outdoor type							indoor type

BE CERTAIN YOU HAVE PUT ONE CHECK MARK ON EACH LINE.

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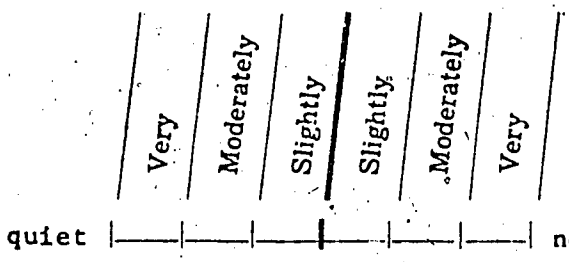
Now we would like to know your feelings about how you would like to have your child behave.

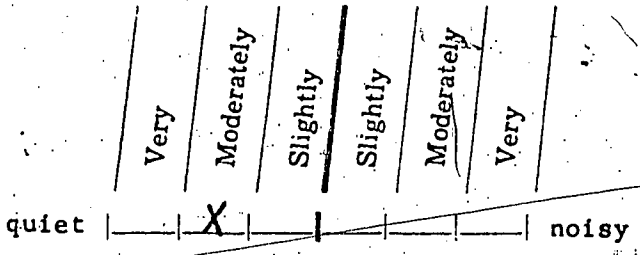
For example, given the choice:



1. First ask yourself if you want him to be basically quiet or basically noisy.

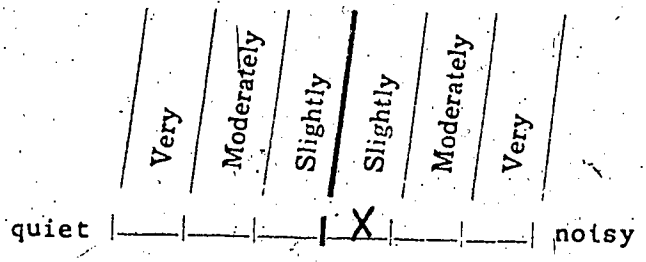
2. If you want him to be basically quiet, put an X on the quiet half of the line under the word which tells how quiet you want him to be.

   For example, if you want him to be moderately quiet, the line would look like this:



3. If you want him to be basically noisy, put an X on the noisy half of the line and show whether you want him to be slightly noisy, moderately noisy, or very noisy.

   For example, if you want him to be slightly noisy, the line would look like this:



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Please do this for each of the following lines.

	Very	Moderately	Slightly	Slightly	Moderately	Very	
friendly							not friendly
happy							sad
loving							not loving
interesting							boring
tense							relaxed
nervous							not nervous
excitable							calm
fearful							not fearful
demanding							not demanding
gets angry easily							does not get angry easily
temper tantrums							no temper tantrums
impatient							patient
strong willed							weak willed
leader							follower
independent							dependent
adventurous							timid
always on the go							not active
never seems to tire							tires easily
outdoor type							indoor type

BE CERTAIN YOU HAVE PUT ONE X ON EACH LINE.

APPENDIX C

HOME INTERVIEWS II AND III

Name of Parent(s) _____

Child's Name _____ Age _____

Address _____ Moved: ( ) Yes ( ) No

School _____ Grade Last Spring _____

Siblings: _____

Mother Worked Last Year: ( ) Yes ( ) No

Interviewer's Name _____ Date _____

Academic Development

First I would like to ask you about _____'s schooling.

1. What grade is _____ in now? _____

1a. Is he repeating the grade? ( ) Yes ( ) No

1b. IF YES, ASK: Why is he repeating the grade?

_____

_____

2. How would you describe _____'s work at school this year?

1. excellent
2. above average
3. average
4. below average
5. very poor

3. Is this better or worse than he was doing last year?

1. better 2. same 3. worse

3a. IF BETTER OR WORSE, ASK: What do you think has caused him to do (better, worse) than last year?

_____

_____

_____

_____

4. How do you think his present grades compare with his ability?

   1. a child of his ability should get better grades
   2. his grades are about right for a child of his ability

5. Have his teachers reported any problems with him this year? YES NO

   5a. IF YES, ASK: What was the complaint? (Circle all answers given; PROBE FOR EACH CATEGORY.)

   1. problems with school work
   2. problems in getting along with other children
   3. problems in getting him to follow directions
   4. other. Specify: _____

6. Has he been suspended or expelled from school in the last year? YES NO

(IF YES, ASK:)

a. Why was he suspended (expelled)?

_____

_____

b. How long did the suspension(s) (expulsion(s)) last? LIST EACH SEPARATELY

_____

_____

_____

7. Since last spring has _____ received

	YES	NO
a. tutoring from someone other than the family?	___	___
b. remedial reading at school?	___	___
c. has he seen the school psychologist?	___	___
d. has he seen the school social worker or visiting teacher or school guidance counselor?	___	___
IF YES, ASK: Is he still seeing her?	___	___

YES NO

IF YES, ASK: Has she been in contact with you? ___ ___

IF YES, ASK: About how many times? _____

Why did she contact you? _____

_____

_____

8. Has the school suggested you get any kind of academic help for _____ this year?

YES NO

IF YES, ASK:

a. What kind? _____

_____

b. Did you get it?

YES NO

IF NO, ASK: Why not? _____

_____

_____

_____

9. Has the school suggested you get any kind of help for _____'s behavior or his emotional development this year?

YES NO

IF YES, ASK:

a. What kind? _____

_____

b. Did you get it?

YES NO

IF NO, ASK: Why not? _____

_____

_____

_____

10. Did _____ go to summer school this past summer?

YES NO

IF YES, ASK: Why did you decide to send him? _____

_____

_____

11. (IF HAS OTHER CHILDREN, ASK:)

Have any of your other children (has your other child) received tutoring or any other special academic help this year?

YES NO

IF YES, SPECIFY FOR EACH CHILD

Child's name	Type of help	Duration

IF BOY IS IN ELEMENTARY SCHOOL: (If not got to p. 6, item 22)

Now I'd like to ask you about _____'s teacher this year.

12. Does he have a man or a woman?

MAN WOMAN

13. Are you satisfied with (her, him)? YES NO

IF NO, ASK: What things would you like to see changed?

IF YES, ASK: What do you particularly like about him/her?

INTERVIEWER: IF SURE ABOUT POSITIVE ANSWER, CIRCLE CATEGORIES. CIRCLE ALL THAT APPLY.

1. understands children in general, is interested in them, is patient, considerate, sincere, gets along well with children, etc.

2. makes reasonable, firm, demands and sticks to them, is strict, gives right amount of homework, demands respect, etc.

3. gives individual attention to survey child, helps him with academic or behavior problems, takes a special interest in him, etc.

4. is a good teacher, teaches well, gets kids interested in their work, does special projects with them, etc.

5. other, for uncoded positive answers _____

14. How does _____ get along with his teacher this year?

1. very well
2. well
3. passably
4. poorly
5. very poorly

Specific comments:

15. Do you feel this year's teacher is better for _____ than the teacher he had last year?

1. better 2. same 3. worse 4. DK

IF BETTER OR WORSE, ASK: In what way? _____

21. Does he have a new principal this year?

YES NO

IF YES, ASK:

21a. Do you think this is a better principal for _____ to have than the one he had last year?

1. better 2. same 3. worse

21b. IF BETTER OR WORSE, ASK:

Why is that? _____

IF BOY IS IN JR. HIGH, ASK:

22. How has _____ adjusted to junior high life? (Circle one):

1. very well
2. well
3. passably
4. poorly
5. very poorly
6. DK

Specific comments:

23. On the whole, how does _____ get along with his teachers? (Circle one):

1. very well
2. well
3. passably
4. poorly
5. very poorly
6. DK

Specific comments:

24. What has been his biggest problem at Jr. High?

( ) Academic
( ) Social
( ) Other, Specify: _____

_____

_____

( ) None
( ) DK

25. Does he have any teacher who has had a particular influence on him?

_____ ____
—YES, who (position - sex) NO

IF YES, ASK:

How has he (she) influenced _____?

_____

_____

_____

(IF VISIT II, ASK:)

26. How many schools has _____ gone to?
Number

IF MORE THAN 1, ASK:

How long has he been in present school?

Where (name of school and state in which located) was he before that and for how long?

What type of school was that? 1. Public 2. Parochial 3. Private

Why did he change schools? (See code below) _____

IF MOVED: Were you satisfied with his progress in that school?

YES NO

Present School	State	Grade	Type School	Why Changed
Prior School				

Reasons for changing schools:

1. Graduated from elementary to high school.
2. Family moved.
3. Child was having problems in school.
4. Child was doing well but parent(s) wanted a better academic or social (including religious) atmosphere.
5. New school was closer to child's home.
6. Financial reasons.
7. Other, Specify: _____
8. Rezoned.

(IF VISIT III, ASK:)

26a. Is he going to a different school this year from the one he attended last year?

YES NO

IF YES, ASK: What type of school is he in this year?
1. Public 2. Parochial 3. Private

Why did he change schools? (See code for Q. 26) _____

IF MOVED, Were you satisfied with his progress in that school?

YES NO

BEHAVIOR

Now I'd like to ask more general questions about _____'s present behavior

27. What do you think is the biggest change in _____ this year?

28. What other changes have you noticed in _____'s behavior since we were here last year?

IF NECESSARY, ASK: 28a. Has he shown any improvements over last year? YES NO

IF YES, specify:

IF NECESSARY, ASK: 28b. Has he shown any new problems this year? YES NO

IF YES, specify:

28c. Specific problems:

CODE

1. No longer a problem.
2. Somewhat better, still a slight problem.
3. Slight improvement
4. No improvement.
5. Had improvement at Visit II - worse again at Visit III. (Inap. for Visit II's)
6. Worse than originally at Visit I. (Can be used for Visit II or III)

29. Has he had any behavioral or emotional problem that you've discussed with a doctor this year?

YES NO

IF YES, a. What kind of problem was it? Specify: _____

_____

_____

b. What did the doctor say and do? _____

_____

_____

c. Did he help _____?

YES NO SOMEWHAT DK

30. Has he received any medicine for a behavioral or emotional problem this year?

YES NO

IF YES, ASK: a. Did a doctor prescribe it?

YES NO, source _____

b. What type of a problem was he getting the medicine for?

_____

_____

c. Did it help?

YES NO SOMEWHAT DK

31. Have you gone to any clinics or other agencies for any behavioral or emotional problems _____ has had this year?

YES NO

Where went? _____

IF YES, kind of problem? _____

_____

What did they say and do? _____

_____

_____

_____

Did it help?

YES NO SOMEWHAT DK

32. Has he been in any hospital or other kind of over-night institution for help with a behavioral or emotional problem this past year?

YES NO

Where went? _____

IF YES, kind of problem? _____

_____

What did they say and do? _____

_____

_____

_____

Did it help?

YES NO SOMEWHAT DK

33. Have you talked to anyone else about any behavioral or emotional problems _____ has had this year?

YES NO

Where went? _____

IF YES, kind of problem? _____

_____

What did they say and do? _____

_____

_____

_____

_____ Check here if mother, not child, has seen therapist but focus is on child.

Did it help?

YES NO SOMEWHAT DK

IF CHILD HAS RECEIVED HELP THIS YEAR, ASK:

34. Do you feel that _____ is still in need of help?

YES SOMEWHAT NO

35. Has _____ had any problems this year for which you would have liked outside help, but didn't get it?

YES NO

IF YES, Why didn't get it?

1. Didn't get around to it
2. Didn't know where to go
3. Other, specify: _____

36. Has he been arrested or has he appeared before Juvenile Court in the past year?

YES, number of times _____ NO

IF YES, What was (were) the charge(s) against him?

37. What was the most important thing that happened to _____ this year?

38. What was the best/worst (DEPENDING ON ANSWER TO 37) thing that happened to him this year?

39. IF BOY HAS SIBLINGS, ASK:

Has anything exciting or unusual happened to your other children this year?

YES NO

IF YES, to whom? _____
Specify relation to boy

What happened? _____

_____

_____

40. Does _____ have any new interests?

YES NO

IF YES, ASK: What are they? _____

_____

_____

41. Has he joined the Scouts or any other organizations this year?

YES NO

IF YES, What has he joined? Does he enjoy it?

_____ _____

_____ _____

_____ _____

_____ _____

42. Has _____ this year been asked to stay away from any organized activities? PROBE for each item.

1. playgrounds
2. swimming pools
3. clubs or church activities
4. school bus
5. other, specify: _____

_____

6. none of the above

IF CHILD HAS NOT MOVED SINCE LAST YEAR, ASK:

43. Did he make a special friend or friends this year that he didn't have before?

YES NO

IF YES: boy his age, etc. (See code for Q. 45) _____

IF YES, ASK: Is this (person, boy, boys) someone you like?

_____

_____

_____

44. Did he lose a good friend this year?

YES NO

IF YES, ASK: Was he (she) someone you liked?

_____

_____

_____

45. IF CHILD HAS MOVED SINCE LAST INTERVIEW, ASK:

What effect do you think moving had on _____?

_____

_____

Would you describe the people in this neighborhood as generally better off (worse off) financially than people in your neighborhood last year?

_____

_____

Did he lose any friends he was particularly close to?

YES NO

IF YES, lost

1. boy(s) his age
2. younger boy
3. older boy
4. girl
5. male adult
6. female adult

Was he (she) someone you liked?

Has he made any special friends here? YES NO

IF YES, use preceding list to describe:

Is he (she) someone you like?

46. Do you feel that he got into a bad group this year?

YES NO Still in bad group Change bad to good group

47. Is there any new adult who has had a special influence on his this year? YES NO

IF YES, DETERMINE WHO:

1. Teacher
2. Church contact
3. Friend
4. Neighbor
5. Clinic
6. Other, specify

Specific comments: Type of influence

1. positive
2. mixed
3. negative

48. What did _____ do last summer?

Did he enjoy the summer? YES NO SOMEWHAT

What did he like most?

49. Did he spend any time away from home last summer?

YES NO

IF YES, Where did he go?

Did he enjoy it?

YES NO

50. Is he more or less pleased with his physical apperance this year? (Interviewer: Use 4 only if can't code 1, 2 or 3.)

1. more 2. same 3. less 4. is more concerned about his appearance.

51. Has he stayed about the same in size as the other boys in his class?

1. bigger
2. same
3. smaller
4. always been different (how):

52. Do you think _____ is happier now than he was last year?

YES NO

53. Do you think his behavior at home this year is better, worse, or about the same as last year?

1. a lot better
2. better
3. same
4. worse
5. a lot worse

IF CHANGE, ASK: What do you think has caused his behavior to change?

54. Do you think his behavior at school this year is better, worse, or about the same as last year?

1. a lot better
2. better
3. same
4. worse
5. a lot worse

IF CHANGE, ASK: What do you think has caused his behavior to change?

_____

_____

_____

_____

55. IF BOY HAS SIBLINGS, ASK:

Does _____ have more or fewer problems than your other children?

1. More problems than other children
2. Same as other children
3. Fewer problems than other children

GENERAL DEVELOPMENT

56. I think you'll recognize this form from last year. Will you please fill it out for me again to tell us about _____ this year.

GIVE MOTHER QUESTIONNAIRE

57. Is _____ more, less, or about as mature acting as other boys his age?

1. More 2. Same 3. Less

58. Do you feel that he has done more growing up this year than he did the year before?

1. More 2. Same 3. Less

59. Do you think he will get along better in the future than he has up to now?

1. Better 2. Same 3. Worse 4. DK

60. Do you think that _____ has more or fewer problems than most other boys his age?

DON'T READ ALTERNATIVES UNLESS PROBING:

1. Has many more problems than most boys his age
2.
3. Has a few more problems than most boys his age
4.
5. Has about as many problems as most boys his age
6.
7. Has fewer problems than most boys his age

FAMILY MEMBERS

Now I would like to ask some questions about the other members of the family.

61. Has there been any change in the number of people living here since last year?

YES NO SPECIFY CHANGE: _____

_____

Do you feel this has been a good change for _____? YES NO

_____

_____

62. Have you been married, divorced, widowed, or become separated in the past year?

0. married
1. divorced
2. widowed
3. separated
4. other, specify: _____

63. IF MOTHER AND CHILD'S FATHER ARE SEPARATED OR DIVORCED, ASK:

Does _____ see his father now?

YES NO

IF YES, How often? _____

IF NO, Does he keep in touch with _____ through letters or phone calls?

YES NO

64. Do you feel that you are any different now from the way you were last year?

YES NO

IF YES, ASK: In what way? _____

_____

_____

IF HUSBAND IS ALIVE, ASK:

65. Is your husband (ex-husband) any different now from the way he was last year?

YES NO DK

IF YES, ASK: In what way? _____

_____

_____

66. Do you and your husband (ex-husband) get along better, worse, or about the same as a year ago?

1. better 2. same 3. worse

67. Do you and _____ get along better, worse, or about the same now as last year?

1. better 2. same 3. worse

IF HUSBAND IS ALIVE, ASK:

68. Do Mr. _____ and _____ get along better, worse, or about the same now as last year?

1. better 2. same 3. worse

69. IF NOT ONLY CHILD, ASK:

How does _____ get along with his brother(s) (sister(s)) as compared to a year ago? INTERVIEWER: GET OVERALL RATING

1. better 2. same 3. worse

INTERVIEWER: In following 5 questions, ask about husband only if he is in the home.

70. Do you (mother only) give _____ more, less, or about the same amount of time and attention he got last year?
(Repeat question asking about husband.)

WIFE	HUSBAND
1. more	1. more
2. same	2. same
3. less	3. less

71. Do you feel that the demands you make on your child this year are more in keeping with what he is able to do?
(Repeat question asking about husband.)

WIFE	HUSBAND
1. more	1. more
2. same	2. same
3. less	3. less

72. This year, are you (mother only) now more or less able to set rules for _____ and stick to them than last year?
(Ask again about husband.)

WIFE	HUSBAND
1. more	1. more
2. same	2. same
3. less	3. less

73. Has there been any change in the way you (mother) discipline or punish _____?

WIFE

1. Yes, explain: _____

_____

2. No

74. Has there been any change in the way your husband disciplines or punishes _____ this year?

HUSBAND

1. Yes, explain: _____

_____

2. No

75. IF BOTH HUSBAND AND WIFE IN HOME, ASK:

a. Has there been any change in who makes family decisions (like where the family will live or how money will be spent)?

1. Father has more say than he used to have
2. No change
3. Mother has more say than she used to have

b. Has there been any change in who makes decisions about _____?

1. Father has more say than he used to have
2. No change
3. Mother has more say than she used to have

c. Do you and your husband agree more or less now about how _____ to handle and discipline _____?

1. more 2. same 3. less

76. Have you or anyone in your family received help for any problem this year? YES

INTERVIEWER: ASK ABOUT ALL MEMBERS OF FAMILY UNTIL YOU GET NO.

IF YES, specify person, nature of problem, and help received.

_____

_____

_____

76a. Have you or anyone in your family had any problems this year for which you felt help was needed?

YES NO

IF YES, specify person, nature of problem, and why help was not received?

_____

_____

_____

IF MOTHER WASN'T WORKING LAST YEAR, ASK:

77. Have you taken a job this year?

YES NO

IF YES: a. What do you do?

_____

_____

b. Closest job classification #_____

INTERVIEWER: PROBE ENOUGH TO MAKE SURE YOU CAN ACCURATELY PLACE JOB IN ONE OF THE FOLLOWING CATEGORIES.

1. Unskilled labor: laborer, hired farm hand, domestic servant.
2. Semi-skilled labor, service and lower white collar: machine operator in factory, taxi or truck driver, waitress, gas station attendant, tenant farmer, sales clerk, beauty parlor operator, telephone operator, garage mechanic, fireman.
3. Skilled labor, white collar: bookkeeper, secretary, foreman, electrician, carpenter, radio or watch repair, welder, policeman, manager of A&P or local theatre.
4. Small business: proprietor of neighborhood store, beauty shop, grocer, butcher; small farmer; insurance or real estate salesman; traveling salesman.
5. Secondary professional: school teacher, social worker, librarian, registered nurse, optometrist, newspaper reporter, podiatrist, minister, welfare worker, accountant.
6. Primary professional: doctor, lawyer, professor, scientist, established artist, newspaper editor, CPA,

or

Owner of large company

or

Major executive of large company

or

Insurance or real estate broker

c. Full or part-time?

1. Full 2. Part-time

d. What made you decide to take a job?

_____

_____

IF MOTHER WAS WORKING LAST YEAR, ASK:

78. Are you still working?

YES NO

IF YES, ASK: Have you changed jobs in the past year?

YES NO

IF YES, How often? _____

Present job? _____

Closest job code # _____

1. Unskilled labor: laborer, hired farm hand, domestic servant.

2. Semi-skilled labor, service and lower white collar: machine operator in factory, taxi or truck driver, waitress, gas station attendant, tenant farmer, sales clerk, beauty parlor operator, telephone operator, garage mechanic, fireman.

3. Skilled labor, white collar: Bookkeeper, secretary, foreman, electrician, carpenter, radio or watch repair, welder, policeman, manager of A&P or local theatre.

4. Small business: proprietor of neighborhood store, beauty shop, grocer, butcher; small farmer; insurance or real estate salesman; traveling salesman.

5. Secondary professional: school teacher, social worker, librarian, registered nurse, optometrist, newspaper reporter, podiatrist, minister, welfare worker, accountant.

6. Primary professional: doctor, lawyer, professor, scientist, established artist, newspaper editor, CPA,
or
Owner of large company
or
Major executive of large company
or
Insurance or real estate broker

Full or part-time?

1. Full 2. Part-time

ASK ALL CURRENTLY WORKING MOTHERS:

79. a. How does _____ feel about your working?

_____

_____

b. How does the rest of the family feel about it?

_____

_____

IF HUSBAND IN HOME, ASK:

80. Has your husband changed jobs in the past year? YES NO

IF YES, ASK: How often? _____

Present job? _____

Closest job code # _____

IF RETIRED, ASK: What did he do before retirement?

_____

1. Not regularly employed or odd jobs; or unkillled labor: laborer, hired farm hand, domestic servant.
2. Semi-skilled labor, service and lower white collar: machine operator in factory, taxi or truck driver, waitress, gas station attendant, tenant farmer, sales clerk, beauty parlor operator, telephone operator, garage mechanic, fireman.
3. Skilled labor, white collar: bookkeeper, secretary, foreman, electrician, carpenter, radio or watch repair, welder, policeman, manager of A&P or local theatre.
4. Small business: proprietor of neighborhood store, beauty shop, grocer, butcher; small farmer; insurance or real estate salesman, traveling salesman.
5. Secondary professional: school teacher, social worker, librarian, registered nurse, optometrist, newspaper reporter, podiatrist, minister, welfare worker, accountant.
6. Primary professional: doctor, lawyer, professor, scientist, established artist, newspaper editor, CPA,
   or
   Owner of large company
   or
   Major executive of large company
   or
   Insurance or real estate broker

81. Is your financial situation better, worse, or about the same as last year?

1. better 2. same 3. worse

OVERALL QUESTION

82. Has there been any factor we haven't mentioned which you feel his affected _____'s behavior in the past year? ___ ___
YES NO

IF YES, What was that? _____

_____

_____

APPENDIX D

PUPIL INFORMATION FORM

Name of Child:_____ Date:_____

Teacher: (Mr., Miss, Mrs.)_____ Grade:_____

Name of School:_____

1. Number of children in class: _____

2. Is this a special or ungraded class? ( ) Yes ( ) No

IF YES, briefly describe type of children in it:

DO NOT ANSWER ITEMS 3 TO 5 IF CHILD IS IN AN UNGRADED CLASS

3. Compared to most classes of this grade, is this child's class as a whole:
( ) 1. Faster ( ) 2. Average ( ) 3. Slower

4. In comparison with other children in his class, is the child's general level of achievement:
( ) 1. Far Above Average
( ) 2. Above Average
( ) 3. Average
( ) 4. Below Average
( ) 5. Far Below Others in Class

5. How does he compare with other children in his class in each of the following areas:

Upper ½	Middle ½	Lower ½	
( )	( )	( )	Reading
( )	( )	( )	Aritlmetic
( )	( )	( )	Spelling
( )	( )	( )	English
( )	( )	( )	Social Studies
( )	( )	( )	Science
( )	( )	( )	Art
( )	( )	( )	Music
( )	( )	( )	Physical Education

Please describe the child as you see him, including examples of typical classroom behavior and any special circumstances that influence his school adjustment:

What do you see as his strong points:

What do you see as his chief problems:

Do you have any suggestions, based on your experience with the child, as to effective ways to teach or manage him?

10. Compared to other children this age, do you think this child's ability is:
( ) 1. Far Above Average
( ) 2. Above Average
( ) 3. Average
( ) 4. Below Average
( ) 5. Far Below Average

11. In your opinion, how does the child's school achievement measure up to his potential for learning?
( ) 1. Works to full capacity most of the time
( ) 2. Irregular, but makes good use of ability at times
( ) 3. Seldom able to use abilities fully

12. We would appreciate your briefly listing the basic school skills which this child lacks that he should already have learned (if any):

13. What grades had the child received this year?

Do you grade him
( ) in relation to his ability?
( ) on amount of material he has actually learned?

14. Is there a possibility the child will not be promoted at the end of the school year? ( ) Yes ( ) No

15. If he is promoted, will it be a social promotion (will he be lifted)?
( ) Yes ( ) No

16. Is the child in danger of being suspended, expelled or excluded? ( ) Yes ( ) No

If any item 14, 15, or 16 has been answered YES, please give further details:

Name of Child _____

17. **ACHIEVEMENT**: Please check the one description below that comes closest to describing the child. If you feel that no category is satisfactory, put a question mark beside the closest description and explain why below.

FOR A CHILD OF NORMAL ABILITY:

___1. Child is a complete misfit in his class academically; he lacks the basic skills needed to learn current material.

___2. Child is doing failing work (although he may receive social promotion).

___3. Child is doing passing work, but his grades are low enough, or he is working enough below his own capacity, to cause concern.

___4. Child's work is generally satisfactory and in line with his ability.

___5. Child's work is above average.

FOR A CHILD OF LESS THAN NORMAL ABILITY:

___1. Child is achieving <u>far</u> below even his own capacity

___2. Child is working enough below even his own capacity to cause you concern.

___3. The child's work is satisfactory in that he is achieving to capacity.

EXPLANATION: (If you wish to explain or qualify your rating above, please use this space to do so.)

Name of Child _____ 5

18. **BEHAVIOR:** Please check the one description below that comes closest to describing the child. If you feel that no category is satisfactory, put a question mark beside the closest description and explain why below:

___1. Child's behavior is so extreme and upsets the class so much that there is serious question as to whether he can continue in school.

___2. Child is truant so much of the time that special steps may need to be taken.

___3. Child is very aggressive, fights, quarrels, or greatly disturbs the class in other ways.

___4. Child is aggressive or disturbs the class, but he is more annoying than seriously disturbing.

___5. Child's behavior is so "odd" or repelling that he is almost totally rejected or ignored by peers.

___6. Child is somewhat isolated or rejected by peers; enough so for you to feel some concern for him.

___7. Although child does not disrupt the class, he does almost no academic work in school, either because he distracts himself with irrelevant tasks, daydreams, or is such a perfectionist that he cannot get beyond the first few problems.

___8. Child accomplishes less than he should because of reasons listed under 7, but he manages nevertheless to accomplish a minimally satisfactory amount of work.

___9. Child's behavior in class is generally satisfactory.

EXPLANATION: (If you wish to explain or qualify your rating above, please use this space to do so.)

19. How disruptive is the child in the classroom?
( ) 1. It is almost impossible to teach with him in the room.
( ) 2. He often disrupts classroom activities.
( ) 3. No more troublesome than most children.

20. How much personal distress (unhappiness, anxiety, worry, fearfulness) do you think the child himself feels?
( ) 1. A very great deal
( ) 2. More than most children
( ) 3. About as much as most children
( ) 4. Less than most children
( ) 5. Almost none

21. Is the child able to face new or difficult situations adequately?
( ) Yes ( ) No

If not, how is he likely to react when faced with a new situation?
( ) Cry ( ) Become ill ( ) Withdraw
( ) Become hostile ( ) Other _____

22. How sensitive is the child's behavior to an adult's words of criticism or praise?
( ) 1. The child's behavior can usually be controlled in this way.
( ) 2 Criticism or praise may temporarily affect the child's behavior, but he usually quickly returns to his original behavior.
( ) 3. Neither praise nor criticism seem to have any observable effect on his behavior or attitudes.

23. How does the child usually react to an adult's disapproval or criticism?
( ) 1. Takes it in stride
( ) 2. Makes him unhappy, withdrawn
( ) 3. Makes him angry, hostile
( ) 4. Other: _____

24. How would you characterize this child's relationship with other children in the class:
( ) 1. Accepted, usually gets a friendly response.
( ) 2. Somewhat isolated, little interaction.
( ) 3. Rejected, other children find him objectionable.

25. If the child appears to be isolated or rejected by the other children, what kinds of behaviors on his part do you think are responsible?

26. Please rate the child's behavior and achievement by making a check in the "yes" or "no" column. If you feel you cannot make a rating because of insufficient opportunity to observe, check the "?" column.

	Yes	?	No	
a.				a. Is the child willing to come to school?
b.				b. Does he seem to like school as much as most children?
c.				c. Does he have as much self control as needed in the school situation?
d.				d. Is he willing to accept instruction (try to learn) while part of the large classroom group?
e.				e. Is he willing to accept instruction (try to learn) while in a small group of two or three children?
f.				f. Is he willing to accept instruction (try to learn) when the teacher tries to teach him individually?
g.				g Does he usually listen well enough to understand directions?
h.				h. Does he carry out written directions properly?
i.				i. Does the child work reasonably well alone at his desk?
				If not, during this time: ( ) 1. Does he sit quietly at his desk, but either daydream or otherwise quietly distract himself? ( ) 2. Is he apt to wander about, annoy other children, get into trouble? ( ) 3. Other. _____
j.				j. Is the child able to be ready when the group is ready?
k.				k. Can he work with a group in carrying through projects?
l.				l. Is the child willing to let other children share the teacher's attention?
m.				m. Does he respect other people's property?
n.				n. Does he keep up with his own materials and possessions?
o.				o. Is he as neat as most children his age?
p.				p Does he usually do necessary homework assignments?

26. continued

	Yes	?	No	
q.				q. Does the child tire easily?
r.				r. Is he very careless or lazy about his work?
s.				s. Is he highly distractible?
t.				t. Does he get easily discouraged and quit before a task is completed?
u.				u. Is this a child who complains a lot, is hard to satisfy?
v.				v. Does he seem to have an unusual need to win, be first, get the largest share?
w.				w. Is he either disobedient, defiant or impertinent?
x.				x. Does he often get into fights or quarrels with other pupils?
y.				y. Does he have to be coaxed or forced to play or work with other pupils?
z.				z. If he is questioned about something he has done wrong, does he usually try to blame someone or something else, or even lie, "to get out of it?"
zz.				zz. Does he make unusual or inappropriate responses during normal school activities?

27. How receptive are the child's parents to suggestions from the school?
( ) 1. Indifferent or argumentative
( ) 2. Fairly cooperative in most ways
( ) 3. Warm participation in planning for the child

28. Generally, would you say this child is:
( ) an average child
( ) an outstanding child
( ) a problem child

29. Is there any kind of special help you would like to see this child able to get?

If yes: What Kind?

Name of Child _____

30. Would you say this child <u>academically</u>:
( ) 1. Is within the normal range
( ) 2. Has mild problems
( ) 3. Has fairly severe problems
( ) 4. Has very severe problems

31. Would you say this child <u>behaviorally</u> or <u>emotionally</u>:
( ) 1. Is within the normal range
( ) 2. Has mild problems
( ) 3. Has fairly severe problems
( ) 4. Has very severe problems

APPENDIX E

SOCIOMETRIC QUESTIONNAIRE AND INSTRUCTIONS

Instructions for Administering Sociometric Questionnaire

General Instructions to Teacher:

(1) Give early in the day to avoid influence of any petty disagreement.

(2) Ample time should be allowed for children to understand what is required and for them to complete the questionnaire.

(3) Please fill out the enclosed classroom roll (first and last name plus nickname if used) so that we may have a complete list in case of absence of a child. (Please list girls and boys in separate columns.)

(4) Before returning the completed forms, please check to see that the children have written the first and last names of those they have selected and that the names are legible. Please do all you can to help us decipher whom the child means.

Instructions Teacher Gives to Children:

(1) Pass out forms, one to a child. Have each child write his own name in the appropriate space on his sheet.

(2) Read aloud the first question. Explain it if necessary. Explain that only children in the class may be listed, but that children who are absent that day may be included. Ask pupils to use both first and last names, but not to worry about spelling.

(3) Answer any questions and give the children time to write their choices.

(4) Read the second item and answer any questions. Tell the children not more than 5 names should be given for the first item and not more than 3 names on the second item. After giving the children time to answer, collect the questionnaires.

CLASS ROLL

Teacher: _____ Date: _____

School: _____

PLEASE STAR TODAY'S ABSENTEES.

BOYS		GIRLS	
Last Name	First Name	Last Name	First Name

YOUR NAME _____

You are going to have a birthday party. Name <u>five</u> friends that you would ask to your party. Please ask ONLY your friends from your classroom. Write their FIRST and LAST names on the lines.

_____

_____

_____

_____

_____

You may not want to ask some boys and girls to your party. Is there a boy or girl in your room you would not ask? Write their names on the lines.

_____

_____

_____

If you cannot think of three that's all right, but don't write more than three.

APPENDIX F

SELF-CONCEPT QUESTIONNAIRE

Name_____ Date_____

( ) T1 ( ) T2

I am going to tell you about some boys and then I am going to ask you how much you are like each boy, and I want you to tell me if you are a lot like him, pretty much like, not much like him, or not at all like him. Then I'm going to ask you some other questions about each boy.

	VERY MUCH	PRETTY MUCH	NOT MUCH	NOT AT ALL
1. Ed is a very good ball player	3	2	1	0
How much like Ed are you?	( )	( )	( )	( )
How much like Ed would you like to be?	( )	( )	( )	( )
How much like Ed does your mother want you to be?	( )	( )	( )	( )
How much like Ed does your father want you to be?	( )	( )	( )	( )
2. Fred gets in trouble in school	0	1	2	3
How much like Fred are you?	( )	( )	( )	( )
How much like Fred would you like to be?	( )	( )	( )	( )
How much like Fred does your mother want you to be?	( )	( )	( )	( )
How much like Fred does your father want you to be?	( )	( )	( )	( )
3. Sam gets good grades on all his school work.	3	2	1	0
How much like Sam are you?	( )	( )	( )	( )
How much like Sam would you like to be?	( )	( )	( )	( )
How much like Sam does your mother want you to be?	( )	( )	( )	( )
How much like Sam does your father want you to be?	( )	( )	( )	( )
4. Paul fights a lot with his (brother and sister), no matter how hard he tries not to.	0	1	2	3
How much like Paul are you?	( )	( )	( )	( )
How much like Paul would you like to be?	( )	( )	( )	( )
How much like Paul does your mother want you to be?	( )	( )	( )	( )
How much like Paul does your father want you to be?	( )	( )	( )	( )

	VERY MUCH	PRETTY MUCH	NOT MUCH	NOT AT ALL
5. John is very popular. Almost everyboby in his class likes him.	3	2	1	0
How much like John are you?	( )	( )	( )	( )
How much like John would you like to be?	( )	( )	( )	( )
How much like John does your mother want you to be?	( )	( )	( )	( )
How much like John does your father want you to be?	( )	( )	( )	( )
6. Pete thinks his mother doesn't like him.	0	1	2	3
How much like Pete are you?	( )	( )	( )	( )
7. Jack always does what his parents tell him.	3	2	1	0
How much like Jack are you?	( )	( )	( )	( )
How much like Jack would you like to be?	( )	( )	( )	( )
How much like Jack does your mother want you to be?	( )	( )	( )	( )
How much like Jack does your father want you to be?	( )	( )	( )	( )
8. Mike is happy.	3	2	1	0
How much like Mike are you?	( )	( )	( )	( )
How much like Mike would you like to be?	( )	( )	( )	( )
How much like Mike does your mother want you to be?	( )	( )	( )	( )
How much like Mike does your father want you to be?	( )	( )	( )	( )
9. Bill would like to be a girl.	0	1	2	3
How much like Bill are you?	( )	( )	( )	( )
How much like Bill would you like to be?	( )	( )	( )	( )
How much like Bill does your mother want you to be? Would she like you to be a girl?	( )	( )	( )	( )
How much like Bill does your father want you to be? Would he like you to be a girl?	( )	( )	( )	( )
10. Dan thinks his father doesn't like him.	0	1	2	3
How much like Dan are you?	( )	( )	( )	( )

	VERY MUCH	PRETTY MUCH	NOT MUCH	NOT AT ALL
11. Ken gets angry easily.	0	1	2	3
How much like Ken are you?	( )	( )	( )	( )
How much like Ken would you like to be?	( )	( )	( )	( )
How much like Ken does your mother want you to be?	( )	( )	( )	( )
How much like Ken does your father want you to be?	( )	( )	( )	( )
12. Al is very good-looking.	3	2	1	0
How much like Al are you?	( )	( )	( )	( )
How much like Al would you like to be?	( )	( )	( )	( )
How much like Al does your mother want you to be?	( )	( )	( )	( )
How much like Al does your father want you to be?	( )	( )	( )	( )
13. Bob wishes he were younger.	0	1	2	3
How much like Bob are you?	( )	( )	( )	( )
How much like Bob would you like to be?	( )	( )	( )	( )
How much like Bob does your mother want you to be? Would she like you to be younger?	( )	( )	( )	( )
How much like Bob does your father want you to be? Would he like you to be younger?	( )	( )	( )	( )
14. Jim thinks his folks like his sister and brother better than him.	0	1	2	3
How much like Jim are you?	( )	( )	( )	( )
15. Tom is often worried or scared.	0	1	2	3
How much like Tom are you?	( )	( )	( )	( )
How much like Tom would you like to be?	( )	( )	( )	( )
How much like Tom does your mother want you to be?	( )	( )	( )	( )
How much like Tom does your father want you to be?	( )	( )	( )	( )

APPENDIX G

LOCUS OF CONTROL QUESTIONNAIRE AND INSTRUCTIONS

This is not a test. The questions are to find out how people your age feel about certain things. There are no right or wrong answers. Some people will answer a question "yes" while other people will answer the same question "no." The answer depends on how you really feel about the question.

Listen to each question carefully. Then, if you think the answer should be "yes" or mostly "yes" for you, answer "yes." If you think the answer should be "no" or mostly "no" for you, answer "no."

Child's Name _____

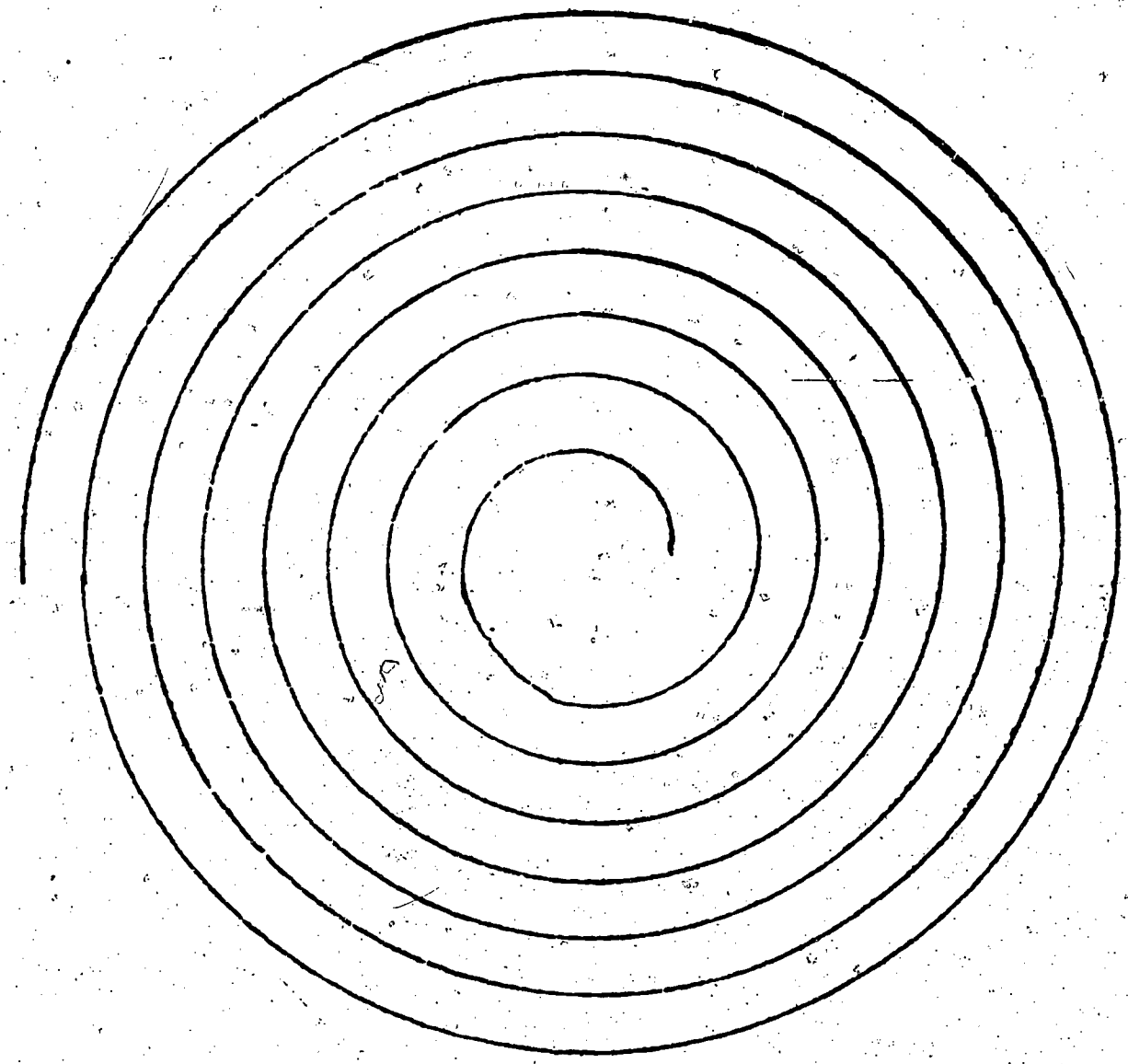
( ) T 1 or ( ) T 2

(If not sure child understands double negative, PROBE.)

YES	NO		
( )	( )	1.	When bad things happen to you, is it usually someone else's fault?
( )	( )	2.	Can a boy your age ever have his own way?
( )	( )	3.	When someone gets mad at you, can you do something to make him your friend again?
( )	( )	4.	When nice things happen to you, is it just good luck?
( )	( )	5.	When people are mean to you, could it be because you did something to make them mean?
( )	( )	6.	Does it seem like to you that you don't have much choice about which kids will be your friends?
( )	( )	7.	If another child was going to hit you, could you do anything to make him stop?
( )	( )	8.	Can you ever try to be friends with another boy even if he doesn't want to?
( )	( )	9.	When you get into an argument, is it always the other person's fault?
( )	( )	10.	Does it seem like other people will never do the things you want them to?
( )	( )	11.	Do you often feel you get punished when you don't deserve it?
( )	( )	12.	Can you usually get the kids to like you?
( )	( )	13.	Do you feel that no matter what happens, there's nothing you can do about it?
( )	( )	14.	Can you usually get the kids to play the game that you want them to?
( )	( )	15.	Do others usually make you do what <u>they</u> want to do?
( )	( )	16.	Can you usually make the others stop if they're doing something you don't like?
( )	( )	17.	Can you get others to use your ideas?
( )	( )	18.	Do you believe this: a boy has no choice about what he's going to be when he grows up?

APPENDIX H

THE SPIRAL TEST



Name _____ T II _____ Date _____

T I _____ Birthday _____

T II - T I _____ Age _____

TABLE 1 Cont'd.

	Re-Ed	Untreated Disturbed	Normal	R vs UD[a]	R vs N[a]	UD vs N[a]
49. Behavior Ratings Given by Teacher at End of Last Academic Year (3 = above average, 2 = average, 1 = below average)[d]						
Self-control (na, 56, 51)						
Mean		1.4	2.2			8.31***
Standard deviation		0.5	0.4			
Dependability (na, 61, 62)						
Mean		1.6	2.3			8.18***
Standard deviation		0.5	0.4			
Cooperation (na, 54, 56)						
Mean		1.6	2.2			6.85***
Standard deviation		0.5	0.4			
50. Child's Relationship with Children in Class (113, 127, 128)						
Accepted, usually gets a friendly response	32%	30%	95%			
Somewhat isolated, little interaction	28%	34%	5%			
Rejected, other children find him objectionable	40%	36%	1%	ns	105.37***	114.35***

	Untreated Re-Ed	Untreated Disturbed	Normal	R vs UD[a]	R vs N[a]	UD vs N[a]
51. Personal Distress (unhappiness, anxiety, worry, fearfulness) Felt by Child (111, 127, 128)						
A very great deal	48%	27%	0%			
More than most children	36%	36%	8%			
As much as or less than most children	16%	37%	92%	16.51***	144.05***	87.69***
52. Child's Ability Compared to Other Children His Age (112, 127, 128)						
1. Far Above Average	2%	1%	2%			
2. Above Average	21%	14%	33%			
3. Average	51%	48%	55%			
4. Below Average	18%	30%	9%			
5. Far Below Average	8%	7%	1%			
Mean	3.1	3.3	2.8	ns	3.36***	5.65***
Standard Deviation	0.9	0.8	0.7			
53. Child's General Level of Achievement Compared with Other Children in His Class (113, 128, 128)						
1. Far above average	0%	1%	5%			
2. Above average	9%	11%	33%			
3. Average	20%	16%	50%			
4. Below average	46%	48%	11%			
5. Far below others in class	25%	25%	2%			
Mean	3.9	3.9	2.7	ns	10.65***	10.42***
Standard deviation	0.9	0.9	0.8			

TABLE 1 Cont'd.

	Untreated					
	Re-Ed	Disturbed	Normal	R vs UD[a]	D vs N[a]	UD vs N[a]
54. Achievement (na, 128, 128)						
Child is a complete misfit in his class academically; he lacks the basic skills necessary to learn current material		16%	0%			
Child is doing failing work (although he may receive social promotion)		17%	1%			
Child is doing passing work, but his grades are low enough, or he is working enough below his own capacity, to cause concern.		49%	9%			
Child's work is generally satisfactory and in line with his ability		14%	68%			
Child's work is above average		3%	23%			
55. The Child is in Danger of Being Retained or Socially Promoted at the End of the Academic Year (na, 128, 128)						141.00***
56. Use of Potential (119, 127, 128)		39%	2%			52.56***
1. Works to full capacity most of the time	3%	5%	73%			
2. Irregular, but makes good use of ability at times	31%	32%	24%			
3. Seldom able to use abilities fully	66%	63%	2%			
Mean	2.6	2.6	1.3			
Standard deviation	0.6	0.6	0.5	ns	19.82***	18.95***

	Untreated					
	Re-Ed	Disturbed	Normal	R vs UD[a]	R vs N[a]	UD vs N[a]
57. How Receptive are Child's Parents to Suggestions from School (88, 104, 123)						
Indifferent or argumentative	12%	25%	5%			
Fairly cooperative in most ways	47%	61%	36%			
Warm participation in planning for the child	41%	14%	59%	18.17***	8.57*	52.88***
Communication from School to Family						
58. Either Current or Earlier Teachers Have Reported Behavior Problems in School[b] (na, 128, 128)		93%	35%			92.91***
59. Teacher's Reports about Child's Current Behavior in School[b] (na, 127, 128)						
Behaviors which disturb class		59%	16%			51.44***
Child breaks important school rules		3%	0%			4.10*
Poor study habits, poor attitudes toward schoolwork		51%	12%			46.11***
Child shy, fearful, withdrawn, no self-confidence, cries		10%	3%			5.18*
Child "emotionally disturbed" or "emotionally upset"		3%	0%			4.10*
Child mentally retarded, brain damaged, perceptually handicapped		1%	0%			ns
Problems in relations with peers (no friends, fighting, picking on other children, etc.)		12%	0%			16.36***
Immature (word specifically mentioned)		2%	2%			ns
At least one of above		89%	30%			91.79***
Mean number of behaviors reported		1.4	0.3			12.32***

TABLE 1 Cont'd.

	Untreated Re-Ed	Untreated Disturbed	Untreated Normal	R vs UD[a]	R vs N[a]	UD vs N[a]
60. Earliest Grade in Which Teacher Reported Behavior Problems in School[b] (na, 119, 45)						
Mean		2.1	2.5			ns
Standard Deviation		1.5	1.5			
Teacher Reported Behavior Problems to Mother When Child Was in First Grade						
% of children for whom problems ever reported by teacher (na, 119, 45)		55%	40%			ns
% of all children in group (na, 128, 128)		51%	14%			39.38***
61. Teacher Reported Behavior Problem in Every Grade (asked of Wave 2 mothers only)[b] (na, 64, 64)		53%	3%			39.57***
62. Teacher Has Reported Problems with Child's School Work This Year[b] (59, 127, 128)	63%	49%	12%	ns	50.13***	39.61***
63. School Has Requested Mother to Get Outside Help for Child[b] (103, 128, 128)	84%	24%	2%	82.90***	165.63***	29.26***
64. Problem for Which School Requested Outside Help[b] (103, 128, 128)						
Behavior	83%	19%	0%	95.92***	170.26***	26.48***
Academics	10%	9%	2%	ns	7.69**	6.56*

Ratings and Descriptions of the Child by the Mother

	Re-Ed	Untreated Disturbed	Normal	R vs UD[a]	R vs N[a]	UD vs N[a]
65. Problems Mentioned by Mother						
Behavior or attitude problems in school (115, 128, 128)	90%	76%	15%	7.90**	135.29***	95.91***
Difficulty getting him to study, do his homework, display interest in school (115, 128, 128)	35%	35%	10%	ns	21.54***	22.83***
Problems getting along with others (122, 128, 128)	48%	20%	9%	28.03***	45.13***	3.88*
Acting-out, aggressive, belligerent, headstrong, temper, no self-control (115, 128, 128)	64%	48%	13%	6.84**	67.44***	35.70***
Important rule or law-breaking behavior (115, 128, 128)	23%	11%	1%	6.97**	30.61***	11.97***
Doesn't apply himself, short attention span, restless, impatient, demanding, careless, daydreams (115, 128, 128)	40%	42%	17%	ns	15.64***	19.16***
Worried, anxious, withdrawn, no self-confidence, unhappy, nervous, fearful (115, 128, 128)	50%	26%	17%	15.72***	30.32***	ns
66. Does Mother Feel Child Has More or Fewer Problems than Other Boys His Age (na, 125, 126)						
More		30%	3%			
Same		60%	48%			
Fewer		10%	49%			60.24***

TABLE 1 Cont'd.

	Re-Ed	Untreated Disturbed	Normal	R vs UD[a]	R vs N[a]	UD vs N[a]
67. Mother's Rating of How Child's Grades Compare with His Ability (107, 124, 124)						
Child is working up to ability	18%	12%	52%			
Child is not working up to ability	82%	88%	48%	ns	28.60***	44.60***
68. Does Mother Feel Child Needs Special Help for His Problems (na, 128, 128)						
Yes		32%	1%			
Unsure or Not now		8%	2%			
No		60%	97%			52.85***
Sociometric Ratings by Classmates						
69. Number of Positive Nominations by Classmates (59, 128, 128)						
0	27%	21%	1%			
1	14%	15%	7%			
2-3	39%	26%	18%			
4-6	12%	25%	27%			
7 or more	8%	13%	48%			
Mean	2.5	3.2	6.4	ns	7.17***	7.39***
Standard deviation	2.8	3.1	3.7			

	Untreated Re-Ed	Untreated Disturbed	Untreated Normal	R vs UD[a]	R vs N[a]	UD vs N[a]
70. Number of Negative Nominations by Classmates (59, 128, 128)						
0-1	7%	13%	71%			
2-5	37%	31%	26%			
6-9	24%	18%	3%			
10 or more	32%	38%	0%			
Mean	8.3	8.4	1.2	n.	8.87***	11.99***
Standard deviation	6.0	6.6	1.6			

Note.--Under the name of each item are listed the numbers of Re-Ed, untreated disturbed and normal children, respectively, upon whose data analyses were based; na = not asked or not applicable.

[a] χ^2 is shown when percentages are compared, t when means are compared.

[b] Information was provided by the mother.

[c] Information was provided by the principal.

[d] Information came from the child's cumulative record folder at his school.

* $p < .05$.

** $p < .01$

*** $p < .001$

stepparent, a single parent, or neither parent (item 9). (The difference between the normal and untreated disturbed groups is particularly striking because some attempt was made to match these two groups on parental situation--that is, if more than one normal child close to the untreated disturbed child in intelligence and socioeconomic status were identified within the class, that child most like the untreated child in parental constellation was chosen as a match.) Many of the disturbed children had had multiple changes in parental situation during their lives; the Re-Ed children had had significantly more changes than the untreated children (item 11). The groups did not differ in number of siblings or in percentages of only, eldest, middle and youngest children (items 12 and 13).

The families of the untreated disturbed children were not only less stable over time than the families of the normal children, they were also, according to the mothers, less harmonious. Ratings of family relationships by the mothers of the normal and untreated disturbed children are summarized in items 14 through 16. Ratings requested of mothers of the Re-Ed children were worded differently and are not shown; those ratings, like the ratings by the mothers of the untreated children, suggested more intra-family stress than did ratings by the mothers of the normal children, with fewer of the parents of disturbed children getting along well or agreeing about the management of the child and more difficulties in relationships between the disturbed child and his siblings. There was no difference between the mothers of the normal and untreated children in percentage who indicated that for the child's sake, they would like to change (item 17). Approximately half the mothers in each group indicated a desire to change, usually toward being calmer and more patient. The groups did differ in percentage of mothers who wanted the father to change (item 18). The changes most frequently desired were that the father have more time for the child and family, be calmer, more patient, more understanding, be a better father.

Mental health history. Although children who were currently getting non-school-provided professional help for behavior problems were not admitted to the untreated disturbed group, a number of the children who were admitted had previously received such help (items 19-23). One-fourth of the families of the "untreated" disturbed children had previously sought help for the behavioral or emotional problems of their children at least once from physicians and 16 per cent had sought help at least once from psychiatrists, psychologists, or social workers; one-third of the untreated children had been taken to one or more of these professionals. (Seven untreated children were seen by physicians for psychosomatic problems; none of these were counted in item 19 and five of the seven were not counted in items 21 or 23 since other types of help were not sought for them.) Nineteen per cent of the families of the untreated disturbed children had contacted school personnel for help with the child's problems (as will be seen later, the school provided special help for many additional children; a child was counted in item 22 only if the family

initiated contact with school personnel for the purpose of getting special help for the child's behavior problems). In all, families of 43 per cent of the untreated children had sought professional help for them prior to nomination of the children by the principals. A number of the families had sought help from several of the sources described above, and some had in addition sought help from their clergymen.

The Re-Ed and untreated disturbed children did not significantly differ in percentage taken for help for behavior problems to physicians (item 19), but there was a great difference in the percentage seen by non-school-provided psychiatrists, psychologists or social workers (93% vs. 16%, item 20). The six Re-Ed children not seen by sources listed in items 19 or 20 were referred to Re-Ed by school personnel.

Mothers of untreated children who indicated during the Round 1 home interview that the child currently had problems for which they felt he needed special help were asked how old the child had been when they first realized he needed special help. Mean age given by those mothers able to answer was 6.4 years (item 24), not significantly different from the 6.9 year mean given by the Re-Ed mothers who answered the question (some mother figures did not answer the question because they had not been with the child during his early years). Mean age of the children when first seen for professional help is shown in item 25 and mean age of the children who entered Re-Ed is shown in item 26. Items 24, 25 and 26 are not directly comparable since the items do not reflect data for completely overlapping groups of children, but they do suggest what was commonly found in the data for individual children--a time lag of a year or more between perceived need for professional help and actual contact with professional help, and a lapse of two or more years between first professional help and entry into Re-Ed. (The data for the Re-Ed and untreated children shown in item 25 are also not directly comparable. Ages for the Re-Ed children reflect only help from physicians, psychiatrists, psychologists and social workers; ages for the untreated children include in addition help sought from school personnel and clergymen.)

As indicated in item 27, most Re-Ed children were referred to Re-Ed by mental health clinics, child study centers, social service agencies or professionals in private practice; schools and special school services referred 11 per cent of the children.

About three times as many Re-Ed (38 per cent) as untreated children (13 per cent) had received medication for behavior problems prior to Re-Ed (item 28); this difference probably to some extent reflects the difference between the groups in percentage of children seen by professionals able to prescribe such medication. The groups did not significantly differ in percentage of children who had been in trouble with the law (item 29). Significantly more mothers, but

not fathers, of Re-Ed than untreated children had received professional help for psychological problems not directly related to the child (items 30 and 31).

School situation and history. Principals had been asked to nominate only children currently enrolled in regular classes.[5] All children in the untreated disturbed group were therefore enrolled in school and in regular class at Round 1. Only 79 per cent of the Re-Ed children were enrolled in a regular class prior to Re-Ed; 14 per cent were not enrolled in school and 7 per cent were in special classes. Three per cent of the untreated children had previously spent time in special classes (item 33). There was no difference between the disturbed groups in grade level of those enrolled in regular class (item 34) or in normal expected grade level (grade child would have been in if he had remained in a regular class and made normal school progress) for all children (item 35).

Counting children who were not enrolled in school or who were in special class at the time they entered Re-Ed, more Re-Ed than untreated children had failed one or more grades (item 36). For children in regular class (item 37), there was no significant difference between the Re-Ed and untreated children in mean number of grades behind normal expected grade level (a child could have gotten behind normal expected grade level not only by repeating a grade, but also by losing a year because of placement in a special class or withdrawal from school). In all, 58 per cent of all Re-Ed children and 37 per cent of all untreated children had not made normal school progress because of school failure, withdrawal from school or placement in special class (item 38).

Fewer of the normal than Re-Ed or untreated children had failed a grade or for any other reason failed to make normal school progress. There were no significant differences among the groups, however, in

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[5] The restriction of the untreated disturbed group to children in regular classes followed from the desire to use as a comparison group children who were not currently receiving treatment. Special class placement may be considered an education-based treatment for disturbed children. Similarly, it was not possible to locate children who had been expelled from school for behavior or emotional problems who were not currently in treatment or likely soon to be in treatment. The restriction of the untreated sample to children in regular classes undoubtedly meant that some Re-Ed children were more disturbed than children in the untreated sample and accounts to some extent for the gloomier picture of the Re-Ed children given by the school history data. It may also account to some extent for the difference in ratings by mothers to be described later.

the grade in which children who ever stopped normal school progress, first did so. More than half the children in each group who were ever to fail a grade, be placed in a special class, or be withdrawn from school, did so by the end of the first grade, and 76, 85 and 95 per cent of the Re-Ed, untreated and normal children, respectively, did so by the end of the second grade (item 39). There can be no doubt that schools do identify early those children who will have trouble adapting to school requirements.

In addition to having the child repeat a grade, asking his family to withdraw him from school, or placing him in a special class, the schools tried in many other ways to help the "untreated" disturbed child. (The figures given in items 40 through 45 undoubtedly underestimate the facts. More than half the untreated children had transferred to their current school; many of them had very incomplete school records and the principals had incomplete knowledge of their past school histories. In some cases this lack of knowledge on the principal's part was encouraged by the parents; some parents had moved in order to transfer the child from a school in which he was having problems--this included some parents who moved to prevent the child's placement in a special class or to gain him entry into one school after he had been expelled from another. Incomplete data also resulted from the fact that some principals had only recently been transferred to their current schools. In addition, in assessing the data in items 40 through 45, it should be noted that many principals indicated that they had tried to provide additional services for the children but had not been able to do so either because of waiting lists or because of lack of parental cooperation.)

One-third of the children in the untreated group had been seen or were currently being seen by a school psychologist (item 40). 16 per cent had been seen or were currently being seen by a school social worker (item 41). Some of the children had been seen by both a school psychologist and a school social worker; 41 per cent had been seen by at least one of these (item 42). Item 43 summarizes additional special arrangements the principals indicated had been made by the schools for the untreated children.

In addition to special services and arrangements provided by the schools, school personnel had asked the families of 43 per cent of the untreated children to secure outside help for the children (item 44). For 39 per cent of the children, professional help for the child's behavior problems was requested; for 14 per cent special help was requested for academic problems (item 45).

The teacher's ratings of the child and his parents. Uncontrollable behavior and disruptiveness in class were problems frequently mentioned by the principals in describing the problem behaviors of the children they nominated. Such problems were also strongly reflected in ratings of both the untreated disturbed and Re-Ed children by their teachers. Ratings by the teachers of disruptiveness

in class and sensitivity of the child's behavior to an adult's words of criticism or praise did not significantly differ for the Re-Ed and untreated children, but sharply differentiated them from the normal children. For example, in rating disruptiveness in class (item 46), the teachers described all of the normal children but fewer than one-third of the Re-Ed or untreated children as "no more troublesome than most children," and indicated that "it is almost impossible to teach with him in the room" for 18 per cent of the Re-Ed and 11 per cent of the untreated children. Similarly, the teachers indicated that the behavior of 85 per cent of the normal children but only 16 per cent of the Re-Ed and 12 per cent of the untreated children could usually be controlled by words of criticism or praise (item 47), and that 10 per cent of the Re-Ed and 12 per cent of the untreated children but none of the normal children were currently in danger of suspension, expulsion or exclusion (item 48). Ratings of the untreated children's behavior by their former teachers at the end of the previous academic year suggest that the behavior problems of the untreated children were neither new nor dependent only on the relationship with the current teacher; ratings by the previous teachers on such dimensions as self-control, dependability, and co-operation sharply differentiated the normal and untreated disturbed children (item 49).

The principals described a number of the children they nominated as being rejected, isolated, or scapegoated by their classmates. Teacher ratings of the children's relationships with their classmates did not differentiate the Re-Ed and untreated children but sharply discriminated each of the disturbed groups from the normal children (item 50); the teachers rated 95 per cent of the normal children but only about one-third of the Re-Ed and untreated children as "accepted, usually gets a friendly response," while describing approximately one-third of each disturbed group as isolates and the remaining third as "rejected, other children find him objectionable."

In describing some of the children they nominated, the principals spoke of the children's feelings of anxiety and unhappiness. The teachers rated the untreated disturbed children as feeling significantly more of this kind of distress than the normal children, but significantly less than the Re-Ed children (item 51).

Although the principals were asked to nominate children on the basis of their behavioral and emotional problems, and not on the basis of their academic deficits, academic problems were extremely common among the untreated disturbed children. The teachers indicated that 16 per cent of the untreated children were complete misfits in their classes academically, lacking the basic skills necessary to learn current material (item 54) and that 39 per cent were in danger of being retained or socially promoted at the end of the academic year (item 55). The teacher ratings, as well as the intelligence test scores cited earlier, suggest that the untreated disturbed as well as the Re-Ed children's academic problems were more closely

related to their inability to use their potential than to actual limitations in intellectual capacity.

The Re-Ed and untreated disturbed children did not differ significantly in teacher ratings of ability (item 52) or achievement (item 53). Although both disturbed groups were rated as less satisfactory on both dimensions than the normal children, there was greater discrepancy between teacher ratings of ability and achievement in the disturbed groups than in the normal group. For example, the teachers rated 3 per cent more of the normal children as below average or far below others in the class in achievement than they rated as below average or far below average in ability. For the Re-Ed children, the discrepancy was 45 per cent, for the untreated children 36 per cent. Clearly, the teachers felt that substantial numbers of the Re-Ed and untreated children were not learning as well as they could. The teachers expressed this belief directly in rating the children's use of potential (item 56). The Re-Ed and untreated groups did not differ significantly from each other on this item, but did differ significantly from the normal children. The teachers described 73 per cent of the normal children, but only 3 per cent of the Re-Ed and 5 per cent of the untreated children as working to full capacity most of the time, and almost two-thirds of the Re-Ed and untreated children but only two per cent of the normal children as seldom able to use their abilities fully.

In explaining why they had not asked the parents to seek outside help for a child or why they had not been able to make special arrangements for the child within the school situation, the principals often cited the parents' lack of cooperation or lack of receptiveness to suggestions from the school. The teachers rated parents of the untreated children as less cooperative than parents of either the Re-Ed or normal children (item 57).

Communication from the school as reported by the mother. More mothers of the untreated disturbed (93 per cent) than normal (35 per cent) children reported that at least one of the child's teachers had communicated to them that the child's behavior in school was a problem (item 58); 89 per cent of the mothers of the untreated disturbed children and 30 per cent of the mothers of the normal children reported such communications from the current teacher (item 59). A categorization of problem behaviors mothers said were reported by current teachers is shown in item 59.

Teacher complaints that the child's behavior in school was unsatisfactory were generally not new to the mothers of the untreated disturbed children; approximately one-half of them reported receiving such communications from the teacher as early as the first grade (item 60) and approximately one-half reported receiving complaints about the child's behavior from every teacher the child had had (item 61). Teacher complaints about the untreated children's school work were also reported by the mothers as common, about as common for

them as for the Re-Ed children and significantly more common for both the latter groups than for the normal children (item 62).

Nineteen per cent of the mothers of the untreated disturbed children reported that the school had requested them to get outside help for the child's behavior problems; 9 per cent reported that the school had requested them to get outside help for the child's academic problems (item 64). A school request for outside help of one or both kinds was reported by 24 per cent of the mothers of the untreated disturbed children (item 63). Significantly fewer mothers of the normal children and significantly more mothers of the Re-Ed children reported that the school had requested they seek outside help for the child's behavior problems; an equal percentage of the Re-Ed mothers but fewer of the mothers of the normal children reported school requests for outside academic help (item 64).

There were many mothers of untreated children who did not report that the school had requested them to get outside help for their child despite the fact that school records and the school principal indicated that such a request had been made (see items 44 and 45). It is unclear whether these mothers had not understood the school's request, had forgotten it, or were unwilling to report it.

Ratings and descriptions of the child by the mother. On the whole, teacher ratings of the Re-Ed and untreated disturbed children were similar and the teachers rated both disturbed groups as significantly less well-adjusted than the normal children. Mothers of the Re-Ed and untreated children also rated their children as less well-adjusted than did mothers of the normal children, but generally the Re-Ed mothers rated their children as having more problems than mothers of the untreated children did. It is unclear whether the mothers of the untreated children really were more satisfied with their children's behavior or whether they were more defensive. The fact that the Re-Ed mothers rated and described their children after they had already made the decision to apply to Re-Ed (after they had already in a sense publicly admitted their dissatisfaction with the child's behavior) and that they were describing the child's behavior to those (the descriptions and ratings were made as part of the application to Re-Ed) they hoped would help the child and therefore needed to be fully informed about his problems, while the mothers of the untreated children were describing the child to a stranger for an impersonal research study, makes comparisons of the ratings and descriptions of the disturbed children by the two groups of parents difficult to interpret. The parent descriptions and ratings were gathered for two primary purposes: first, to check whether the parents of the untreated children as well as their teachers and principals saw them as deviant compared to the normal children (ratings and descriptions from parents of normal and untreated children were gathered under comparable conditions), and second, to see whether the parents of the untreated children were in general concerned about the same kinds of problems as the Re-Ed parents.

It is clear that mothers of the untreated disturbed children did see their children as having more problems than did mothers of the children defined by the schools as normal. Mothers of the untreated children described more problems in every category listed in item 65 except one, the one having more to do with the child's feelings than his behavior; mothers of the untreated disturbed children were more likely to feel that their child had more problems than other children his age (item 66); they were more likely to feel the child's grades in school did not reflect his ability (item 67); and they were more likely to feel that the child needed special help for his problems.

While mothers of the Re-Ed children generally reported more problems with their children's behavior than did mothers of the untreated disturbed children (item 65), the two groups of mothers seemed to be concerned about the same kinds of problems. In both groups, problems related to school and to lack of self-control seemed to predominate (see items 65 and 67).

Sociometric ratings by the children's classmates. Each of the children's classmates filled out a questionnaire (see Appendix E) in which he named up to five children in the class he would choose to invite to a party (positive nominations) and, if he wished, also listed the names of children from the class he would not want to invite to his party (negative nominations or rejections). For most analyses of the sociometric data, the number of positive and negative nominations received by each child were converted to T scores to adjust for differences in class size. The unconverted data are presented in items 69 and 70 of Table 1 in order to show the actual numbers of positive and negative nominations received by the children; analyses based on the same data using T scores yielded the same pattern of significant results.

Like their teachers, principals and mothers, the untreated disturbed children's classmates sharply differentiated between them and the normal children. The sociometric data did not significantly differentiate the Re-Ed and the untreated disturbed children. The normal children received significantly more positive nominations than the Re-Ed or untreated children. For example, while only one normal child did not receive a positive nomination from any classmate, 27 per cent of the Re-Ed and 21 per cent of the untreated children failed to receive any positive nomination. Similarly, while 48 per cent of the normal children received seven or more positive nominations from their classmates, only 8 per cent of the Re-Ed and 13 per cent of the untreated children received that many (item 69). The difference between the normal and disturbed children in number of negative nominations (item 70) was even more striking. While 71 per cent of the normal children received no negative nominations or at most one, this was true for only 7 per cent of the Re-Ed and 13 per cent of the untreated children, and while no normal child received as many as ten negative nominations from his classmates,

approximately one-third of the Re-Ed and untreated children received ten or more negative nominations.

Summary. The Re-Ed, untreated disturbed, and normal children have been compared on a number of dimensions. In light of the data which have been presented, how adequate do the untreated children appear as a comparison group for the Re-Ed children?

It is clear that the untreated children are different from the normal children. Teacher, parent, and classmate ratings all strongly indicate this, as do the school and mental health history data. It is clear, too, that there are many similarities between the untreated disturbed children and the Re-Ed children, but there are also some differences which suggest more severe maladjustment among the Re-Ed children. While the school histories of the Re-Ed children who were in regular class immediately prior to enrollment at Re-Ed were fairly similar to those of the untreated children, 21 per cent of the Re-Ed children were not enrolled in school or were in special classes immediately prior to enrollment at Re-Ed. The Re-Ed children had had more unstable family histories than the untreated children. Perhaps because Re-Ed parents were seen as more cooperative and more receptive to suggestions by the schools, the schools had suggested to more parents of Re-Ed than untreated children that they get outside professional help for the child's behavior problems, and many more of the Re-Ed than untreated children had been seen by non-school-provided psychiatrists, psychologists, and social workers prior to enrollment at Re-Ed. (Since non-school psychiatrists, psychologists, and social workers are the most common sources of referral to Re-Ed, lack of access to them may account to some extent for the untreated children's not getting referred to Re-Ed.) Teacher ratings of the Re-Ed and untreated children's behavior and academic performance were similar on a number of dimensions. One exception was that the teachers saw the Re-Ed children as feeling more internal distress; the teachers rated the Re-Ed children as feeling more anxiety, unhappiness and the like than the untreated children. While the children's classmates found the Re-Ed and untreated disturbed children equally worthy of rejection, the mothers of the untreated disturbed children reported fewer behavior problems than the Re-Ed mothers. As indicated earlier, it is unclear to what extent the differences in mother ratings reflect differences in rating conditions.

How might the initial differences between the Re-Ed and untreated disturbed children affect the data? Could the initial differences, rather than the Re-Ed intervention, lead to the Re-Ed children's doing better at follow-up than the untreated children?

It seems unlikely that more severe initial behavior problems would lead to better adjustment at follow-up. Two other differences are sources of greater concern. The Re-Ed children were

rated by their teachers as feeling more internal distress than the untreated children. Might initial level of internal distress be related to amount of improvement? Parents of the untreated children were seen by the schools as less cooperative and less receptive to suggestions by the school than parents of Re-Ed children. Might parental resistance be negatively related to later improvement in the child's adjustment?

To assess the relationship between improvement and initial level of internal distress, two 2 X 3 analyses of variance were done (2 groups = Re-Ed and untreated disturbed; 3 levels = a very great deal of distress, more distress than most children, and as much distress or less distress than most children). The dependent variables were amount of change between Rounds 1 and 3 in global ratings of 1) academic status and 2) behavioral-emotional adjustment in school. The two ratings, which will be described in detail when data on change over time are presented, are derived from descriptions and ratings of the child by the teacher on the Pupil Information Form (Appendix D).

The results of the analyses give no reason to believe that improvement in either school behavior or school learning is related to a child's initial level of internal distress as rated by his teacher. Neither the F's for initial level of internal distress (1.25 and 2.54 for the academic and behavior ratings, respectively, each with 2 and 233 df) nor the F's for the levels by groups interactions (2.31 and 0.52 for the academic and behavior ratings, each with 2 and 233 df) were significant.

Comparable analyses of variance were done using three levels of receptiveness of parents to suggestions from the school: indifferent or argumentative, fairly cooperative in most ways, and warm participation in planning for the child. Again, the results were not significant (F = 1.22 for levels and 0.29 for the levels by groups interaction, each with 2 and 235 df, for the academic rating, and 1.29 and 0.19, respectively, with 2 and 235 df, for the behavior rating).

While the untreated disturbed children cannot be defended as a perfect comparison group for the Re-Ed children, there seems little reason to believe that without intervention the Re-Ed children would do better than the untreated children.

CHAPTER IV

INFORMATION AND RATINGS COLLECTED AT DISCHARGE

Just prior to a child's discharge from Cumberland House, staff summarize information about program experiences the child and his family have had, provide ratings of change in the child and family, and make predictions about the child's future adjustment. The referring agencies also provide ratings if they have had contact with the child and/or his parents during the child's residence at Cumberland House. Comparable information and ratings are, of course, not available for the untreated disturbed or normal children.

Some Aspects of the Re-Ed Program

Although the Re-Ed program is carried out in the context of a group of eight children, and the group is regarded as vital to the efficacy of the program, flexibility of programming for the individual child remains high. This flexibility permits individual attention by staff members and/or use of individualized strategies when necessary to fill a child's special needs. For example, as shown in Table 2, during residence 13 per cent of the children were on medication for a time for behavior problems, three per cent were in therapy with a psychotherapist from another agency (usually the referring agency), and 32 per cent received individual tutoring. Sixteen per cent of the children attended a public school at the end of their stay at Cumberland House as part of the transition back to their own home and school. Length of stay at Re-Ed was also variable (see item 5 of Table 2). The shortest length of stay was 2.8 months, the longest 18.5 months. The majority of the children (89 per cent) stayed between three and twelve months.

Information about work with parents is also shown in Table 2. More than 90 per cent of the mothers and more than 70 per cent of the fathers of the Re-Ed children were in casework or therapy with an outside agency (usually the referring agency) for at least a short time while the child was at Cumberland House; 54 per cent of the mothers and 34 per cent of the fathers were seen at least twice a month throughout the child's stay (see item 6). In most cases, especially with the father, these contacts were oriented primarily toward the parent-child relationship, but in a substantial number of cases personal and marital problems were the primary focus (see item 7). Re-Ed staff noted considerable variability in the ability of the outside agencies to provide the parents (especially the fathers) the help they needed (see item 8).

TABLE 2

Some Aspects of the Re-Ed Program

		% of Children
1.	Child Took Medication for Behavior Problems for a Period of Time during Residence (106)	13%
2.	Child Was in Therapy with Another Agency during Residence (122)	3%
3.	Child Received Individual Tutoring during Residence (105)	32%
4.	Child Attended Public School for a Time during Residence (122)	16%
5.	Length of Residence (122)	
	3.0 months or less	1%
	3 to 6.0 months	27%
	6 to 9.0 months	39%
	9 to 12.0 months	23%
	12 to 15.0 months	9%
	more than 15 months	1%
	Mean in months: 8.1	
	Standard deviation: 2.8	

		% of Mothers	% of Fathers
6.	Was Parent in Casework or Therapy with Another Agency while the Child Was at Re-Ed? (119, 95)		
	No such contacts were planned	2%	12%
	Contacts planned but never took place	5%	17%
	Contacts continued for a short time during child's stay, but then stopped	21%	17%
	Contacts occurred less than twice a month but continued throughout child's stay	18%	21%
	Contacts occurred at least twice a month and continued throughout child's stay	54%	34%
7.	Parent's Contacts with the Agency Were Oriented Primarily toward (71,43)		
	Parent's own problems	21%	7%
	Marital relationship	14%	19%
	Relationship with child	48%	63%
	Combination of above	17%	12%

	% of Mothers	% of Fathers
8. Was the Other Agency Able to Give the Parent the Help Needed? (108, 74)		
No	16%	27%
Partly	56%	45%
Yes	29%	28%
9. Did Parent's Relationship with Re-Ed Staff Affect Agency's Work with Parent? (71, 43).		
Interfered with agency's work	1%	0%
Had no effect	27%	37%
Facilitated agency's work	72%	63%

Note.-- After each item, in parentheses, is shown the number of children (or, if two numbers are shown, the number of mothers and fathers, respectively) about whom the information was available. The information was provided by Re-Ed staff, except for items 7 and 9. Information for items 7 and 9 was provided by the agencies which served the parents.

Re-Ed staff also work with parents, in an educational rather than a therapeutic mode, on communication, child management, and parent-child relationships. This is true not only for the liaison-teachers, whose primary task is work with the child's ecology, but also for the day and night teacher-counselors who work directly with the children. The day and night teacher-counselors reported working with one or both parents of 62 per cent of the children.

When the Re-Ed program was first developed, there was some concern that work with parents by Re-Ed staff might interfere with the therapy or casework provided by the referring agencies. According to ratings by referring agency workers, however, the relationship between parents and Re-Ed staff was a positive rather than a negative influence (see item 9).

Ratings of the Re-Ed Children by Re-Ed and Referring Agency Staff

The first evaluations of the effectiveness of the Re-Ed program were made at discharge by Re-Ed and referring agency staff. They were asked to compare the child's behavior at enrollment and discharge along a variety of dimensions, and to make predictions about his future adjustment in a number of situations.

While these ratings do not reflect observation of the child's behavior in the environments to which he is returning, are not made by evaluators indigenous to those environments, they do offer several advantages. The raters have had broad experience and training in observing and evaluating children; they are specialists in assessing children's behavior. Further, the Re-Ed staff have had intimate contact with the children for a more extensive period of time than is usually available for judgments by mental health specialists, and they knew the children's histories and backgrounds unusually well. Ratings by the referring agency workers offer a check on the Re-Ed ratings in that the referring agency workers were freer of the bias which may color ratings of one's own work. Finally, judgments by mental health personnel are commonly used in evaluating effectiveness of treatment and are therefore useful for comparative purposes.

The ratings of change. The ratings of change are summarized in Table 3. As indicated in Table 3, inter-rater reliabilities ranged from low to moderate, but all were significant at the five per cent level or less.

The Re-Ed liaison-teachers and the referring agency workers rated the children on change in overall adjustment between enrollment and discharge. No rater in either group rated any child as unimproved or worse. The liaison-teachers rated 94 per cent, and the referring agency workers rated 88 per cent, of the children as moderately or much improved, the two highest ratings on the five-point scale (see item 1).

The day and night teacher-counselors rated the children on improvement in behavior. The day teacher-counselors rated 90 per cent of the children, and the night teacher-counselors rated 89 per cent of the children, as having shown moderate or major improvement in behavior. The remaining children were rated as having shown a small amount of improvement in behavior (see item 2). Six months after discharge, 93 per cent of the mothers (N=107) and 89 per cent of the fathers (N=74) reported improvement in their child's behavior since before enrollment at Cumberland House. Eighteen months after discharge, 88 per cent of both the mothers and fathers reported such improvement in behavior.

The day teacher-counselors rated 82 per cent, and the liaison-teachers rated 92 per cent, of the children as having improved in attitudes toward and motivation for learning since enrollment at Cumberland House (see item 3). Six months after discharge, 76 per cent of the mothers (N=108) and 86 per cent of the fathers (N=74) reported their child as having improved in willingness to learn since before his enrollment at Cumberland House. Eighteen months after discharge, the percentages were 78 and 83, respectively.

TABLE 3

Ratings of [illegible]nge in the Re-Ed Children
between Enrollment and Discharge

	Rater	
	Liaison T-C (N=112)	Referring Agency (N=60)
1. Overall Judgment of Change: Compared to Enrollment is Child at Discharge		
Worse	0%	0%
Same	0%	0%
Slightly improved	6%	12%
Moderately improved	44%	38%
Much improved	49%	50%
	r = .39 (N=60)	
	Day T-C (N=105)	Night T-C (N=106)
2. Behavioral Improvement during Stay		
Child's behavior has become less socially acceptable	0%	0%
No change	0%	0%
Small amount of improvement	10%	11%
Moderate improvement	50%	51%
Major improvement	39%	38%
	r = .28 (N=101)	
	Day T-C (N=105)	Liaison T-C (N=105)
3. Improvement in Attitudes toward and Motivation for Learning during Stay		
Now less willing to learn	0%	0%
No change	3%	0%
Small amount of improvement	15%	8%
Moderate improvement	51%	53%
Major improvement	31%	39%
	r = .21 (N=91)	
	Day T-C (N=94)	Night T-C (N=97)
4. Academic Improvement during Stay		
Child is in worse position academically than when he came	0%	0%
Same	4%	3%
Small amount of improvement	33%	27%
Moderate improvement	52%	58%
Major improvement	11%	12%
	r = .62 (N=85)	

The day and night teacher-counselors rated the children on academic improvement during residence at Re-Ed. The day teacher-counselors rated four per cent of the children as having shown no improvement and 63 per cent of the children as having shown moderate or major improvement. The night teacher-counselors rated three per cent of the children as having shown no improvement and 70 per cent as having shown moderate or major improvement (see item 4). Six months after discharge, mothers (N=107) and fathers (N=72) reported 76 and 81 per cent, respectively, of their children as having improved in reading since prior to enrollment at Re-Ed. Eighteen months after discharge, the figures were 72 and 85 per cent, respectively. The percentages of children reported showing improvement in arithmetic since prior to Re-Ed were 76 and 77 for mothers and fathers six months after discharge, and 76 and 78 eighteen months after discharge,

The percentages for academic improvement are lower than those for improvement in behavior. This surprised neither staff nor consultants at Cumberland House. Their feeling was that behavioral improvement usually precedes academic improvement (the child must learn to sit still in class, attend to instruction and try to learn before significant improvement in academic learning can take place), and that, because Cumberland House returns the child to his own home and school as soon as possible, children are often discharged when they are ready to learn but have not yet begun to make the strides which have become possible for them. In making recommendations for special help for the children after discharge, the staff recommended medication for three per cent of the children, psychotherapy for seven per cent, and tutoring for 28 per cent.

Prediction of future adjustment. In addition to rating change in the child between enrollment and discharge, Re-Ed staff and referring agency workers made predictions about the child's future adjustment. Two types of predictions were made. The first, made by Re-Ed liaison-teachers and referring agency workers, compared the child's predicted adjustment in the future (about a year after discharge) to his adjustment prior to enrollment. The second type of prediction, made by Re-Ed staff, referred to how the child would do in specific contexts after discharge.

The prediction data are summarized in Table 4. Inter-rater reliabilities ranged from low to moderate (see Table 4); all were significant beyond the one per cent level.

The global prediction of future adjustment. Liaison-teachers and referring agency workers were asked to predict the child's adjustment a year after discharge and compare this to his adjustment prior to Re-Ed. The liaison teachers predicted that 85 per cent, and the referring agency workers predicted that 76 per cent, of the children would be moderately or much improved a year after discharge (see item 1). The percentages of children rated by

their parents six and eighteen months after discharge as showing a good deal of improvement or great improvement compared to their pre-Re-Ed adjustment are fairly similar to these predictions, ranging from 73 to 88 per cent (see items 2 and 3). Ratings of future adjustment (item 1 of Table 4), by both the liaison-teachers and the referring agency workers, were somewhat less optimistic than their ratings of adjustment at discharge (item 1 of Table 3), indicating an expectation that there would be some regression in some children when they left Cumberland House and returned to their own homes, schools, and communities.

The more specific predictions. The remaining predictions summarized in Table 4 differ from the ratings of change in Table 3 in a number of important ways. First, the predictions refer to the future rather than to the present as the ratings of change do. Second, they are more specific than the ratings of change. They ask about disruptiveness in the classroom or about getting along with other children rather than about behavior in general. Third, the prediction items require that the context to which the child is returning be taken into account. Will the child do passing work in the class he is entering. Given his home situation and the community supports available to him, is he apt to get into trouble for delinquent acts? Fourth, the prediction items ask how the child will do in absolute terms rather than in relation to pre-enrollment behavior. In the prediction about academic performance, for example, the focus is on "Will he do passing work?" rather than, as in the change rating, on "Has he improved academically?" Finally, because of their absolute nature, the predictions may be meaningfully correlated with absolute ratings obtained at follow-up.

Disruptiveness in the classroom. The day teacher-counselors predicted that 82 per cent of the children would not be disruptive in their classes after they returned to their schools (see item 4). This had been true of only 30 per cent of the children prior to enrollment (see item 4f of Table 1).

Since the day teacher-counselor was the only one to make this prediction at discharge, no inter-rater reliability is available. The day teacher-counselor's prediction was significantly related ($r=.36$, $N=111$, $p < .01$) to a similar rating of the child made by his own school teacher six months after discharge.

Academic status. Both the day teacher-counselors and the liaison teacher-counselors expected that 92 per cent of the children would do passing work in the grade entered after discharge (see item 5). The day teacher-counselor's prediction was significantly related ($r=.31$, $N=113$, $p < .01$) to a rating of academic performance by the child's school teacher six months after discharge.

TABLE 4

Predictions about the Children Made by Re-Ed Staff and Referring Agency Workers

The Global Prediction of Future Adjustment and Parent Ratings of Actual Later Adjustment

	Rater	
1. Prediction of Child's Adjustment in the Future (about a year after discharge) Compared to His Pre-Re-Ed Adjustment	Liaison (N=111)	Referring Agency (N=66)
Will probably become worse	0%	0%
Will be about the same	1%	8%
Will be slightly improved	14%	17%
Will be moderately improved	56%	52%
Will be much improved	29%	24%
	r = .37 (N=66)	

2. Parent's Rating of Child's Adjustment Compared to His Pre-Re-Ed Adjustment (Rating Made Six Months after Discharge)	Mother (N=116)	Father (N=80)
Worse	1%	0%
No change	0%	1%
Slight improvement	11%	14%
Good deal of improvement	52%	47%
Great improvement	36%	38%
	r = .52 (N=77)	

3. Parent's Rating of Child's Adjustment Compared to His Pre-Re-Ed Adjustment (Rating Made Eighteen Months after Discharge)	Mother (N=108)	Father (N=68)
Worse	0%	0%
No change	7%	3%
Slight improvement	19%	16%
Good deal of improvement	52%	63%
Great improvement	21%	18%
	r = .64 (N=66)	

The More Specific Predictions

	Rater Day T-C (N=114)
4. How Disruptive Will Child Be In Classroom	
Almost impossible to teach with him in room	0%
Will often disrupt classroom activities	18%
No more disruptive than most children	82%

	Day T-C (N=113)	Liaison T-C (N=117)
5. How Will Child Do Academically in Grade in Which He Will Be Placed after Discharge		
Will require a social promotion if he is to pass	8%	8%
Below average but passing	37%	35%
About average	39%	47%
Above average	16%	10%
r = .72 (N=109)		

	Day T-C (N=115)	Night T-C (N=115)
6. How Will Child Get Along with Other Children after Discharge		
Extreme rejection	0%	0%
Often rejected	7%	8%
Some difficulty with peer relations, but generally manages to get along	55%	52%
Usually well accepted, among best liked	35%	36%
	3%	4%
r = .44 (N=110)		

	Day T-C (N=116)	Night T-C (N=114)
7. How Will Child Get Along in Community (delinquent behavior) after Discharge		
Predict he will get into trouble	4%	0%
Grave reservations that he can stay out of trouble	3%	3%
Some concern about whether he will get into trouble	28%	36%
Not likely to get into trouble	66%	61%
r = .61 (N=110)		

TABLE 5

Ratings of the Re-Ed Children's Families, Schools and Communities

1. To What Extent Has Parent Made Those Changes In Himself or In the Child's Situation Which Were Considered Necessary for the Child's Well-Being (Re-Ed rating)	Mothers (N=118)	Fathers (N=94)
Great change for worse	0%	1%
Some change for worse	2%	1%
No change	1?	29%
Some change for better	74%	57%
Great change for better	12?	12%

2. Compared to Enrollment, Is Family Situation at Discharge (Re-Ed rating)	Families (N=110)
Worse	[illegible]
Same	12%
Slightly improved	2.%
Moderately improved	32%
Much improved	22%

3. To What Extent has Parent Made Those Changes In Himself or in the Child's Situation Which Were Considered Necessary for the Child's Well-Being (Referring Agency rating)	Mothers (N=71)	Fathers (N=44)
Worse	0%	0%
No change	7%	16%
Slight Improvement	37%	45%
Moderate Improvement	44?	27%
Great Improvement	13%	11%

4. How Able is Family to Fill the Child's Needs after Discharge (Re-Ed rating)	Families (N=112)
1. Unable	4%
2.	1 %
3. Able to give him some things that are important, unable to fill other important needs	54%
4.	29%
5. Able	

		Schools (N=98)
5.	How Confident Does the School Feel about Its Ability to Cope with the Child When He Returns to Them (Re-Ed rating)	
	1. Apprehensive	0%
	2.	0%
	3. Ambivalent	9%
	4.	58%
	5. Confident	33%

		Schools (N=99)
6.	How Willing Is the School to Accept the Child Back from Re-Ed (Re-Ed rating)	
	1. Reluctant	1%
	2.	1%
	3. Ambivalent	7%
	4.	29%
	5. Willing	62%

		Schools (N=101)
	How Able Is the School to Fill the Child's Needs (Re-Ed rating)	
	1. Unable	0%
	2.	1%
	3. Able to give him some things that are important, unable to fill other important needs	35%
	4.	41%
	5. Able	23%

		Communities (N=112)
8.	Will the Child's Community Be Willing and Able to Fill the Needs of the Child and His Family (Re-Ed rating)	
	1. No	0%
	2.	5%
	3. Partly	53%
	4.	34%
	5. Yes	8%

Peer relationships. Both the day and night teacher-counselors expected that more than 90 per cent of the children would get along with their peers at least reasonably well after discharge (see item 6). Prior to enrollment, the children's school teachers had rated 40 per cent of the children as rejected by their peers and 28 per cent as isolates (see Table 1, item 50). The day teacher-counselor's prediction was significantly related ($r = .33$, $N = 111$, $p < .01$) to a rating of peer acceptance by the child's school teacher six months after discharge.

Delinquent behavior. The day and night teacher-counselors were concerned that a third or more of the children might get into trouble because of delinquent behavior after discharge (see item 7). Very few children actually did get into trouble during the follow-up interval, too few to make it worthwhile to compute validity coefficients for the prediction.

Ratings of the Re-Ed Children's Families, Schools and Communities

The ratings presented thus far assess change in the child. He is not the only focus of the Re-Ed program, however. The Re-Ed program attempts also to affect the child's family, his school, and other components of his social world, in order to increase their capacity to support the gains he has made while at Re-Ed. Assessments of the results of these efforts, made by Re-Ed liaison-teachers and referring agency workers at the time the child is discharged, are shown in Table 5.

Ratings of the Families. The Re-Ed liaison-teachers rated 86 per cent of the mothers and 69 per cent of the fathers as having made at least some of the changes in themselves and in their children's situations which were necessary for their children's welfare (see item 1). In 54 per cent of the families, the changes in the parents were substantial enough for the liaison-teacher to rate the family situation at discharge as moderately improved or much improved compared to the time when the child was admitted to Cumberland House; 14 per cent of the family situations were rated as unchanged or worse, and 33 per cent were rated as slightly improved (see item 2). Referring agency workers rated 57 per cent of the mothers and 38 per cent of the fathers as having made moderate or great improvement (see item 3). The referring agency rating of change in the mother (item 3) correlated .39 ($N = 71$, $p < .01$) with the Re-Ed rating of change in the mother (item 1), and .36 ($N = 71$, $p < .01$) with the Re-Ed rating of change in the family (item 2). The referring agency rating of change in the father (item 3) correlated .32 ($N = 43$, $p < .05$) with the Re-Ed rating of change in the father (item 1), and .45 ($N = 44$, $p < .01$) with the Re-Ed rating of change in family (item 2).

Re-Ed staff felt that approximately one-third of the families would be able to fill their children's needs after discharge, 14 per cent would be largely unable to fill their children's needs, and 54 per cent would be able to meet some needs but not others (item 4). Staff recommended therapy after the child's discharge for 58 per cent of the mothers and 40 per cent of the fathers.

Ratings of the children's schools and communities. Although the schools to which the Re-Ed children were going did not always feel confident about being able to cope with the children (item 5), they were usually willing to accept them (item 6). Re-Ed staff felt that about two-thirds of the schools would be able to meet most of the children's needs (item 7). They felt this to be true of only 42 per cent of the children's communities (item 8).

Re-Ed staff believe that the timing of a child's discharge should depend not only upon the readiness of the child to return to his own environments and perform there with at least a minimum of success, but also upon the readiness of those environments to support and promote the progress he has made at Re-Ed. A comparison of items 4, 7 and 8 in Table 5 suggests that Re-Ed staff saw the family as a relatively weak link in the child's social world at discharge, and the school as a relatively strong one. To some extent, this reflects the fact that it is easier to move a child from one school to another than from one family to another. Re-Ed staff helped place 34 per cent of the children in schools outside their regular school zones in order to provide an optimum school situation after discharge. Re-Ed staff also encouraged family change in a few cases, usually change from living with one relative to living with another, but in trying to improve a child's family situation they were far more likely to rely on affecting the current family, through therapy or training, and on providing additional supports (for example, a big brother) for the child and family, than on moving the child from one family to another.

CHAPTER V

CHANGE IN SELF-CONCEPT, LOCUS OF CONTROL, IMPULSIVITY, AND SOCIAL SCHEMATA

Shortly after enrollment at Re-Ed and again shortly before discharge, measures of self-concept, locus of control, impulsivity and social schemata were individually administered to the Re-Ed children. While improvement on such measures is, of course, not the ultimate criterion of Re-Ed's effectiveness (the ultimate criterion is the increased acceptability of the child's behavior, in his normal environment, to his family, school, peers, and community), the measures are important insofar as they reflect variables which may be involved in a child's being labeled "emotionally disturbed" and also as potential indicators of how Re-Ed works. A poor self-concept, a belief that what happens to you is unrelated to your own behavior (external locus of control), deviant social schemata, and impulsivity have all been associated in the literature with emotional disturbance in children, and many strategies used by teacher-counselors at Re-Ed schools are guided by the belief that these are aspects of the children's problems and are, therefore, appropriate targets for change. Improvement in self-concept is sought by helping the child find success in areas where he has previously experienced failure (e.g., academics, sports, interpersonal relationships), by helping him gain competence in new areas like camping, music, or arts and crafts, and by recognizing each success, no matter how small. A more internal locus of control is encouraged during evening pow-wow when the children assess, in relation to their own behavior, what went well and what went ill during the day, and set goals for their behavior which might help things go better the next day. A more internal locus of control is also encouraged by the teacher-counselors' customary responses to the children's complaints about other's behavior: "What did you do that made him do that?" or "What can you do about that?" There is some evidence (e.g., Weinstein, 1967, 1968) that deviant social schemata are associated with a child's perception that he is not acceptable to his parents; problems in the parent-child relationship are dealt with at Re-Ed not only through work with the child, but also by working directly with the parents, helping them to adjust their expectations to the abilities and interests of their children and helping them to learn ways of behaving which will be more likely to elicit desired behaviors from their children. Impulsivity is addressed at Re-Ed both by helping the children gain better control over their bodies through programs in physical education and arts and crafts, and by encouraging a "think first" orientation to choice and action.

Measures

Self-concept. The Self-Concept Scale (Appendix F, with items 6, 10 and 14 not scored) was adapted from Rogers (1931) and Bower (1960). It contains twelve items, each of which describes a mythical child (e.g., "Ed is a very good ball player." "Fred gets in trouble in school."). After hearing the mythical child described, the child being tested is asked, "How much like Ed (or Fred, etc.) are you?" The choices available for his answer are: very much, pretty much, not much, or not at all (for scoring purposes, these alternatives are assigned numerical values from 0 to 3). The child is then asked, "How much like Ed (or Fred, etc.) would you like to be?" The self-ideal discrepancy score, which is the sum over all items, of the discrepancy between the two answers to each item, is the measure of self-concept used in analyses.

For each item, the child (if he had both a mother and father) was also asked, "How much like Ed (or Fred, etc.) does your mother want you to be?" After the child answered with one of the alternatives listed above, the question was repeated, this time in terms of the father. The sum of the discrepancies, over all items, between the child's answers about his mother and father were considered a measure of the discrepancy he felt between the standards and expectations held for his behavior by his two parents. At Re-Ed, disturbed behavior is defined as behavior discrepant from the standards and expectations held by those responsible for the child's socialization. One source of disturbed behavior may be the child's perception that the adults he most cares about hold conflicting standards for his behavior.

During early try-outs of the Self-Concept Scale, it was noted that while most of the Re-Ed children described themselves quite negatively, a minority described themselves positively. The teacher-counselors of the latter children felt that they could have predicted the positiveness of their responses; the teacher-counselors felt that these were children who were too defensive to admit deviation from perfection. The teacher-counselors felt that for these children, "improvement" would be an increase rather than a decrease in the self-ideal discrepancy score, since this would indicate less defensiveness on the part of the child and greater ability to admit and face up to his problems.

As a result of these discussions with the teacher-counselors, Epstein's (1964) Need for Approval Scale (a social desirability scale for children) was added to the test battery, to be utilized in analyses in two different ways. First, analyses of

all self-report-inventory scores would be run both with and without need for approval score covaried, to explore the possibility that change from pretest to posttest was due not to change in attitude but to increased defensiveness or to having learned more socially acceptable responses. Second, change in the self-ideal discrepancy score (and in any other self-report-inventory score influenced by need for approval) would be compared for children who initially scored high on need for approval and for those who did not, with the expectation that there would be a significant difference in the direction of change for the two groups of Re-Ed children (the high need for approval children showing an increase in the discrepancy and the other children showing a decrease from pretest to posttest).

Locus of control. The 18-item Locus of Control Scale (see Appendix G) was adapted from scales constructed by Cromwell and his coworkers (Cromwell, 1963). The scale measures the extent to which a child believes that the events which befall him and the responses of others to him result from his own behavior (internal locus of control) rather than being consequences of chance, luck, or other factors independent of his behavior (external locus of control).

Impulsivity. Two measures of impulsivity were used. The first, the latency score on the Matching Familiar Figures Test (Kagan, Rosman, Day, Albert, & Phillips, 1964), is a measure of cognitive reflection-impulsivity. Each item of the test requires the child to choose from six similar line drawings the one which is identical to a sample. Score is the length of time the child spends in making the decision before pointing to his choice. A lower score indicates greater impulsivity.

The Spiral Test (Ritter and Colvin, 1959; see Appendix H) provides a measure of motor impulsivity. The child draws his way out of a spiral with a pencil and is timed although he is given no instructions about how fast to work. Then he is asked to repeat the task, this time moving his pencil as slowly as he can. He is cautioned against going outside the lines, stopping, lifting his pencil, or retracing his line. Score is the difference in time under the two conditions; a low or negative score indicates greater impulsivity.

Social schemata. Kuethe and others (e.g., Kuethe, 1962) have found that when normal adult subjects place human figures on a field "any way you like," there is great similarity in the organizations they produce. For example, child figures are characteristically placed closer to adult female than to adult male figures. When subjects are told to replace figures after

viewing their positions for a short time, they err in directions consistent with the commonly produced free placements. Kuethe accounts for these consistencies by positing the existence of social schemata, learned sets of meanings about the relations among people. The physical distance placed between the figures reflects the emotional distance between the people symbolized. This reasoning has been supported by a number of studies which indicate a relationship between figure placements and personality traits (e.g., Kuethe, 1964; Kuethe and Weingartner, 1964).

There is some evidence that disturbed and normal children differ significantly in their figure placement behavior (and presumably in the social schemata they have learned on the basis of their past experience). For example, Re-Ed children have been shown to be less likely than normal children to place a child figure closer to a mother than a father figure, and more likely to replace a pair of rectangles closer than a pair of human figures when the figure pairs had originally been placed equally far apart (Weinstein, 1965). Normal adults place the mother-child pair closer than the father-child pair and replace human pairs closer than rectangle pairs. In studies of normal children, placing the father-child pair closer than the mother-child pair (which is assumed to reflect a deviant mother-child schema and a disturbed mother-child relationship) has been found to be associated with anxiety and academic underachievement (Weinstein, 1968); replacing the rectangle pair closer than the human figure pair has been found to be associated with greater discrepancy, as perceived by the child, between the child's behavior and the standards held for his behavior by his parents (Weinstein, 1967).

In the free placement task, each child was asked to place two pairs of felt figures on flannel boards "any way you want to." One of the pairs consisted of an adult female and a male child, the other of an adult male and a male child. Order of presentation was counterbalanced over children. When placement of one pair of figures was completed, the flannel board was moved out of sight and another blank board was presented along with the next pair of figures. (Materials and procedures have been described in greater detail in Weinstein, 1965.) The children's spontaneous comments during the task suggested that they associated the adult figures with parent figures. The child was scored as having placed the mother-child pair or the father-child pair closer. Children who placed the two pairs equally far apart at either pretest or posttest were omitted from analyses. In most cases, equidistant placements meant that each pair was placed so that the figures touched or overlapped.

The replacement task was presented to the children as a test of accuracy in judging distances. When the child entered the room, he was asked to look (for five seconds) at either a pair of rectangles or a pair of human figures (a male and a female) placed 15 inches apart on a large piece of felt fastened to the wall ten feet in front of him. The child was told that when the figures were taken down and given to him, he was to replace them exactly as far apart as they had been. The child left the room while the tester measured the replacement and put up the second pair of figures. All children replaced both pairs, with order of presentation counterbalanced over subjects. (Materials and procedures have been described in greater detail in Weinstein, 1965.) The child was scored as having replaced the human pair or the rectangle pair closer. Equidistant replacements were scored as rectangle-closer since social schemata are expected to lead to underestimates of the distance between the human pairs.

Procedures

Subjects. The measures were administered to the 122 Re-Ed, 128 untreated disturbed, and 128 normal children, with the following exceptions. Some Re-Ed children enrolled before all the measures were added to the battery. One pair of untreated disturbed and normal children was not tested through oversight. Two untreated children were unable to come to decisions on the self-report questionnaires and their scores and their pairmates' scores were not used in the self-concept or locus of control analyses. One of these pairs were first-graders; the Locus of Control Scale was considered too difficult for first-graders and was not administered to them. Scores of one untreated disturbed and one normal child who moved during the final year of the study (and scores of their pairmates) were not removed from the data tape before early analyses of the data reported here were completed, but were removed before later analyses.

None of the subgroups of children who were compared differed significantly in age or intelligence test score.

Administration of the Measures. The measures were individually administered to the children in two sessions. In the first session, the free placement task and the Matching Familiar Figures Test were given, followed by a verbal conditioning task which is not reported here except to note that there were no differences in verbal conditioning among the groups. The next day, the replacement task, the Spiral Test, and the Locus of Control, Self-Concept, and Need for Approval Scales were administered in the order listed. The self-report-inventory items were read to the children by the tester who also recorded the children's responses.

The battery was administered twice to each child. The pretest administration for the Re-Ed children took place at Cumberland House within the first two weeks after admission; posttest took place during the final two weeks before discharge. The untreated disturbed and normal children were tested in their schools. Their pretest took place soon after selection for the sample. Since time between tests for the Re-Ed children averaged about seven months, posttests were administered to the public school children approximately seven months after pretest.

Hypotheses

The self-concept, locus of control, impulsivity, and social schemata data were collected primarily in order to evaluate the impact of the Re-Ed intervention upon these variables, but the data were also examined with two other purposes in mind. The first of these purposes was to validate the measures by confirming that they are related to a child's being labeled disturbed and are, therefore, by implication, appropriate targets for change in a treatment program for disturbed children. The second purpose related to the labels "withdrawn" and "acting-out."

Validation of the measures. One way to assess the validity of the measures as indices of problem areas for disturbed children, and therefore as appropriate targets for change, is to determine whether disturbed and normal children perform differently on them. The basic design of the study permitted comparison of the scores of three groups of children: the Re-Ed disturbed children, defined by admission to Cumberland House, and the untreated disturbed and the normal children, defined by their schools. It was expected that before intervention, the scores of the Re-Ed and untreated disturbed children would not differ, while each disturbed group would differ, in the appropriate direction, from the normal children. There was also available the possibility of redefining the untreated disturbed and normal children on the basis of their mothers' reports. After the untreated disturbed and normal children had been selected for the study, research assistants, who did not know whether the children had been labeled normal or disturbed by the school, visited their homes to interview the mother about her child. After the interview (see Appendix B), on the basis of the interview information alone, the interviewer rated the child as normal or disturbed. The interviewers made the rating for all but two of the 256 children; these two were seen by them as borderline children. The home interviewers and the school agreed on the categorization of 89 per cent of the remaining children. Pretest scores of the normal and disturbed children, as defined by the home interviewer rating, were compared in order to determine whether the measures would differentiate the two groups.

A measure may also indicate a problem area for disturbed children if it discriminates degrees of disturbance within a group of disturbed children. Prior to a child's enrollment at Re-Ed, and as part of the selection process for the untreated disturbed and normal children, the child's teacher filled out a Pupil Information Form (Appendix D) describing his behavior and academic performance in school. From the Pupil Information Form, research assistants made two global ratings[6] of the child, judging, separately for behavioral-emotional adjustment and academic performance, whether the teacher was saying that the child was in the normal range, had mild problems, had fairly severe problems, or had very severe problems. The global ratings permitted division of the disturbed (Re-Ed and untreated) children into two criterion groups--less and more disturbed--on the behavior dimension and on the academic dimension. On the behavior dimension, the more disturbed group consisted of children rated as having very severe behavioral or emotional problems; the less disturbed group consisted of children receiving any of the other three ratings. Since few of the disturbed children had been rated as in the normal range or as having mild problems, the less disturbed group consisted primarily of children rated as having fairly severe problems. Ratings on the academic dimension were more variable--about one-third of the disturbed children were rated as in the normal range or as having mild problems in academics. These children constituted the less disturbed group on the academic dimension; the more disturbed group was made up of children rated as having very severe academic problems. The scores of the less disturbed and more disturbed criterion groups, on the behavior dimension and on the academic dimension, were compared, with the expectation that the more disturbed children would score in the more deviant direction on each measure.

At about the same time that the teacher filled out the Pupil Information Form, the child and his classmates filled out a sociometric questionnaire.[7] One part of the questionnaire

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[6]More detailed information about the Pupil Information Form and validity and inter-rater reliability data for the global ratings have been reported elsewhere (Weinstein, 1969); additional data will be presented later in this report.

[7]Sociometric data were not available for a number of Re-Ed children. Sociometric questionnaires were not collected for children who were not in school prior to Re-Ed either because they had been expelled or because they entered Re-Ed during the summer. Sociometric questionnaires were not requested for children in small special classes prior to Re-Ed. Sociometrics were not collected for some other Re-Ed children because they entered Re-Ed before the teacher had time to administer the questionnaire; it was considered mandatory that the child be present in class on the day the questionnaire was administered.

included space for the children to indicate, if they wished, names of classmates they would not want to invite to a birthday party (see Appendix E). A rejection T score was computed for each child, based on the number of children listing his name and the number of children in his class. Disturbed (Re-Ed or untreated) children with a T score of 65 or more were categorized as highly rejected disturbed children, children with a lower T score as less rejected disturbed children. Scores of the more rejected and less rejected disturbed children were compared, with the expectation that the more rejected children would score in the more deviant direction on each measure.

As a final test of the validity of the measures, correlation coefficients were computed between scores achieved at discharge and measures of adjustment six and eighteen months after discharge. The follow-up adjustment measures consisted of the sociometric T score and the global behavioral-emotional and academic ratings which have just been described, but based on data collected at follow-up, and also of ratings made by the mothers at follow-up. At follow-up, the mother described her child on a social maturity scale, a symptom checklist, and a semantic differential (see Appendix B).[8] The semantic differential score used was the discrepancy between the way the mother described the child and the way she said she wanted him to be. It was hypothesized that the self-concept, locus of control, impulsivity and social schemata scores achieved by the child at discharge would be related, in the appropriate direction, to measures of follow-up adjustment by school, parents and peers.

Effectiveness of the Re-Ed intervention. As noted earlier, it was expected that prior to intervention, the scores of the Re-Ed and untreated disturbed children would not differ on any of the measures studied, but that the scores of each of the disturbed groups would differ, in the appropriate direction, from the scores of the normal children. The Re-Ed children were expected to show improvement on all the measures between pretest and posttest, and it was expected that their improvement would be greater than that of either the untreated or normal children. Finally, it was expected that after Re-Ed, scores of the Re-Ed and normal children would not differ on any of the measures and that both groups would differ, in the direction appropriate for normal children, from the untreated disturbed children.

[8] Further information about the ratings provided by the mothers is presented later in this report.

The withdrawn vs. acting-out comparisons. It had been noted that in assigning children to groups, Re-Ed staff spontaneously used the labels "acting-out" and "withdrawn," aiming at a suitable mix of the two types of children in each group. Would the measures differentiate the two types of children? Would the Re-Ed intervention affect the two types of children differently?

On the basis of observation of the children, the following hypotheses seemed reasonable. Prior to intervention, the two types of children were expected to differ on all the measures, with the acting-out children showing greater impulsivity and the withdrawn children demonstrating more negative cognitions (a less positive self-concept, greater perceived discrepancy between the expectations held by the two parents, more external locus of control, and more deviant social schemata). Prior to intervention, the acting-out children, but not the withdrawn children, were expected to score as more impulsive than the normals, while both the acting-out and withdrawn children were expected to score more negatively on the cognitive measures than the normals. Between pretest and posttest, the acting-out children were expected to show more improvement in impulsivity than the withdrawn children, with the withdrawn children showing more improvement on the cognitive measures. After Re-Ed, the withdrawn and acting-out children were not expected to differ on any measure from each other or from the normal children.

Results

Correlations of the measures with each other and with need for approval, age, and intelligence test score, for all groups combined, are shown in Table 6. It can be seen from the table that the measures were quite independent; only one of the intercorrelations among them surpassed .15 (locus of control and the self-ideal discrepancy, $r = -.26$). The measures were also relatively independent of age and intelligence test score; only one of the correlations with age or intelligence surpassed .15 (self-ideal discrepancy and age, $r = .26$). Need for approval showed a substantial relationship with the self-ideal discrepancy (-.48), but not with the other self-report-inventory measures. The negligible correlations between need for approval and the mother-father discrepancy and locus of control were reflected in analyses of the latter two variables in which need for approval was used as a covariate. In no case did the analyses of covariance lead to results different from analyses of unadjusted scores for the two variables. Need for approval score correlated negatively (-.26) with score on the Spiral Test.

TABLE 6

Correlations of the Measures with Each Other and with Need for Approval, Age, and Intelligence Test Score

Measure	Self-Ideal Discrepancy	Mother-Father Discrepancy	Locus of Control	MFFT Latency	Spiral	Free Placement	Replacement
Mother-Father Discrepancy	.09						
Locus of Control	-.26	-.09					
MFFT Latency	-.01	-.06	.14				
Spiral	.07	-.08	.00	.15			
Free Placement	.03	-.06	.03	.01	-.07		
Replacement	-.08	-.05	.07	-.01	-.08	.01	
Need for Approval	-.48	.07	-.01	-.04	-.26	-.06	.01
Age	.26	-.02	.15	-.05	.09	.06	.00
IQ	-.03	-.13	.10	.15	.10	-.08	-.02

Note.--N's for the correlations ranged from 319 to 373. Point biserial coefficients are shown for correlations involving free placement or replacement scores. A phi coefficient is shown for the correlation between free placement and replacement.

TABLE 7

Intercorrelations among the Measures Used to Define the Criterion Groups

Measure	Home Interviewer Rating	Behavior Rating	Academic Rating	Rejection T Score
Behavior Rating	.77 (254)			
Academic Rating	.58 (254)	.69 (378)		
Rejection T Score	.56 (254)	.67 (315)	.48 (315)	
Disturbed (Re-Ed or Untreated) vs. Normal	.78 (254)	.88 (378)	.62 (378)	.68 (315)

Note.--Next to each correlation coefficient is shown the number of children upon whose scores the coefficient is based. Point biserial coefficients are shown for correlations involving either the home interviewer rating or the disturbed (Re-Ed or untreated) vs. normal dichotomy. A phi coefficient is shown for the correlation between the latter two variables. The remaining variables were not dichotomies; each involved the total range of scores possible for the measure. All relationships were in the appropriate direction.

Intercorrelations among the measures used to define the various criterion groups for the validation studies are shown in Table 7. The correlation coefficients ranged from .48 to .88; all were highly significant.

The Self-Ideal Discrepancy

Children rated by the home interviewers as disturbed on the basis of information from their mothers scored significantly higher on the self-ideal discrepancy than children the interviewers rated as normal (see Table 8). The self-ideal discrepancy did not, however, discriminate disturbed children with more severe behavior or academic problems from disturbed children with less severe problems, or highly rejected disturbed children from less rejected disturbed children (Table 8). It appears that while disturbed children have poorer self-concepts than normal children, self-concept is not linearly related to degree of disturbance among disturbed children.

TABLE 8

Mean Scores of the Criterion Groups on the Self-Concept, Locus of Control, and Impulsivity Measures

Measures	Home Interviewer Rating			School Behavior Rating		
	Normal	Disturbed	t	Less Severe Problems	Very Severe Problems	t
Self-Ideal Discr.	8.0 (139)	10.3 (109)	4.73**	10.2 (147)	10.6 (92)	0.65
Mother-Father Discr.	0.9 (131)	1.6 (99)	2.58**	1.4 (131)	1.8 (77)	0.83
Locus of Control	12.8 (132)	11.8 (104)	3.11**	12.0 (141)	11.1 (93)	2.61**
MFFT Latency	131.1 (141)	119.6 (111)	1.00	129.5 (134)	102.8 (91)	2.83**
Spiral	88.0 (141)	73.6 (111)	0.94	93.5 (125)	62.1 (87)	1.98*

	Academic Rating			Sociometric Rating		
	No Problems or Mild Problems	Very Severe Problems	t	Less Rejected	Highly Rejected	t
Self-Ideal Discr.	10.1 (83)	10.5 (96)	0.45	10.3 (96)	10.3 (84)	0.04
Mother-Father Discr.	1.2 (73)	1.9 (85)	1.83*	1.7 (87)	1.5 (71)	0.42
Locus of Control	12.0 (77)	11.2 (97)	1.92*	12.2 (92)	11.2 (83)	2.53**
MFFT Latency	142.4 (78)	103.6 (92)	2.85**	128.1 (92)	105.7 (81)	1.82*
Spiral	105.0 (71)	59.3 (88)	2.45**	86.5 (90)	63.0 (74)	1.41

Note.--The number of children in each group is shown in parentheses following the mean for the group.

*p <.05

**p <.01

As indicated in Table 9, self-concept at the time of discharge predicted many aspects of adjustment six and eighteen months after discharge (follow-up 1 and follow-up 2, respectively). Children with a lower self-ideal discrepancy at discharge were seen by their teachers at follow-up as more behaviorally and academically adequate; they were seen by their mothers as displaying fewer inappropriate behaviors (symptom checklist) and as more congruent with expectations (semantic differential discrepancy); and they received more positive nominations and fewer rejections from their peers.

Table 10 shows pretest and posttest self-ideal discrepancy scores for the Re-Ed children and for the children defined as disturbed and normal by the schools. At pretest, the Re-Ed and untreated disturbed children did not differ significantly, and the self-ideal discrepancy of each disturbed group was greater than that of the normal children. Decrease in the discrepancy between pretest and posttest was greater for the Re-Ed than for the untreated disturbed ($t = 1.90$, $p < .05$) or normal ($t = 3.13$, $p < .001$) children; the two latter groups did not differ in amount of change between tests ($t = 1.12$). Change from pretest to posttest was significant only for the Re-Ed group ($t = 3.44$, $p < .001$); neither the untreated ($t = 0.97$) nor normal children ($t = 0.59$) changed significantly from pretest to posttest. At posttest, the self-ideal discrepancy was again higher for the untreated disturbed than for the normal children, while the Re-Ed and normal children did not differ significantly. The posttest difference between the untreated disturbed and Re-Ed children did not reach significance (Table 10).

The Re-Ed children's decrease in self-ideal discrepancy score was not associated with an increase in defensiveness or learning to give socially acceptable responses. Both the Re-Ed ($t = 4.32$, $p < .001$) and the normal ($t = 2.16$, $p < .05$) children showed a decrease in need for approval score from pretest to posttest. The untreated disturbed children did not change significantly ($t = 0.50$). When need for approval was controlled by means of analysis of covariance, all of the hypothesized relationships among groups for the self-ideal discrepancy were confirmed, including the one which was not confirmed by the unadjusted discrepancy scores--a lower posttest self-ideal discrepancy for the Re-Ed than for the untreated children ($F = 18.59$, with 1 and 225 df, $p < .001$).

Table 11 shows self-ideal discrepancy scores for children who scored high and low on need for approval at pretest. (High scorers were those who scored in the highest quartile for all groups combined on the Need for Approval Scale, a score of 16 or more; low scorers had scores of 15 or less.) As hypothesized, in all three groups--Re-Ed, untreated disturbed and normal--the high need for

TABLE 9

Correlations between Discharge Testing Scores and Evaluations by Teachers, Mothers and Peers at Follow-Up

Follow-Up Measures	Self-Ideal Discrep. (301-365)	Father-Mother Discrep. (274-332)	Locus of Control (302-367)	Latency (297-353)	Spiral (289-341)	Free Placement (275-337)	Replacement (299-359)
School Behavior Rating							
Follow-up 1	.22**	.19**	.18**	.12*[a]	.10*	.12*	.12*
Follow-up 2	.14**	.14*[a]	.19**	.13**	ns	ns	ns
Academic Rating							
Follow-up 1	.17**	.10*	.13**	.11*	.12*	.09*	.12*[a]
Follow-up 2	.13*[a]	.14*[a]	.12*	.13**	ns	ns	ns
Social Maturity Scale							
Follow-up 1	ns	ns	.22**	ns	.12*	.12*	ns
Follow-up 2	ns	ns	.21**	ns	ns	.10*	ns
Symptom Checklist							
Follow-up 1	.14**	ns	.13**	ns	ns	.13**	ns
Follow-up 2	.11*	ns	.12*	.09*	ns	ns	ns

Follow-Up Measures	Self-Ideal Discrep. (301-365)	Father-Mother Discrep. (274-332)	Locus of Control (302-367)	Latency (297-353)	Spiral (289-341)	Free Placement (275-337)	Replacement (299-359)
Semantic Differential Discrepancy							
Follow-up 1	.15**[a]	.13*[a]	.09*	ns	ns	.10*	ns
Follow-up 2	.12*	ns	.09*	.11*[a]	ns	ns	ns
Sociometric Positive T Score							
Follow-up 1	.15**	ns	.11*	ns	ns	.14**	ns
Follow-up 2	.14**	ns	ns	ns	ns	.10*	ns
Sociometric Rejection T Score							
Follow-up 1	.15**	.10*	.11*	.11*	ns	.14**	ns
Follow-up 2	.11*	ns	.12*[a]	ns	ns	ns	.11*

Note.--Under the name of each measure is shown the range of N for correlations in the column. Correlations were based on children in all three groups for whom scores were available. Point biserial coefficients are shown for correlations involving free placement or replacement. Relationships for all coefficients shown are in the appropriate direction.

[a]Correlations were generally slightly higher for the public school (untreated disturbed and normal) children alone than when the Re-Ed children were included. Where a correlation was not significant for all three groups combined, but was significant for the public school children alone, the coefficient for the public school children is shown for informational purposes.

*p <.05

**p <.01

TABLE 10

Pretest and Posttest Scores of the Re-Ed, Untreated Disturbed, and Normal Children on the Self-Concept, Locus of Control, and Impulsivity Measures

Measure	Re-Ed Mean	Re-Ed SD	Untreated Disturbed Mean	Untreated Disturbed SD	Normal Mean	Normal SD	R vs UD t	R vs N t	UD vs N t
Self-Ideal Discrep. (114, 127, 127)									
Pretest	10.7	4.9	10.1	4.3	8.0	3.6	1.05	4.89**	4.12**
Posttest	9.2	4.2	9.7	4.5	8.2	3.7	0.90	1.93	2.88**
Mother-Father Discrep. (95, 115, 121)									
Pretest	1.5	2.9	1.5	2.4	1.0	1.5	0.00	1.72*	2.16*
Posttest	0.9	1.3	1.7	2.4	1.0	1.5	3.28**	0.44	2.98**
Locus of Control (115, 121, 121)									
Pretest	11.5	2.7	11.8	2.7	12.8	2.3	0.64	4.06**	3.41**
Posttest	13.5	2.4	12.1	2.9	13.3	2.3	3.92**	0.54	3.59**
MFFT Latency (98, 129, 129)									
Pretest	116.2	63.2	119.6	90.1	130.3	87.9	0.33	1.35	0.97
Posttest	135.5	72.0	119.4	73.2	132.1	83.0	1.66*	0.32	1.31
Spiral (85, 129, 129)									
Pretest	81.9	105.1	78.3	118.8	84.6	123.8	0.23	0.16	0.42
Posttest	144.2	161.7	97.1	133.4	103.8	152.6	2.32*	1.85	0.37

Note.--Under the name of each measure is shown the number of Re-Ed, untreated disturbed, and normal children, respectively, with scores on that measure at both pretest and posttest.

* $p < .05$

** $p < .01$

TABLE 11

Mean Self-Ideal Discrepancy Scores for Children
High and Low on Need for Approval

	Re-Ed			Untreated Disturbed			Normal		
	High N App (N=16)	Low N App (N=85)	t	High N App (N=37)	Low N App (N=88)	t	High N App (N=43)	Low N App (N=82)	t
Pretest	5.7	11.5	4.67**	7.5	11.1	4.51**	6.3	8.8	3.90**
Posttest	7.2	9.1	1.68	7.8	10.5	3.21**	7.2	8.8	2.25*
Change	- 1.5	-2.4	3.11**	0.3	-0.6	1.03	0.9	0.0	1.33

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

TABLE 12

Pretest and Posttest Scores of Re-Ed Acting-Out and Withdrawn Children on the Self-Concept, Locus of Control, and Impulsivity Measures

Measure	Acting-Out Mean	Acting-Out SD	Withdrawn Mean	Withdrawn SD	Acting-Out vs. Withdrawn t	Acting-Out vs. Normal t	Withdrawn vs. Normal t
Self-Ideal Discrepancy (83, 28)							
Pretest	10.4	5.0	11.5	4.4	1.00	3.94**	4.60**
Posttest	9.2	4.4	9.4	3.6	0.24	1.70	1.53
Mother-Father Discrepancy (67, 26)							
Pretest	1.2	1.9	2.5	4.6	1.47[a]	0.81	1.71*
Posttest	0.8	1.4	1.0	1.1	0.61	0.80	0.04
Locus of Control (85, 28)							
Pretest	11.8	2.7	10.8	2.4	1.74*	2.99**	4.22**
Posttest	13.5	2.3	13.7	2.7	0.40	0.55	0.78

Measure	Acting-Out Mean	Acting-Out SD	Withdrawn Mean	Withdrawn SD	Acting-Out vs. Withdrawn t	Acting-Out vs. Normal t	Withdrawn vs. Normal t
MFFT Latency (73, 22)							
Pretest	113.5	64.7	131.0	59.1	1.14	1.58	0.02
Posttest	132.5	76.6	140.7	57.5	0.47	0.02	0.43
Spiral (62, 20)							
Pretest	70.1	96.6	126.9	125.4	2.12*	0.72	1.49
Posttest	134.2	161.8	188.9	166.1	1.31	1.34	2.35*

Note.--Under the name of each measure is shown the number of Re-Ed acting-out and withdrawn children, respectively, with scores on pretest and posttest for that measure. Means and standard deviations for the normal children are shown in Table 10.

[a]As noted in the text, the Mann-Whitney U Test z for this comparison did reach significance ($z = 2.29$, $p < .05$).

* $p < .05$

** $p < .01$

TABLE 11

Mean Self-Ideal Discrepancy Scores for Children
High and Low on Need for Approval

	Re-Ed			Untreated Disturbed			Normal		
	High N App (N=16)	Low N App (N=85)	t	High N App (N=37)	Low N App (N=88)	t	High N App (N=43)	Low N App (N=82)	t
Pretest	5.7	11.5	4.67**	7.5	11.1	4.51**	6.3	8.8	3.90**
Posttest	7.2	9.1	1.68	7.8	10.5	3.21**	7.2	8.8	2.25*
Change	1.5	-2.4	3.11**	0.3	-0.6	1.03	0.9	0.0	1.33

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

TABLE 12

Pretest and Posttest Scores of Re-Ed Acting-Out and Withdrawn Children on the Self-Concept, Locus of Control, and Impulsivity Measures

Measure	Acting-Out Mean	Acting-Out SD	Withdrawn Mean	Withdrawn SD	Acting-Out vs. Withdrawn t	Acting-Out vs. Normal t	Withdrawn vs. Normal t
Self-Ideal Discrepancy (83, 28)							
Pretest	10.4	5.0	11.5	4.4	1.00	3.94**	4.60**
Posttest	9.2	4.4	9.4	3.6	0.24	1.70	1.53
Mother-Father Discrepancy (67, 26)							
Pretest	1.2	1.9	2.5	4.6	1.47[a]	0.81	1.71*
Posttest	0.8	1.4	1.0	1.1	0.61	0.80	0.04
Locus of Control (85, 28)							
Pretest	11.8	2.7	10.8	2.4	1.74*	2.99**	4.22**
Posttest	13.5	2.3	13.7	2.7	0.40	0.55	0.78

children did not differ and each of the two disturbed groups showed more external locus of control than the normal children. At posttest, the Re-Ed and normal groups did not differ and each group showed more internal locus of control than the untreated disturbed children. The Re-Ed children showed more change from pretest to posttest than the normal ($t = 4.16$, $p \leq .001$) or untreated ($t = 4.44$, $p < .001$) children; the latter groups did not differ in amount of change ($t = 0.33$). Change between tests was significant for the Re-Ed ($t = 7.70$, $p < .001$) and normal ($t = 2.05$, $p < .05$) children, but not for the untreated children ($t = 1.55$).

The withdrawn vs. acting-out comparisons. At pretest, the withdrawn Re-Ed children were more external in locus of control than the acting-out Re-Ed children, and both groups were more external than the normals (Table 12). Between tests, both the withdrawn ($t = 6.58$, $p < .001$) and the acting-out ($t = 5.59$, $p < .001$) children became more internal, with the withdrawn children showing greater change ($t = 2.04$, $p < .05$). At posttest, neither Re-Ed group differed significantly from the normal children.

Summary. All hypotheses were confirmed for the locus of control measure. The data indicate that disturbed children, withdrawn or acting-out, are more external in locus of control than normal children, and that withdrawn children are more external than acting-out children. Children with more severe problems are more external in locus of control than children with less severe problems. The Re-Ed program led to more internal locus of control in both withdrawn and acting-out disturbed children, especially the withdrawn children, so that at discharge neither the acting-out nor withdrawn children differed from the normal children.

Impulsivity

Both impulsivity measures discriminated among disturbed children those with very severe behavior problems from those with less severe behavior problems, and those with very severe academic problems from those with few or no academic problems. The Matching Familiar Figures Test latency score also discriminated disturbed children who were highly rejected by their peers from those less rejected by their peers (see Table 8). Discharge scores on each impulsivity measure predicted teacher evaluations of school behavior and academic status at follow-up as well as one or more of the mother or peer follow-up ratings (see Table 9). However, neither impulsivity measure significantly differentiated children categorized as disturbed by the home interviewers from those categorized as normal (Table 8). Nor did either the Re-Ed or untreated disturbed children differ from the normal children at pretest on either impulsivity measure (see Table 10).

These data suggest two possibilities. First, only the most severely disturbed children may be characterized by impulsivity; i. e., very disturbed children may differ significantly from normal children while less disturbed children do not. To explore this possibility, the impulsivity scores of the Re-Ed and untreated disturbed children who were rated as having very severe behavior problems in school were compared with the impulsivity scores of children defined by the schools as normal. The two groups differed significantly on the Matching Familiar Figures Test latency score ($\underline{t} = 3.06$, $p < .01$), but the difference did not reach significance for the spiral score ($\underline{t} = 1.31$). Results were similar when Re-Ed and untreated disturbed children rated as having very severe academic problems were compared with the normal children; the normals were significantly less impulsive on the latency measure ($\underline{t} = 2.69$, $p < .01$), but the difference between the groups did not reach significance for the spiral ($\underline{t} = 1.54$). The same pattern was again repeated when the highly rejected children were compared with the normal children ($\underline{t} = 2.19$, $p < .05$, for the latency measure; $\underline{t} = 1.41$ for the spiral). None of the comparisons between the normal children and the less disturbed children (children with less severe problems in behavior, academics or peer rejection) approached significance for either the latency or spiral score.

The second possibility suggested by the data is that impulsivity as defined by the measures used in this study may be a problem for disturbed children but not for normal children. The quickness of response indicated by low scores on the measures may mean something different when it characterizes a child otherwise defined as normal than when it characterizes a child defined as disturbed. When quickness of response is associated with adequate behavior it may not be or be seen as a problem; indeed, in such a case quickness may be an asset. It seems reasonable to expect that quickness of response will be socially defined as impulsivity only when the response is inadequate. Here it is relevant that when pretest latency time on the Matching Familiar Figures Test was held constant through analysis of covariance, the disturbed children (Re-Ed and untreated) made significantly more errors on the test than the normals ($F = 10.72$, with 1,349 df, $p < .01$); for a given latency, the behavior of the disturbed children was less adequate than that of the normals. Also, a significantly higher proportion of normal than disturbed children ($\chi^2 = 5.73$, with 1 df, $p < .05$) scored below the median for the combined groups on both the latency score and number of errors, again indicating that quickness of response was less likely among the normal than the disturbed children to be associated with inadequate behavior. Children who are able to perform with few errors despite a low latency are more likely to be labeled

"efficient" than "impulsive." When efficient children (children below the median for the combined groups on both latency score and number of errors--17 Re-Ed, 12 untreated, and 31 normal children) were omitted from all groups, the expected pretest pattern did occur for the latency score: latency scores of the Re-Ed and untreated children did not differ ($t = 0.13$), and both the Re-Ed ($t = 2.08$, $p < .05$) and untreated disturbed ($t = 1.79$, $p < .05$) groups had a lower latency than the normals.

Pretest and posttest scores of the Re-Ed, untreated disturbed, and normal children on the impulsivity measures are shown in Table 10. As noted above, at pretest the Re-Ed and untreated disturbed children did not differ significantly from each other or from the normal children. At posttest, while again neither disturbed group differed significantly from the normal children, the Re-Ed children scored as significantly less impulsive than the untreated disturbed children on both measures of impulsivity. On the latency measure, only the Re-Ed children showed significant change from pretest to posttest ($t = 2.75$, $p < .01$); change for the untreated ($t = 0.03$) and normal ($t = 0.26$) children was not significant. Change from pretest to posttest was significantly greater for the Re-Ed children than the untreated children ($t = 2.11$, $p < .05$) or normal children ($t = 1.72$, $p < .05$); the latter groups did not differ in change from pretest to posttest on the latency score ($t = 0.22$). Change in spiral score from pretest to posttest was significant for the Re-Ed ($t = 4.74$, $p < .001$) and normal ($t = 2.16$, $p < .05$) children and approached significance for the untreated disturbed children ($t = 1.93$). The Re-Ed children showed significantly more change on the Spiral Test than the untreated ($t = 2.70$, $p < .01$) or normal ($t = 2.82$, $p < .01$) children; the latter groups did not differ in amount of change ($t = 0.00$).

There were, as noted earlier, for the latency measure though not for the spiral, subgroups of children who did differ from the normals at pretest. These were the most deviant disturbed children, those rated as having very severe problems in school behavior or academic performance and those who were most highly rejected by their peers. It was expected that these subgroups of Re-Ed and untreated children would show the hypothesized pattern of posttest relationships with the normals as well as with each other. Analyses were run separately for each of the dimensions (school behavior, academics, peer rejection), and all the expected relationships were confirmed, for the latency but not for the spiral measure, for children most deviant in school behavior and children most deviant in academic performance, but not for children most rejected by peers. Table 13 shows results for children with very severe problems in either school behavior or academic performance. It can be seen from Table 13 that on the latency measure at pretest, the subgroups of most deviant Re-Ed and untreated disturbed children did not differ from each other, but each

TABLE 13

Mean Pretest and Posttest Impulsivity Scores for Re-Ed and Untreated Disturbed Children with Very Severe Problems at Pretest in Either School Behavior or Academic Performance

MFFT Latency

	Re-Ed (N=66)	Untreated Disturbed (N=61)	R vs UD t	R vs N t	UD vs N t
Pretest	109.4	99.4	0.99	2.15*	2.47**
Posttest	133.5	106.4	2.44**	0.07	2.66**

Spiral

	Re-Ed (N=60)	Untreated Disturbed (N=61)	R vs UD t	R vs N t	UD vs N t
Pretest	72.5	61.1	0.61	0.56	1.22
Posttest	136.3	81.0	2.08*	1.39	0.96

Note.--Scores for the normal children are shown in Table 10.
* $p < .05$
** $p < .01$

subgroup scored as more impulsive than the normals. At posttest, the Re-Ed subgroup did not differ from the normal children and the Re-Ed and normal children each scored as less impulsive than the untreated subgroup. As indicated in Table 13, results on the spiral measure for the most deviant subgroups of Re-Ed and untreated children did not differ from results for the total groups: the two disturbed subgroups did not differ at pretest; the Re-Ed children scored as less impulsive than the untreated children at posttest; neither disturbed subgroup differed from the normals either at pretest or at posttest.

It was indicated earlier that when "efficient" children (i.e., children whose low latency was associated with few rather than many errors) were omitted from comparisons, the hypothesized relationships among groups at pretest did hold for the latency measure: the Re-Ed and untreated disturbed children did not differ from each other while each scored as more impulsive than the normal children. At posttest, with the efficient children omitted, the Re-Ed and normal groups did not differ ($t = 0.38$) and both the Re-Ed ($t = 1.70$, $p < .05$) and normal ($t = 2.04$, $p < .05$) children scored as less impulsive than the untreated disturbed children.

The withdrawn vs. acting-out comparisons. As in the comparisons among the Re-Ed, untreated disturbed, and normal children, there were no significant pretest differences in latency score among the acting-out, withdrawn and normal children (Table 12). Because the number of withdrawn children was small, analyses using only most deviant children and analyses with efficient children omitted, done for the Re-Ed, untreated disturbed and normal groups, were not done for the acting-out and withdrawn groups. However, comparison of the acting-out, withdrawn and normal children on number of MFFT errors indicated that the acting-out disturbed children made significantly more errors than the withdrawn disturbed children ($t = 2.37$, $p < .01$) or normal children ($t = 3.20$, $p < .001$), while the difference in errors between the withdrawn and normal children was not significant ($t = 0.66$). This, and comparison of the mean latency scores of the acting-out (113.5), withdrawn (131.0) and normal (130.3) children, suggest that the withdrawn children contributed little to any difference in impulsivity between the normal and Re-Ed children. Change in latency score between tests was significant for the acting-out children ($t = 2.21$, $p < .05$), but not for the withdrawn children ($t = 0.88$); difference between the two groups in change between tests was not significant ($t = 0.55$). Decrease in number of errors was significant for the acting-out ($t = 3.80$, $p < .001$) but not the withdrawn children ($t = 1.08$), and at posttest the two groups did not differ in number of errors ($t = 0.11$). At posttest, there were no differences among the acting-out, withdrawn and normal children in latency score.

On the spiral, at pretest, the acting-out children scored as more impulsive than the normal children and the normal children scored as more impulsive than the withdrawn children, although only the difference between the acting-out and withdrawn children reached significance (see Tables 10 and 12). Both the acting-out ($t = 4.11$, $p < .001$) and the withdrawn ($t = 2.19$, $p < .05$) children increased their Spiral Test scores from pretest to posttest; there was no significant difference between them in amount of change between tests ($t = 0.07$). At posttest, the acting-out children no longer differed significantly from the withdrawn children, nor did they differ from the normal children. The withdrawn children scored as significantly less impulsive than the normal children.

Summary. Although the complete pattern of expected relationships did not appear, the data strongly suggest that impulsivity is a problem for acting-out disturbed children and that Re-Ed is effective in decreasing the impulsivity of such children.

Social Schemata

The free placement task. The number of children in each criterion group who at pretest placed the mother-child pair closer than the father-child pair and the number who placed the father-child pair closer than the mother-child pair are shown in Table 14. Free placement behavior did not differentiate children categorized as normal by the home interviewers from children categorized as disturbed, nor did it differentiate among the disturbed children those with more severe and those with less severe problems. Free placement behavior at discharge did, however, predict adjustment at follow-up (see Table 9). Children who at discharge placed the mother-child pair closer than the father-child pair were seen by their teachers at follow-up as more behaviorally and academically adequate and by their mothers as displaying fewer symptoms, as more socially mature, and as more congruent with expectations than children who placed the father-child pair closer. They also received more positive nominations and fewer rejections from peers at follow-up.

The free placements of the Re-Ed, untreated disturbed, and normal children are shown in Table 15. At pretest, more children in each group placed the mother-child pair closer than placed the father-child pair closer, but the mother-child-closer placement exceeded chance only among the normals ($z = 1.74$, $p < .05$). Differences among the three groups at pretest were not significant. Significantly more normal children placed the mother-child pair closer at posttest than at pretest (McNemar test for the significance of changes, $\chi^2 = 4.08$, $p < .05$); change

TABLE 14

Free Placements and Replacements by the Various Criterion Groups

	Free Placement		Replacement	
	Mother-Child Closer	Father-Child Closer	Humans Closer	Humans Not Closer
Home Interviewer Rating				
Normal	81	55	75	66
Disturbed	59	45	56	55
School Behavior Rating				
Less Severe Problems	80	56	65	73
Very Severe Problems	50	41	45	51
Academic Rating				
No or Mild Problems	42	35	34	48
Very Severe Problems	60	34	48	47
Sociometric Rating				
Less Rejected	44	37	50	45
Highly Rejected	35	36	37	43

between tests was not significant for either disturbed group (see Table 16). Change from pretest to posttest was significantly different for the untreated disturbed and normal groups, with significantly more untreated than normal children changing from a mother-child-closer to a father-child-closer placement ($\chi^2 = 6.08$, $p < .05$); change in the Re-Ed group did not differ significantly from change in either the normal or untreated groups. At posttest, the untreated disturbed group placed significantly fewer mother-child pairs closer than did the normal group; the Re-Ed children did not differ significantly in their posttest free placements from either the normal or untreated children (Table 15).

The withdrawn vs. acting-out comparisons. As hypothesized, the acting-out and withdrawn children differed significantly in their pretest free placements, with significantly fewer withdrawn than acting-out children placing the mother-child pair closer than the father-child pair (see Table 15). The withdrawn children also

TABLE 15

Free Placements by the Re-Ed, Untreated Disturbed, and Normal Children

Group	Pretest Mother-Child Closer	Pretest Father-Child Closer	Posttest Mother-Child Closer	Posttest Father-Child Closer
Re-Ed	53	46	57	42
Untreated Disturbed	59	46	59	46
Normal	69	50	83	36
Acting-Out	43	29	40	32
Withdrawn	8	16	16	8

	χ^2	χ^2
Re-Ed vs. Untreated Disturbed	0.15	0.04
Re-Ed vs. Normal	0.43	3.48
Untreated Disturbed vs. Normal	0.07	4.42*
Acting-Out vs. Withdrawn	5.03*	0.91
Acting-Out vs. Normal	0.06	3.94*
Withdrawn vs. Normal	4.88*	0.09

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

placed significantly fewer mother-child pairs closer than the normal children at pretest. The acting-out and normal children did not differ in their pretest free placements; indeed, like the normals, the acting-out children at pretest placed significantly more mother-child pairs closer than would be expected by chance ($z = 1.65$, $p < .05$).

From pretest to posttest, the withdrawn group significantly increased their mother-child-closer placements (McNemar $\chi^2 = 4.57$, $p < .05$); change from pretest to posttest was not significant for the

TABLE 16

Frequency of Changes in Free Placement from Pretest to Posttest

Group	To Mother-Child Closer	No Change	To Father-Child Closer
Re-Ed	24	55	20
Untreated Disturbed	29	47	29
Normal	31	71	17
Acting-Out	13	43	16
Withdrawn	11	10	3

acting-out group (see Table 16). Between tests, a significantly higher proportion of withdrawn than acting-out ($\chi^2 = 7.41$, $p < .01$) or normal ($\chi^2 = 3.77$, $p < .05$) children changed to a mother-child-closer placement, and at posttest the withdrawn children did not differ significantly in their free placements from the acting-out or normal children. While change between tests was not significantly different for the acting-out and normal children, the posttest free placements of the acting-out and normal children were significantly different, with significantly fewer acting-out than normal children placing the mother-child pair closer than the father-child pair.

Summary. The data presented here indicate that withdrawn disturbed children, but not acting-out disturbed children, have a mother-child schema which is deviant from that of normal children. The data also indicate that the Re-Ed program leads to change in the mother-child schema of withdrawn disturbed children so that at discharge it is no longer deviant from the schema of normal children.

The replacement task. Replacement behavior at discharge predicted appropriateness of school behavior at first follow-up and rejection by peers at second follow-up, but these were the only indications of validity for the replacement measure. The replacement data for the criterion groups shown in Table 14 provide no evidence that replacing rectangle pairs closer than human pairs is associated with emotional disturbance in children. Replacement behavior did not differentiate children categorized as disturbed by the home interviewers from those categorized as normal, nor did it differentiate disturbed children with more

TABLE 17

Replacements by the Re-Ed, Untreated Disturbed, and Normal Children

Group	Pretest Humans Closer	Pretest Humans Not Closer	Posttest Humans Closer	Posttest Humans Not Closer
Re-Ed	38	65	45	58
Untreated Disturbed	70	59	59	70
Normal	65	64	67	62
Acting-Out	28	47	31	44
Withdrawn	8	17	13	12

	χ^2	χ^2
Re-Ed vs. Untreated Disturbed	6.95**	0.10
Re-Ed vs. Normal	4.22*	1.56
Untreated Disturbed vs. Normal	0.39	0.99
Acting-Out vs. Withdrawn	0.23	0.87
Acting-Out vs. Normal	3.26*	2.14
Withdrawn vs. Normal	2.84*	0.00

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

severe problems from those with less severe problems. The pretest data for the Re-Ed, untreated disturbed and normal children, shown in Table 17, raise additional questions about the validity of the replacement measure and its usefulness in the evaluation research.

The pretest data for the Re-Ed and normal children confirmed earlier results (Weinstein, 1965) which indicated that the replacement behavior of both groups of children differs, in different ways,

TABLE 18

Frequency of Changes in Replacement from Pretest to Posttest

	To Humans Closer	No Change	To Humans Not Closer
Re-Ed	26	58	19
Untreated Disturbed	29	60	40
Normal	31	69	29
Acting-Out	18	42	15
Withdrawn	7	16	2

from the replacement behavior of normal adults. While normal adults replace human pairs closer than rectangle pairs (Kuethe, 1962), the Re-Ed children, to a degree greater than would be expected by chance ($z = 2.66$, $p < .01$), replaced the human pairs farther apart than the rectangles, and the normal children made no systematic distinction between the human and rectangle pairs (see Table 17). In the earlier study, the "normal" children had been only roughly screened to omit emotionally disturbed children and it was unclear whether the difference between the normal children and adults reflected a developmental trend or whether the difference resulted from the inclusion of disturbed children in the normal sample. The low likelihood that many disturbed children could have been included in the present normal sample suggests that the difference between normal children and adults represents a developmental trend.

The pretest replacement results for the untreated disturbed children were unexpected. Like the normal children and unlike the Re-Ed children, the untreated children made no distinction between the human and rectangle pairs. This finding raises the possibility that the replacement behavior of the Re-Ed children may not so much reflect their status as disturbed children as their experience of leaving home and entering residential treatment. In an earlier study (Weinstein, 1967) of normal children living at home, a relationship was demonstrated between replacing the rectangle pair closer and a child's perception that he is not meeting his parent's expectations; placement in residential treatment would be expected to lead to or confirm that perception.

The pattern of initial differences among the three groups, combined with the possibility that the Re-Ed posttest data may have been affected by the Re-Ed children's knowledge that they would soon be leaving Re-Ed and returning to their parents, makes the change (Table 18) and posttest (Table 17) replacement data impossible to interpret. For the record, however, it will be noted that between tests more untreated than Re-Ed children changed from replacing the human pair closer to replacing the rectangle pair closer ($\chi^2 = 4.77$, $p < .05$), and at posttest there were no significant differences among the three groups in replacement behavior.

The withdrawn vs. acting-out comparisons. At pretest, the replacements of the withdrawn and acting-out children did not differ, and each subgroup replaced significantly fewer human pairs closer than the normals did. Between tests, the withdrawn children (McNemar $\chi^2 = 2.78$, $p < .05$), but not the acting-out children, changed significantly toward replacing the human pairs closer than the rectangles. At posttest, the withdrawn and acting-out children did not differ on the replacement task from each other or from the normal children. The fact that the untreated disturbed children were different from the Re-Ed children at pretest and like the normal children, makes these data, like the data for the larger groups, difficult to evaluate.

Summary. The data presented here provide little support for the validity or usefulness of the replacement measure in the evaluation of treatment programs for disturbed children. The association of improvement with the withdrawn group may be worthy of some note since it fits with the results of the other measures (the mother-father discrepancy and free placement) which have to do with the child's perception of the relationship between himself and his parents.

Summary of the Results

According to the data which have been presented, emotionally disturbed children differ from normal children in several ways, the specific pattern of differences depending on whether the disturbed child's behavior leads others to describe him as acting-out or withdrawn. Compared to his normal peers, the acting-out disturbed child has a poor self-concept (self-ideal discrepancy) and an inadequate grasp of the relationship between his behavior and its consequences (locus of control). In addition, he fails to inhibit his behavior when circumstances require; he has difficulty controlling his motor behavior when necessary (spiral), and he does not spend enough time evaluating his choices before making them (MFFT latency). The withdrawn disturbed child also has a poor self-concept, and even less belief than the acting-out child that he can affect events by his behavior. In withdrawn children, these problems appear to be associated with troubled parent-child

relationships. The withdrawn disturbed child feels estranged from and rejected by his mother (free placement) and perceives his mother and father as placing conflicting demands upon his behavior (mother-father discrepancy).

The Re-Ed program succeeded in ameliorating the maladaptive perceptions and behavior patterns of both types of children. As needed, the program led to a more positive self-concept, more internal locus of control, decreased motor and cognitive impulsivity, and more constructive family relationships as perceived by the child. In the same period, the untreated children showed no improvement in any of these areas.

The data indicated that the perceptions, cognitions and behavior patterns studied were related to various aspects of later adjustment, suggesting that the Re-Ed children would do better at follow-up than the untreated children. Follow-up data on the children's later adjustment is presented in the following chapters.

CHAPTER VI

SCHOOL PLACEMENT AND SPECIAL SERVICES AFTER RE-ED

School Placement

The child's transition back to a regular school after Re-Ed is given a great deal of attention and care. Efforts are made to select a school situation adapted to the child's capacities. For example, as noted earlier, Re-Ed staff helped to select a new school (a school different from the one attended prior to Re-Ed) for 34 per cent of the children. Reasons for advising a change of school varied, but most frequently reflected the belief that the ability level of students in the former school was too high for the child or the fact that the new school offered special curricula. An additional 27 per cent of the Re-Ed children also went to a new school after Re-Ed, because their families had moved or their homes had been rezoned while they were in residence, or because they changed from an elementary to a junior high school. Many of the untreated disturbed and normal children also changed schools during the study period because they moved, were rezoned, or graduated from elementary school to junior high school. In addition, mothers of seven untreated children reported transferring them from one school to another (usually by moving) between Rounds 1 and 2 because they were having problems in school. Five additional mothers of untreated children reported doing this between Rounds 2 and 3.

The liaison-teacher works with the principal of the school which the child will enter after Re-Ed to select an appropriate class for him. Attention is paid to the ability of the new teacher to work with children like him and to the size and composition of the new class. Attention is also paid to the grade level in which the child will be placed. The liaison-teacher tries to place him in a class with students of his maturity level and physical size, but also a class in which he can cope academically. Twenty of the children who had been in regular classes prior to Re-Ed were placed a grade level behind the grade level they would have been in if they had received normal promotions since enrollment at Re-Ed; three children were placed a grade level ahead. Between Rounds 1 and 2, four untreated disturbed children, but no children in the normal group, repeated a grade. The following year, one Re-Ed child, seven untreated disturbed children, and no normal children, repeated a grade.

Prior to Re-Ed, seventeen children were not enrolled in school either because they were school phobic or because they had been asked by the school to leave; three of the latter children

had been in ED classes (classes for the emotionally disturbed) before expulsion from school. Nine children were in ED classes immediately prior to Re-Ed. One child was allowed to spend only part of the day in school. The remaining children spent the school day in regular classes prior to enrollment at Re-Ed (one of these had been in an ED class previously). All of the untreated disturbed children were enrolled in regular classes at Round 1 when they were nominated for inclusion in the study, although three children had previously been in ED classes and one child had spent time in EMR classes (classes for the educable mentally retarded).

Table 19 shows the number of Re-Ed and untreated disturbed children in special classes or not in school at Rounds 2 and 3. Counting children who changed from a special class at Round 2 to a regular class at Round 3, a total of 9 Re-Ed and 14 untreated children are shown in the table.

A number of the untreated disturbed children were referred to a Re-Ed school during the course of the study. Three of these are shown in Table 19. One of the untreated children shown as not in school at Round 3 had been expelled from his regular school and was at home while awaiting an opening at Re-Ed. The other two children are shown as in an ED class at Round 3. Only one of these had actually entered a Re-Ed school; the other was placed in a public school ED class when his parents refused to permit his enrollment at Re-Ed after he had been accepted there. Not shown in the table is a child who remained in a regular class at Round 3 after his parents refused to permit his enrollment at Re-Ed. Also not shown in the table are children dropped from the untreated sample because of referral to Re-Ed prior to Round 3.

According to school records, special class placement of various kinds was recommended but not implemented for several other untreated children. For example, parents of three untreated children refused to permit their child's enrollment in an EMR class and one untreated child was awaiting an opening in an EMR class. The number of children in the untreated group who were put in or considered for EMR classes was unexpected since principals had been asked to nominate children for the study on the basis of their behavior problems, not their intellectual problems. Also, while the differences were not statistically significant, the mean IQ of the untreated children was higher than that of the Re-Ed children, and there were more children with low IQ scores in the Re-Ed group (see Table 1, item 2, for a description of the children's IQ scores). Interviews with parents and teachers suggested that EMR placement was sometimes a "desperation" measure to get the child from a regular class into a situation where he could get more individual attention.

TABLE 19

Children Who Were Not in a Regular Class at Round 2 or Round 3

Placement	Number of Children Not in Regular Class at Each Round			
	Re-Ed		Untreated Disturbed	
	Round 2	Round 3	Round 2	Round 3
Class for Emotionally Disturbed or Behavior Disordered	0	0 + 1 = 1	1	1 + 3 = 4
Class for Perceptually Handicapped, Neurologically Impaired, or Learning Disabled	3	1 + 1 = 2	0	0 + 1 = 1
Class for Mentally Retarded	1	1 + 1 = 2	3	2 + 3 = 5
In State Training School	1	1 + 0 = 1	0	0 + 1 = 1
Not In School	0	0 + 1 = 1	0	0 + 2 = 2
TOTAL	5	7	4	13

NOTE--The first number listed under Round 3 shows how many children in a specific special school situation at Round 2 remained in the special situation at Round 3; the second number indicates how many children in a regular class at Round 2 entered a special situation at Round 3. (All children except three who were in a special class at Round 2 remained in the special class at Round 3. Two Re-Ed children went from a class for children with learning disabilities or neurological impairment at Round 2 to a regular class at Round 3, one untreated disturbed child went from an EMR class at Round 2 to a regular class at Round 3; all three children were making a poor adjustment, behaviorally and academically, at Round 3.)

Special Services

Between Rounds 1 and 2, 39 per cent of the untreated disturbed children and three per cent of the normal children ($\chi^2 = 49.66$, 1 df, $p < .001$) were seen by a school psychologist or school social worker, or both. Some of the same children were also seen between Rounds 2 and 3. Between Rounds 1 and 3, a total of 55 per cent of the untreated children and nine per cent of the normal children ($\chi^2 = 60.36$, 1 df, $p < .001$) were seen by a school psychologist and/or school social worker. Figures for the Re-Ed children are not comparable, since they spent part of the period between Rounds 1 and 2 at Re-Ed. After Re-Ed, between Rounds 1 and 2, four per cent of the Re-Ed children were seen by school psychologists and/or social workers, and between Rounds 1 and 3, ten per cent of the Re-Ed children were seen.

In addition to these services provided by the schools, between Rounds 1 and 2 school personnel suggested to parents of 31 per cent of the untreated children and one per cent of the normal children ($\chi^2 = 44.17$, 1 df, $p < .001$) that they obtain outside professional help for their child's behavioral or emotional problems. Between Rounds 1 and 3, this suggestion was made to the parents of 42 per cent of the untreated children and one per cent of the normal children ($\chi^2 = 65.05$, 1 df, $p < .001$). Twenty per cent of the mothers of the untreated disturbed children reported taking their child for professional help (to physicians or mental health clinics) for behavioral or emotional problems between Rounds 1 and 2; thirty-two per cent reported taking their children for such help between Rounds 1 and 3. The mothers also reported that nine per cent of the untreated disturbed children were on medication for behavioral or emotional problems between Rounds 1 and 2, fourteen per cent between Rounds 1 and 3. Eleven per cent of the mothers of Re-Ed children reported taking their children for professional help for behavioral or emotional problems between Rounds 1 and 2, twenty-three per cent between Rounds 1 and 3. Seven per cent of the Re-Ed children were on medication for behavioral or emotional problems between Rounds 1 and 2, ten per cent between Rounds 1 and 3.

CHAPTER VII

SCHOOL ADJUSTMENT AT FOLLOW-UP

Before the child left his school to enter Re-Ed, his teacher filled out a Pupil Information Form (Appendix D) describing and rating his school behavior and academic performance. The Pupil Information Form provided part of the data used by Re-Ed staff to come to an admission decision and to make initial plans for the child; its research purpose was to provide pre-intervention measures of the child's behavior and academic performance as perceived by the natural evaluators in one of his most important social systems, his school.

After the child's discharge from Re-Ed, his current teacher filled out the same form, as did his teacher the following year. The aim was to have the Pupil Information Forms filled out six and eighteen months after discharge, but the exact timing depended on how close the child's discharge was to the end of the school year and the summer recess. To permit valid ratings from teachers, no school inquiry was made before the child had been with his teacher and classmates at least three months. To adapt to this requirement and to the timing of the summer recess, after which children customarily change classes, first school follow-up took place as early as three months after discharge for some children, as late as nine months after discharge for others; the average was approximately six months. Second school follow-up took place a year after the first.

Teachers filled out Pupil Information Forms for the untreated disturbed and normal children when the children were selected for the study. The children's current teachers filled out the forms one and two years later.

In relatively few cases (two per cent) did a child return after Re-Ed to a teacher he had had previously. The Pupil Information Form, therefore, did not ask teachers to compare present and past performance, but required only ratings and descriptions of current performance. Interest was in comparing evaluations of the child made at follow-up with those made prior to his enrollment at Re-Ed. For this reason, children who were not enrolled in school prior to Re-Ed, and therefore had no teacher who could make initial ratings, were omitted from analyses of Pupil Information Form items, except in those cases where the child had been expelled shortly enough prior to Re-Ed that his former teacher could provide the ratings. Children with Pupil Information Forms filled out by special class teachers prior to Re-Ed were omitted from analyses of items which asked teachers to compare the child's performance with

that of other children in his class (where children had only recently entered a special class, their last regular class teacher filled out their pre-enrollment Pupil Information Form). Additional children were omitted from some analyses because they enrolled at Re-Ed before particular items were added to the Pupil Information Form. Finally, some items have smaller N's because teachers omitted them through oversight or inability to make a judgment.

The Global Ratings

A rater in the research department made two global judgments about the child on the basis of the Pupil Information Form filled out by his teacher; in making these judgments, the rater considered descriptions of the child given by the teacher in answer to open-ended questions as well as ratings made by the teacher in response to individual items in the questionnaire. The rater was asked to judge, separately for behavioral-emotional adjustment and academic adequacy, whether the teacher was saying that the child was in the normal range, had mild problems, had fairly severe problems, or had very severe problems.

The global ratings of behavioral and academic status have several advantages over the more specific ratings made by the teachers. First, as noted above, the more specific ratings were not available at Round 1 for some Re-Ed children who had not been in school prior to Re-Ed, and they were sometimes misleading for children in special classes because of the teacher's special frame of reference. Yet it was particularly important to have data on the effectiveness of the Re-Ed intervention for these two groups of children, since they may be the children most in need of help and/or most difficult to help. The raters made global judgments for children not in school prior to Re-Ed who had no Pupil Information Forms, and for children in special classes where the teacher ratings seemed misleading, by relying on information provided by other school personnel and on school records. This meant that unlike the more specific ratings made by the teachers, Round 1 global ratings were available for all children in the study.

Second, not only is a great variety of information requested from the teacher in the Pupil Information Form, but the same kind of information is requested in different ways. The teacher describes the child in response to open-ended questions and also rates him in response to numerous more structured items. Many of the latter are redundant. They ask about similar types of behavior, but use different language; they have reference to somewhat different specific behaviors; and they appear in different parts of the form. The redundant information is available to

the rater making the global judgments, reducing the importance of teacher errors or omissions, or idiosyncratic ways of construing individual items.

A third advantage of the global ratings is that they possess a type of built-in correction for age. Expectations for children's behavior rise as children grow older, and children are normally able to meet more demanding expectations as they mature. On many measures, this is reflected in higher scores for older children. Since the interest here is in change in ratings related to intervention, rating changes associated with age constitute "noise." The global ratings are based on the degree to which the teacher sees the child as deviating from the norms she holds for her class. Since these norms rise from one grade-level to the next, the meaning of the global ratings as measures of deviancy should remain relatively stable over time despite increasing age.

A fourth advantage relates to the meaningfulness of the anchor points used in the global ratings. If a child is rated as having very severe problems one year and as having mild problems a year later, we have a better understanding of what the change means than if we know that his scores on a behavior checklist were 21 and 13 for the two years.

A fifth advantage of the global ratings is that they make it easy to assess the data in terms of percentage of children who improved from year to year. Most scores encourage evaluation in terms of mean change; while such change is important and was evaluated for the global ratings, in intervention studies there is great need for evaluation in terms of percentage of children improved. In the present study, change from a rating of very severe or fairly severe problems to a rating of mild problems or no problems ("in the normal range") has been the typical criterion of improvement.

There is a sixth advantage to the use of the global ratings. Teachers vary in their tolerance for and acceptance of deviance. The global judgments by the research raters are an attempt to provide a common yardstick which may be applied to the ratings and descriptions made by a large number of different teachers.

The global ratings had good inter-rater reliability (.92, N = 78, for the behavior rating; .91, N = 72, for the academic rating), and mean ratings by different raters were nearly identical. The global behavior rating correlated .89 (N = 280) with the same rating made by the child's teacher, .86 (N = 280) with total score on the Behavior Problem Checklist (Quay and Peterson, 1967) filled out by the teacher, .86 (N = 372) with the Student Role Behavior Scale filled out by the teacher, and .84 (N = 380) with a scale

based on teacher ratings of the child's disruptiveness in class, use of his learning potential, ability to face new situations, relationship with classmates, and feelings of personal distress. The global academic rating correlated .85 (N = 279) with the same rating made by the child's teacher and .80 (N = 259) with report card grades given by the teacher.

In order to provide interim results, the global ratings were made yearly, as the Pupil Information Forms were collected. This raised the question of the comparability of the ratings over time. Had the "common yardstick" mentioned above remained stable over the years of the research? Because of employee turnover, different raters had been involved at different times. Subtle changes could take place even within the same rater, however, over a period of several years, especially if there were a change over time in the forms being rated (if, for example, the disturbed children improved over time, the forms for different years would cluster in different parts of the rating continuum). The aim was to use the global ratings to evaluate change in the acceptability of the children's school behavior and academic performance over time. For this, it was necessary that ratings done in various years be comparable.

Therefore, after all Pupil Information Forms had been collected, they were all, no matter when collected or for which group, randomly intermixed and re-rated by a research assistant who had not previously been involved in making such ratings, although she had worked with the research group for several years and was thoroughly acquainted with the Pupil Information Form. Results of the re-rating procedure will be summarized after the problem of follow-up Pupil Information Forms filled out by special class teachers is discussed.

It should be easier for a child to adjust to the demands of a special class than to the demands of a regular class. There are fewer children to distract him; the teacher can give him more individual attention; she can adjust her demands to his capacities. If he can only sit still for five minutes at a time, she can adjust his curriculum to adapt to this; if, despite the fact that he is ten years old, he can only read at first grade level, she can begin teaching him at that level. The global ratings are supposed to reflect the performance of a child in a regular class situation, but it was obvious that the information from the special class teacher was often not relevant to that situation. In rating the Round 2 and Round 3 special class Pupil Information Forms, the raters did the best they could with the ratings and descriptions provided by the special class teacher, but they sometimes felt very ill at ease with their ratings. And if the global ratings resulting from a special class Pupil Information Form were better than those from the prior year's regular class

Pupil Information Form, it was not clear whether the child had improved or whether the change was due solely to the change in situation. Three children, two from Re-Ed and one untreated disturbed child, were in special classes at Round 2 and entered regular classes at Round 3. The pattern of their ratings over time strongly suggested that improvement in ratings while in special class reflected, for them, change in situation rather than change in child.

At the time all the Pupil Information Forms were being re-rated, it was decided to treat the Pupil Information Forms filled out by special class teachers at follow-up as irrelevant to the regular class situation. They simply could not provide the desired information about how the child was able to cope, behaviorally and academically, in a regular class situation. The special class children could not be omitted from analyses completely, however; enrollment in special class is "failure" data which should not be filtered out. It was decided to treat as the best estimate of the special class child's adjustment in a regular class, the last data available on his regular class performance. The last Pupil Information Form filled out for him by a regular class teacher was re-used. Thus, if a child went from Re-Ed to a special class, his pre-Re-Ed Pupil Information Form was re-used for first follow-up (and second follow-up if he remained in a special class).

Two points should be noted in evaluating the new system for rating special class children. Some Re-Ed children were unmanageable even in special class prior to Re-Ed and were expelled from school; ability to be maintained in special class is an improvement for them which is ignored by the rating system. Other Re-Ed children in special class at follow-up also seemed much more manageable behaviorally after Re-Ed, and these too would not show change under the new rating system. It seemed reasonable to accept these results for three reasons. First, it was necessary to achieve a consistent rule for dealing with special class Pupil Information Forms, and after alternatives were considered, the rule adopted seemed to offer the greatest combined validity and reliability. Second, the changes required by the new rule had a more adverse effect on the results for the Re-Ed than for the untreated disturbed group and thus could not lead to the conclusion that the Re-Ed intervention was effective if it were not. Third, it had been decided to use a rather severe criterion of improvement: change from very severe or fairly severe problems to mild problems or no problems. Special class children should not be placed into either of the latter two categories.

The second point to be noted concerns the various types of special class children may enter. Children in this study entered classes for the emotionally disturbed, the learning disabled,

the educable mentally retarded, the neurologically impaired, the delinquent, and the perceptually handicapped. (The large number of different special classes seems especially great when the relatively small number of children who entered special classes is considered.) There was some question about whether the rule for rating special class children should be applied differently for the different types of special classes. However, since the type of special class a child enters seems to depend to a large extent upon what is available and upon what a parent will accept, and since only a relatively few children were involved, no distinction among types of special classes was made in applying the special class rule.

The number of children whose behavior or academic rating was actually changed by application of the new special class rating rule was small; in all, 20 (three per cent) of 756 follow-up behavior ratings and 12 (two per cent) of 756 follow-up academic ratings were changed. All changes were for the worse; that is, when changes occurred because of the new rule, the children were re-rated as less well adjusted behaviorally or academically.

Not counting ratings changed as a result of the new special class rule, the re-rating of all Pupil Information Forms led to judgments identical with the earlier judgments for 87 per cent of the behavior ratings and 91 per cent of the academic ratings. Almost all differences were between one category and the one next higher or lower. Only two of the more than 1100 global behavior ratings and four of the more than 1100 global academic ratings were changed by two categories; one academic rating was changed by three categories. Correlations between the earlier and later behavior ratings were .95 for Rounds 1 and 3, .94 for Round 2. Correlations for the academic ratings were .95, .96 and .97 for Rounds 1, 2, and 3, respectively.

The binomial test was used to assess whether the changes made by the later rater were random in direction or whether, for any group at any round, more changes were in either the positive or negative direction than would be expected by chance. Ten of the eighteen comparisons indicated no significant directional tendency. Seven of the eighteen comparisons indicated that when the new rater disagreed with the earlier rater, she saw the child as less well-adjusted than the earlier rater had. This was true for the Round 1 normal ($p < .01$), Round 2 Re-Ed ($p < .01$) and normal ($p < .01$), and Round 3 Re-Ed ($p < .01$) and untreated disturbed ($p < .05$) behavior ratings, and for the Round 1 Re-Ed ($p < .01$) and Round 2 Re-Ed ($p < .01$) academic ratings. The later rater made more changes in the positive than negative direction in the Round 3 academic ratings for the normal group ($p < .05$). Overall, the new ratings, in comparison with the earlier ones, would be expected to make it more rather than less difficult to confirm the effectiveness of the Re-Ed intervention.

The new global ratings, like the earlier ones, correlated substantially with ratings made by the teachers themselves. The global behavior rating correlated .91 (N = 276) with the same rating made by the child's teacher, .88 (N = 277) with total score on the Behavior Problem Checklist, .86 (N = 367) with total score on the Student Role Behavior Scale, and .87 (N = 376) with a scale based on teacher ratings of the child's disruptiveness in class, use of learning potential, ability to face new situations, relationship with classmates, and feelings of personal distress. The size of the correlations is not surprising since the global behavior rating was based on the teacher's ratings and descriptions. The data do suggest, however, the accuracy of the research raters in evaluating the teachers' ratings and descriptions of the children's behavior and the generality of the global behavior rating in reflecting teachers' judgments over a broad variety of behaviors. These data lend support to the use of the global behavior rating as a summary evaluation of the child's behavioral adjustment in school.

The Round 1 global behavior rating also correlated significantly ($r = .65$, $N = 107$) with the previous teacher's rating, for school records, of the child's self-control. Correlations between the global behavior rating and IQ and age were small, but significant. The correlation with IQ was .20 ($N = 378$, $p < .01$), indicating a tendency for brighter children to be seen as better adjusted behaviorally. The correlation with age was .11 ($N = 378$, $p < .05$); the older children tended to be seen as less well adjusted behaviorally.

The global academic rating correlated .85 (N = 275) with the same rating made by the teacher, .80 (N = 255) with report card grades, .82 (N = 369) with the teacher's rating of the child's general level of achievement compared to his classmates, .82 (N = 369) with the teacher's ratings of the child's standing in class (bottom quartile, middle half, or top quartile) summed over all academic subjects, and .65 (N = 246) with final grades received in academic subjects the previous year. In addition, the global academic rating correlated .40 (N = 378) with IQ score and .56 (N = 367) with the teacher's judgment of the child's ability. Children with poorer global academic ratings at Round 1 had been retained more times prior to Round 1 ($r = .41$, $N = 378$). There was also a small but significant correlation between the academic rating and age ($r = .15$, $N = 378$, $p < .01$), with older children tending to have more severe academic problems.

Table 20 shows correlations between the global behavior and academic ratings, and their stability over time, for those children who did not participate in the Re-Ed intervention. It

TABLE 20

Intercorrelations of the Global Behavior and Academic Ratings for the Normal and Untreated Disturbed Groups Combined (N = 256)

Ratings	Behavior Ratings		Academic Ratings		
Behavior	Round 2	Round 3	Round 1	Round 2	Round 3
Round 1	.74	.67	.75	.54	.45
Round 2		.69	.64	.68	.53
Round 3			.64	.60	.76
Academic					
Round 1				.72	.62
Round 2					.71

can be seen from the table that there was a substantial relationship between the two global ratings (.75 at Round 1, .68 at Round 2, and .76 at Round 3). There was also considerable stability in the ratings over time despite the fact that the ratings were based on information from different teachers each year. Stability coefficients for ratings a year apart ranged from .69 to .74; they were .67 and .62 for behavior and academic ratings, respectively, made two years apart.

Global ratings of school behavior and academic performance were available for all children for all three rounds; data for individual items in the Pupil Information Form were not available for some children. Other advantages of the global ratings have been described. The individual items also had an advantage. Since they were answered directly by the children's teachers, they were free of any bias which may have affected the research raters. For this reason, some of the individual items were analyzed to see how closely results based on them supported findings based on the global ratings.

School Behavior at Follow-Up

The Global Rating of School Behavior

For scoring purposes, a rating of very severe problems was given a value of 4, a rating of fairly severe problems was given

a value of 3, mild problems was given a value of 2, and no problems (in the normal range) was given a value of 1. A higher global rating score therefore indicated greater deviation from the teacher's standards and expectations.

Mean global behavior ratings for each group at each round are shown in Table 21. Both the Re-Ed (t = 12.36 and 10.63) and the untreated disturbed children (t = 4.81 and 4.33) improved significantly between Rounds 1 and 2 and Rounds 1 and 3, but improvement was significantly greater for the Re-Ed children in both cases (t = 5.08 and 3.81, respectively). Neither group changed significantly between Rounds 2 and 3, nor was the difference between them in amount of change between Rounds 2 and 3 significant. At both Round 2 and Round 3, the behavior of the Re-Ed children was seen as significantly less deviant than that of the untreated disturbed children.

These results indicate that the Re-Ed intervention was successful in improving the school behavior of emotionally disturbed children, and that as late as eighteen months after discharge their behavior in school was still seen as more acceptable than the behavior of disturbed children who had not received the Re-Ed intervention. However, comparison of the Re-Ed and untreated children's Round 1 global behavior ratings indicates that prior to Re-Ed the school behavior of the Re-Ed children was seen as more deviant than that of the untreated children (more Re-Ed than untreated children were initially rated as having very severe behavior problems). To test whether the results indicating greater improvement for the Re-Ed children were related to their greater initial deviance, two sets of analyses were undertaken.

First, the independence of the effectiveness of the Re-Ed intervention from level of initial deviance was tested using analysis of covariance. The behavior ratings received by the Re-Ed and untreated children at Round 2 were compared using the Round 1 behavior rating as a control variable. The resulting F, with 1 and 247 df, was 21.29 ($p < .001$).

The procedure was repeated for the Round 3 behavior ratings, with resulting F of 10.39 (with 1 and 247 df, $p < .001$). Thus, effectiveness of the Re-Ed intervention was confirmed when analysis of covariance was used to statistically control for severity of initial behavior problems.

The second set of analyses dealt with subgroups of Re-Ed and untreated disturbed children equated for deviance of initial

TABLE 21

Mean Global Behavior Ratings

	Re-Ed (N=122)	Untreated Disturbed (N=128)	Normal (N=128)	R vs UD t	R vs N t	UD vs N t
Round 1	3.4	3.2	1.1	2.20*	34.61**	35.02**
Round 2	2.4	2.8	1.2	3.49**	11.94**	16.00**
Round 3	2.5	2.8	1.3	2.44**	12.11**	14.76**

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

TABLE 22

Mean Global Behavior Ratings of Re-Ed and Untreated Disturbed Children Rated at Round 1 as Having Very Severe Behavior Problems

	Re-Ed (N=61)	Untreated Disturbed (N=41)
Round 1	4.0	4.0
Round 2	2.7	3.3
Round 3	2.9	3.2

school behavior. Table 22 shows the mean global behavior rating at each round of Re-Ed and untreated disturbed children who were rated at Round 1 as having very severe behavior problems. The Re-Ed children showed significantly greater improvement than the untreated children between Round 1 and Round 2 ($t = 3.58$, $p < .001$) and between Round 1 and Round 3 ($t = 1.66$, $p < .05$).

Table 23 shows the mean global behavior rating at each round of Re-Ed and untreated disturbed children who were rated at Round 1 as having fairly severe behavior problems. The Re-Ed children showed greater improvement than the untreated children between Rounds 1 and 2 ($t = 2.52$, $p < .01$) and between Rounds 1 and 3 ($t = 2.05$, $p < .05$).

TABLE 23

Mean Global Behavior Ratings of Re-Ed and Untreated Disturbed Children Rated at Round 1 as Having Fairly Severe Behavior Problems

	Re-Ed (N=51)	Untreated Disturbed (N=76)
Round 1	3.0	3.0
Round 2	2.1	2.6
Round 3	2.3	2.7

TABLE 24

Mean Global Behavior Ratings of Re-Ed and Untreated Disturbed Children Rated at Round 1 as Having Mild Behavior Problems or No Behavior Problems

	Re-Ed (N=10)	Untreated Disturbed (N=11)
Round 1	1.9	2.0
Round 2	1.4	2.4
Round 3	1.6	2.7

Since only one disturbed child (a Re-Ed child) was rated at Round 1 as in the normal range, that child was combined for this analysis with children rated at Round 1 as having mild behavior problems.[9] Results for this group are shown in Table 24. The initial ratings of the Re-Ed and untreated children in this group did not differ significantly ($t = 1.05$). The Re-Ed children showed greater improvement than the untreated children between Rounds 1 and 2 ($t = 2.22$, $p < .05$) and between Rounds 1 and 3 ($t = 2.71$, $p < .01$).

The results of this set of analyses indicate that the Re-Ed intervention is effective in improving the school behavior of emotionally disturbed children no matter how deviant their original behavior.

[9] It may seem puzzling that children referred and admitted to a residential school for disturbed children or children nominated by school principals as having problems needing special help would be rated as in the normal range or as having mild problems. The children who received these ratings displayed withdrawn or anxious behaviors, or behaviors which were very immature for their age, or were not learning despite normal intellectual ability. The Pupil Information Form did not put as much emphasis on such behaviors as on more acting-out and disruptive behaviors, nor did the teachers or raters react as vehemently to them. The raters were specifically instructed not to rate poor learning as a behavior problem, but only as an academic problem.

TABLE 25

Percentage of Re-Ed, Untreated Disturbed, and Normal Children in Each Global Behavior Rating Category at Each Round

	Normal Range	Mild Problems	Fairly Severe Problems	Very Severe Problems
Re-Ed (N=122)				
Round 1	1	7	42	50
Round 2	21	35	29	15
Round 3	16	32	34	17
Untreated (N=128)				
Round 1	0	9	59	32
Round 2	14	21	34	31
Round 3	13	20	37	30
Normal (N=128)				
Round 1	88	12	0	0
Round 2	82	15	3	0
Round 3	77	19	3	2

The results reported above deal with group means. Another way to look at the data is in terms of percentage of children who improved. Table 25 shows the percentage of Re-Ed, untreated disturbed, and normal children rated in each category at each round. Probably the most striking data in this table are those shown in the "very severe problems" column, the data which deal with the most behaviorally deviant children. The percentage of

TABLE 26

Round 2 Global Behavior Ratings of Re-Ed and Untreated Disturbed Children Rated at Round 1 as Having Very Severe Behavior Problems

	Re-Ed (N=61)		Untreated Disturbed (N=41)	
	N	%	N	%
Improved (Rated as having mild problems or no problems at Round 2)	26	43	5	12
Slightly improved (Rated as having fairly severe problems at Round 2)	21	34	16	39
No Improvement (Rated as having very severe problems at Round 2)	14	23	20	49

Mann-Whitney U = 772, z (corrected for ties) = 3.47, $p < .001$.

χ^2 for improved vs. not improved by group = 7.36, with 1 df, $p < .01$.

untreated disturbed children in this column remained approximately the same each year; the percentage of Re-Ed children in this column decreased by about two-thirds after intervention.

Tables 26 and 27 present outcome data for those Re-Ed and untreated disturbed children who were initially rated as having very severe behavior problems. By Round 2, approximately six months after discharge from Re-Ed and one year after Round 1, the school behavior of 43 per cent of the Re-Ed graduates in this most deviant group, as compared with 12 per cent of the untreated children, was seen as relatively normal ("normal" or "mild problems"). At the same time, the behavior of 49 per cent of the

TABLE 27

Round 3 Global Behavior Ratings of Re-Ed and Untreated Disturbed Children Rated at Round 1 as Having Very Severe Behavior Problems

	Re-Ed (N=61)		Untreated Disturbed (N=41)	
	N	%	N	%
Improved (Rated as having mild problems or no problems at Round 3)	20	33	8	19
Slightly Improved (Rated as having fairly severe problems at Round 3)	25	41	15	37
No Improvement (Rated as having very severe problems at Round 3)	16	26	18	44

Mann-Whitney U = 979.5, z (corrected for ties) = 1.97, $p < .05$.

χ^2 for improved vs. not improved by group = 3.45, with 1 df, $p < .05$.

untreated children, as opposed to 23 per cent of the Re-Ed graduates, continued to be rated in the "very severe problems" category. The remainder of the children in each group were rated "fairly severe problems," a slight improvement over the previous year's rating. The difference between the Re-Ed and untreated children in amount of improvement in school behavior between Rounds 1 and 2 was significant by both χ^2 and Mann-Whitney U tests (see Table 26). Comparable data for Round 3 (approximately two years after Round 1 and eighteen months after discharge from Re-Ed) are shown in Table 27. Again the difference between the two groups of children was significant, with the Re-Ed children showing more improvement in school behavior.

TABLE 28

Round 2 Global Behavior Ratings of Re-Ed and Untreated Disturbed Children Rated at Round 1 as Having Fairly Severe Behavior Problems

	Re-Ed (N=51)		Untreated Disturbed (N=76)	
	N	%	N	%
Improved (Rated as having mild problems or no problems at Round 2)	33	65	34	45
No Change (Rated as having fairly severe problems at Round 2)	14	27	25	33
Worse (Rated as having very severe problems at Round 2)	4	8	17	22

Mann-Whitney U = 1482, z (corrected for ties) = 2.48, $p < .01$.

χ^2 for worse vs. not worse by group = 4.67, with 1 df, $p < .05$.

χ^2 for improved vs. not improved by group = 4.88, with 1 df, $p < .05$.

Tables 28 and 29 present outcome data for Re-Ed and untreated children whose initial deviance in the school situation was moderate (children rated "fairly severe problems" at Round 1). By Round 2, more Re-Ed than untreated disturbed children in this group had improved and fewer Re-Ed than untreated disturbed children had become more behaviorally deviant. The same held for Round 3.

TABLE 29

Round 3 Global Behavior Ratings of Re-Ed and Untreated Disturbed Children Rated at Round 1 as Having Fairly Severe Behavior Problems

	Re-Ed (N=51)		Untreated Disturbed (N=76)	
	N	%	N	%
Improved (Rated as having mild problems or no problems at Round 3)	29	57	31	41
No Change (Rated as having fairly severe problems at Round 3)	17	33	28	37
Worse (Rated as having very severe problems at Round 3)	5	10	17	22

Mann-Whitney U = 1552, z (corrected for ties) = 2.07, $p < .05$.

χ^2 for worse vs. not worse by group = 3.36, with 1 df, $p < .05$.

χ^2 for improved vs. not improved by group = 3.16, with 1 df, $p < .05$.

Table 30 presents outcome data for those Re-Ed and untreated children who were rated as having mild behavior problems or no behavior problems at Round 1. None of the Re-Ed children were rated as more deviant at Round 3 than at Round 1, whereas more than 60 per cent of the untreated children were rated as more deviant at Round 3 than at Round 1 ($p < .01$, Fisher's Exact Test).

Taken together, Tables 26 through 30 indicate that the Re-Ed

TABLE 30

Round 3 Global Behavior Ratings of Re-Ed and Untreated Disturbed Children Rated at Round 1 as Having Mild Problems or No Problems

Group	Number of Children Rated as Having Mild Problems or No Problems at Round 3 (No change)	Number of Children Rated as Having Very Severe or Fairly Severe Problems at Round 3 (Behavior Deteriorated)
Re-Ed	10	0
Untreated Disturbed	4	7

$p < .01$, Fisher's Exact Test

intervention leads to more acceptable school behavior in disturbed children and prevents mild behavioral deviance from becoming more serious.

The stability of the behavior rating. Data have been presented which indicate that the global behavior rating accurately reflects a given teacher's evaluation of a child's behavior at a given time. How accurately does the rating predict a different teacher's evaluation of the child's behavior at a later time?

There are three sources of variability which would be expected to lower the predictive accuracy of the rating. The first such source is inaccuracy in assessing the current teacher's evaluation of the child. The size of the correlations between the global rating and the teacher's ratings, and the data on inter-rater reliability suggest that error from this source is relatively small. A second source is variability in the judgmental frame of reference used by different teachers; teachers vary, for example, in the degree of deviant behavior they view as within the normal range. It was to reduce this source of variability that ratings made by research assistants rather than those

made by teachers themselves were used as the summary ratings of school behavior. The research assistants applied a common yardstick to ratings and descriptions provided by many different teachers. A third source of predictive inaccuracy is actual change in the children's behavior over time. The literature on effectiveness of psychotherapy has led some to conclude that most disturbed children (two-thirds is a common estimate) show "spontaneous recovery," i.e., become better adjusted as they grow older without any specific intervention.

One way of assessing stability of ratings is to compute correlation coefficients between earlier and later ratings. Such correlation coefficients for the behavior rating, for the normal and untreated disturbed children combined, are shown in Table 20. (The normal and untreated children were combined in order to maximize range; the Re-Ed children were omitted since the Re-Ed intervention was expected to lower stability of ratings.) It can be seen from Table 20 that correlations for ratings made one and two years apart were about .70.

In dealing with disturbed children, the question of stability of ratings is usually stated as "How likely is it that a child rated disturbed at one point in time will be considered disturbed at a later time?" Or, conversely, "How likely is it that a child rated normal at one point in time will be considered normal at a later time?" Correlation coefficients do not provide good answers to these questions; what are required are percentages of changed and unchanged labels. For this purpose, children rated as in the normal range or as having mild problems were categorized as "normal," and children rated as having fairly severe or very severe problems were categorized as "disturbed," and percentages of labels thus derived which remained stable over a one or two year period were computed. (With this method of defining normal and disturbed children, the Round 1 global behavior rating would have identified 100 per cent of the children in the normal group as normal and 91 per cent of the Re-Ed and untreated children as disturbed.)

Stability within the untreated disturbed group. At Round 1, 117 of the 128 untreated disturbed children were rated as having fairly severe or very severe problems in school behavior. The remaining eleven children were rated as having mild problems. The "normal" label assigned these eleven children on the basis of their Round 1 global behavior rating was relatively unstable; five were categorized as disturbed at Round 2, seven at Round 3.

Of the 117 children labeled disturbed on the basis of their global behavior rating at Round 1, 78 (67 per cent) were also

TABLE 31

Stability in the Untreated Disturbed Group of the Normal and Disturbed Labels Derived from the Round 2 Global Behavior Ratings

	Round 2 Label	
Round 3 Label	Normal	Disturbed
Same as Round 2	26	66
Different from Round 2	19	17

labeled disturbed a year later at Round 2, and 78 (67 per cent) were labeled disturbed two years later at Round 3. Of those labeled disturbed at both Rounds 1 and 2, 78 per cent were also categorized as disturbed at Round 3.

Of the 83 children labeled disturbed at Round 2 (78 children who were also labeled disturbed at Round 1 and five children categorized as normal at Round 1), 80 per cent were again labeled disturbed a year later at Round 3. Of the 45 children labeled normal at Round 2, 58 per cent were again labeled normal at Round 3. The Round 2 normal label was significantly less stable than the Round 2 disturbed label for the untreated disturbed children ($\chi^2 = 6.82$, $p < .01$, see Table 31).

The percentages cited above reflect greater stability than one would expect from the "spontaneous recovery" literature which suggests that two-thirds of all disturbed children improve without intervention. The present data indicate that the percentage of children who improve without special intervention is far lower. The discrepancy may be due to the rating procedures used in the present study (for example, absolute rather than relative judgments were made at each point in time, teachers were the primary judges, and different teachers rated the children at different points in time) or to the rather strict definition of improvement used. It should also be noted that not all the "untreated" disturbed children in the present study received no special intervention. A number of these children were in therapy or received medication or were seen by school social workers or were placed in special classes; they were as a group "untreated" only in that they did not receive the Re-Ed intervention.

TABLE 32

Stability in the Re-Ed and Untreated Disturbed Groups of the Normal and Disturbed Labels Derived from the Round 1 Global Behavior Ratings

Stability of the Labels from Round 1 to Round 2

Group	Stability of the Disturbed Label		Stability of the Normal Label	
	Label Stable	Label Changed	Label Stable	Label Changed
Re-Ed	53	59	10	0
Untreated Disturbed	78	39	6	5
	$\chi^2 = 8.75$, $p < .01$		Fisher's Exact Test, $p < .05$	

Stability of the Labels from Round 1 to Round 3

Group	Stability of the Disturbed Label		Stability of the Normal Label	
	Label Stable	Label Changed	Label Stable	Label Changed
Re-Ed	63	49	10	0
Untreated Disturbed	78	39	4	7
	$\chi^2 = 2.62$, $p < .10$		Fisher's Exact Test, $p < .01$	

TABLE 33

Stability in the Re-Ed Group of the Normal and Disturbed Labels Derived from the Round 2 Behavior Ratings

	Round 2 Label	
Round 3 Label	Normal	Disturbed
Same as Round 2	45	39
Different from Round 2	24	14

Stability within the Re-Ed group. At Round 1, 112 of the 122 Re-Ed children were categorized as disturbed by the global behavior rating and ten were categorized as normal. Of the ten children categorized as normal, all were again categorized as normal at Rounds 2 and 3. The Round 1 normal label was significantly more stable, as expected, for the Re-Ed than for the untreated disturbed children (see Table 32).

Of the 112 Re-Ed children categorized as disturbed by the global behavior rating at Round 1, 53 (47 per cent) were also labeled disturbed at Round 2, and 63 (56 per cent) were labeled disturbed at Round 3. The Round 1 disturbed label was less stable for the Re-Ed than for the untreated disturbed children (see Table 32) despite the fact that a higher proportion of children in the Re-Ed than in the untreated group were rated at Round 1 as having very severe rather than fairly severe behavior problems.

Of the 53 children labeled disturbed at Round 2 (all of these had also been labeled disturbed at Round 1), 39 (74 per cent) were again labeled disturbed at Round 3. Of the 69 children categorized as normal at Round 2, 45 (65 per cent) were also categorized as normal at Round 3. There was no difference ($\chi^2 = 0.98$) in the Re-Ed group, as there was in the untreated disturbed group, in the stability of the Round 2 normal and disturbed labels; in the Re-Ed group, normals at Round 2 were as likely to remain normal as disturbed children were to remain disturbed (compare Table 33 with Table 31).

TABLE 34

Mean Global Behavior Ratings of the Acting-Out and Withdrawn Re-Ed Children

	Acting-Out (N=88)	Withdrawn (N=30)	t
Round 1	3.5	3.1	2.80**
Round 2	2.4	2.2	1.12
Round 3	2.6	2.2	2.19*

*p < .05
**p < .01

Stability within the normal group. At Round 1, all 128 children in the normal group were categorized as normal by the global behavior rating. At Round 2, 124 (97 per cent) were again categorized as normal, and at Round 3, 122 (95 per cent) were categorized as normal. Ninety-three per cent of the normal children were categorized as normal at all three rounds. Labeling was clearly more stable for the normal group than for either the Re-Ed or untreated group.

The withdrawn and acting-out Re-Ed children. Mean scores of the acting-out and withdrawn Re-Ed children on the global behavior rating are shown in Table 34. It can be seen from the table that prior to Re-Ed and again eighteen months after discharge, the acting-out children were rated as having more severe school behavior problems than the withdrawn children. Both groups improved equally as a result of the Re-Ed intervention (t for change between Rounds 1 and 2 = 0.71, t for change between Rounds 1 and 3 = 0.52, t for change between Rounds 2 and 3 = 1.17). Change between Rounds 1 and 2 and Rounds 1 and 3 was significant for both groups (t = 11.25 for Rounds 1 - 2 and 9.60 for Rounds 1 - 3 for the acting-out children, t = 4.88 for Rounds 1 - 2 and 4.47 for Rounds 1 - 3 for the withdrawn children); change between Rounds 2 and 3 was significant for neither group.

The representative sample. It is clear that the Re-Ed children, both acting-out and withdrawn, improved behaviorally

as a result of the Re-Ed intervention. It is also clear that the amount of improvement was not sufficient to make the Re-Ed children, as a group, indistinguishable from the normal children (see Table 21). In selecting the normal children, judgments of principals and teachers were used to screen out children who showed any behavioral or emotional problems. The normal children cannot, therefore, be considered representative of school-children-in-general; their scores would be expected to cluster at the most favorable end of any score continuum. It was of interest to compare the Re-Ed children after discharge with a more representative group of children. It was also of interest to see how the latter group would be distributed among the categories of the global behavior rating.

Pupil Information Forms were collected for a stratified random sample of children in grades 1 through 8, from schools of three different socioeconomic levels. The schools were selected and their socioeconomic levels designated by administrators of the public school system. For each grade and socioeconomic level, eight teachers (two from each of four schools) were requested to fill out forms for two randomly selected male students. If more than two teachers in a school taught the same grade, two were chosen at random. Forms were filled out for 384 students (3 socioeconomic levels X 8 grades X 4 schools X 2 teachers X 2 students).

There was a significant difference in IQ ($F = 41.41$, with 2 and 282 df, $p < .001$) related to socioeconomic level of school. Mean IQ for children from low socioeconomic level schools was 97.1 (SD = 13.5), from middle socioeconomic level schools 100.3 (SD = 12.4), and from high socioeconomic level schools 113.6 (SD = 13.6). Since most of the Re-Ed, untreated disturbed and normal children came from low and middle socioeconomic level schools, and since their IQ scores were similar to the IQ scores of children from low and middle socioeconomic level schools, the comparisons of primary interest were with representative sample children from low and middle socioeconomic level schools.

Table 35 shows the Round 3 global behavior ratings of the Re-Ed, untreated disturbed and normal children, and the global behavior ratings of representative sample children from grades 3 through 8 (the grades the other children were in at Round 3) from low and middle socioeconomic level schools. It can be seen from the table that the representative sample children did show more behavior problems than the normal children and that they showed fewer problems than the Re-Ed or untreated children.

There was no difference in global behavior rating related to socioeconomic level of school ($F = 2.31$, with 2 and 381 df). Mean global behavior rating for all 384 representative sample children was 1.5 (SD = 0.79).

TABLE 35

Percentage of Re-Ed, Untreated Disturbed, Normal, and Representative Sample Children in Each Global Behavior Rating Category

	Normal Range	Mild Problems	Fairly Severe Problems	Very Severe Problems
Re-Ed (N=122)	16	32	34	17
Untreated Disturbed (N=128)	13	20	37	30
Normal (N=128)	77	19	3	2
Representative Sample (N=192)	61	25	8	6

χ^2 for normal range or mild problems vs. fairly severe or very severe problems:

Representative Sample vs. Re-Ed = 77.16, $p < .001$.
Representative Sample vs. Untreated Disturbed = 131.67, $p < .001$.
Representative Sample vs. Normal = 4.78, $p < .05$.

Note.--Round 3 ratings are shown for the Re-Ed, untreated disturbed and normal children.

The Teachers' Ratings of Behavior

Disruptiveness in the classroom. One item in the Pupil Information Form asked, "How disruptive is the child in the classroom?" The teacher was required to fit the child into one of the following categories:

1. It is almost impossible to teach with him in the room.
2. He often disrupts classroom activities.
3. No more troublesome than most children.

Mean ratings of disruptiveness at each round are shown in Table 36;

TABLE 36

Mean Ratings of Disruptiveness in the Classroom

	Re-Ed (N=109)	Untreated Disturbed (N=127)	Normal (N=127)	R vs UD t	R vs N t	UD vs N t
Round 1	2.1	2.1	3.0	0.24	14.44**	17.37**
Round 2	2.6	2.5	3.0	1.90*	6.62**	8.79**
Round 3	2.5	2.4	3.0	1.74*	7.94**	10.28**

Note.--A higher score = less disruptive.

*$p < .05$

**$p \leq .01$

TABLE 37

Percentage of Re-Ed, Untreated Disturbed, and Normal Children in Each Disruptiveness Category at Each Round

	Categories		
	1	2	3
Re-Ed (N=109)			
Round 1	17	53	30
Round 2	3	34	63
Round 3	4	39	57
Untreated Disturbed (N=127)			
Round 1	11	66	23
Round 2	5	44	51
Round 3	5	50	45
Normal (N=127)			
Round 1	0	0	100
Round 2	0	4	96
Round 3	0	4	96

Note.--Category 1 = it is almost impossible to teach with him in the room, category 2 = he often disrupts classroom activities, category 3 = no more troublesome than most children.

TABLE 38

Mean Ratings of Use of Learning Potential

	Re-Ed (N=117)	Untreated Disturbed (N=126)	Normal (N=128)	R vs UD t	R vs N t	UD vs N t
Round 1	2.6	2.6	1.3	0.49	19.60*	18.85*
Round 2	2.2	2.4	1.5	2.52*	8.36*	11.19*
Round 3	2.3	2.3	1.7	0.76	7.29*	7.61*

Note.--A higher score = less effective use of potential.
*$p < .01$

percentages of children in each category are shown in Table 37. The Re-Ed and untreated children were rated as equally disruptive at Round 1; the Re-Ed children were rated as significantly less disruptive than the untreated children both at Round 2 and Round 3. Both groups changed significantly between Rounds 1 and 2 (Re-Ed t = 8.02, untreated t = 5.45) and between Rounds 1 and 3 (Re-Ed t = 6.58, untreated t = 4.80); change between Rounds 2 and 3 was not significant for either group. At all rounds, both groups were rated as significantly more disruptive than the normal children.

Of representative sample children in grades 1 through 8 from low and middle socioeconomic level schools, none were rated as almost impossible to teach with him in the room, 12 per cent were rated as often disrupting classroom activities, and 88 per cent were rated as no more troublesome than most chiildren. Disruptiveness rating was not related to socioeconomic level of school (F = .02, with 2 and 380 df); the mean disruptiveness rating for all 384 representative sample children was 2.9 (SD = 0.32).

Use of learning potential. Another Pupil Information Form item read, "In your opinion, how does the child's school achievement measure up to his potential for learning?" The teacher was asked to fit the child into one of the following categories:

1. Works to full capacity most of the time.
2. Irregular, but makes good use of ability at times.
3. Seldom able to use abilities fully.

Although this item makes reference to the child's school achievement and potential for learning, it was placed with the teachers' ratings of behavior because it seemed likely that in making this rating, the teacher would attend at least as much, if not more, to the child's behavior as to his academic accomplishments. If the child attends to his school work and seems to be making an effort to learn, the teacher is apt to accept his academic performance as representative of his potential for learning. And, in fact, score on this item correlated .78 with the global behavior rating (disruptiveness correlated .72 with the global behavior rating) and .72 with the global academic rating.

Mean ratings at each round for the Re-Ed, untreated disturbed and normal children are shown in Table [illegible]. The percentage of children in each category at each round is shown in Table 39. There was no difference between the Re-Ed and untreated groups in use of learning potential at Round 1. Both groups improved between Rounds 1 and 2 (Re-Ed t = 6.98, untreated t = 3.73) and between Rounds 1 and 3 (Re-Ed t = 4.78, untreated t = 3.26); change between Rounds 2 and 3 was not significant for either group. The Re-Ed children were seen as making significantly better use of their learning

TABLE 39

Percentage of Re-Ed, Untreated Disturbed, and Normal Children in Each Use-of-Learning-Potential Category at Each Round

	Categories		
	1	2	3
Re-Ed (N=117)			
Round 1	3	32	65
Round 2	15	56	30
Round 3	9	53	38
Untreated Disturbed (N=126)			
Round 1	5	33	63
Round 2	10	44	46
Round 3	16	33	51
Normal (N=128)			
Round 1	73	24	2
Round 2	57	38	5
Round 3	45	44	12

Note.--Category 1 = works to full capacity most of the time, category 2 = irregular, but makes good use of ability at times, category 3 = seldom able to use abilities fully.

TABLE 40

Change in Use of Learning Potential between Rounds 1 and 3 for Re-Ed and Untreated Disturbed Children Rated at Round 1 as Seldom Able to Use Abilities Fully

Change Between Rounds 1 and 3	Re-Ed (N=76)	Untreated Disturbed (N=79)
Improved	44	33
No Change	32	46

$\chi^2 = 4.03$, $p < .05$

potential at Round 2 than the untreated children. At Round 3, the difference between the groups was no longer statistically significant. However, when only children initially most in need of change were considered, the difference between the Re-Ed and untreated children in amount of improvement between Rounds 1 and 3 did reach significance. These children, who were rated at Round 1 as seldom able to use their abilities fully, constituted 65 per cent of the Re-Ed and 63 per cent of the untreated group. It can be seen from Table 40 that a significantly higher proportion of Re-Ed than untreated disturbed children so rated at Round 1 showed improved use of learning potential at Round 3.

Of representative sample children in grades 1 through 8 from low and middle socioeconomic level schools, 39 per cent were rated in category 1 (works to full capacity most of the time), 43 per cent were rated in category 2 (irregular, but makes good use of ability at times), and 18 per cent were rated in category 3 (seldom able to use abilities fully). Representative sample children from schools of different socioeconomic levels did not differ significantly in mean use-of-potential rating ($F = 2.76$, with 2 and 381 df); mean rating for all 384 representative sample children was 1.8 (SD = 0.72).

The Student Role Behavior Scale. This scale (see item 26 of the Pupil Information Form, Appendix D) consists of questions which are fairly specific and closely tied to the requirements of

TABLE 41

Mean Student Role Behavior Scale Scores

	Re-Ed (N=106)	Untreated Disturbed (N=127)	Normal (N=128)	R vs UD t	R v
Round 1	12.0	13.1	25.9	1.43	26.
Round 2	18.3	15.6	24.9	2.10*	10.
Round 3	15.9	16.0	24.6	0.06	13.

*p < .05
**p < .01

the student role (e.g., does the child work at desk assignments without getting distracted or annoying the other children?). The scale has a maximum of 27 points, with high scores indicating more adequate role performance. For 255 normal and untreated disturbed children, Student Role Behavior Scale score correlated .85 with the teacher's global rating of the child's behavioral-emotional adjustment, .86 with a scale based on the teacher's ratings of the child's disruptiveness in class, use of learning potential, ability to face new situations, relationship with classmates, and feelings of personal distress, and .74 with the teacher's global rating of the child's academic performance. The scale's correlation with age (-.11) was not significant; the correlation with IQ (.16) was significant but small. Student Role Behavior Scale scores at Round 1 correlated .72 with Student Role Behavior Scale scores from different teachers a year later, and .64 with scores from a third set of teachers two years later.

Mean Student Role Behavior Scale scores at each round for the Re-Ed, untreated disturbed and normal children are shown in Table 41. The mean for representative sample children in grades 1 through 8 from low and middle socioeconomic level schools was 22.6 (SD = 5.5). Representative sample children from schools of different socioeconomic levels did not differ in mean Student Role Behavior Scale score ($F = 1.19$, with 2 and 381 df); mean score for all 384 children was 22.9 (SD = 5.3).

It can be seen from Table 41 that the Re-Ed and untreated disturbed children did not differ in Student Role Behavior Scale score at Round 1; the Re-Ed children scored significantly higher than the untreated children at Round 2; the two groups did not differ at Round 3. Improvement was significant for both groups of children between Rounds 1 and 2 ($t = 10.79$ for the Re-Ed children, 6.57 for the untreated children) and between Rounds 1 and 3 ($t = 5.90$ for the Re-Ed children, 4.63 for the untreated children). Change between Rounds 2 and 3 was not significant for the untreated disturbed children, but in that interval the Re-Ed children significantly decreased in score ($t = 3.90$, $p < .001$).

Table 42 shows mean Student Role Behavior Scale scores at each round for the acting-out and withdrawn Re-Ed children. At Round 1, the acting-out children scored significantly lower than the withdrawn children. Both groups improved significantly between Rounds 1 and 2 ($t = 9.67$ for the acting-out children, 4.05 for the withdrawn children) and between Rounds 1 and 3 ($t = 4.86$ for the acting-out children, 3.16 for the withdrawn children). Between Rounds 1 and 2, the acting-out children improved sufficiently to become indistinguishable from the withdrawn children. But between Rounds 2 and 3, the withdrawn children maintained their gains ($t = 0.03$) while the acting-out children decreased significantly in score ($t = 3.86$), so that at Round 3, the scores of the acting-out children were again significantly lower than those of the withdrawn children.

TABLE 42

Mean Student Role Behavior Scale Score
at Each Round for the Acting-Out
and Withdrawn Re-Ed Children

	Acting-Out (N=78)	Withdrawn (N=24)	t
Round 1	11.3	14.5	2.55*
Round 2	18.0	19.4	1.08
Round 3	15.1	19.0	2.68**

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

Results for the Student Role Behavior Scale have differed from the results concerning improvement in behavior presented earlier. The earlier data indicated that the Re-Ed intervention led to improvement in behavior which held up at least as long as eighteen months after discharge from Re-Ed. The data for the Student Role Behavior Scale suggest that while this may be true for children initially described as withdrawn, the effectiveness of the Re-Ed program diminishes for children initially described as acting-out some time during the interval between six and eighteen months after discharge. There is one obvious difference between the Student Role Behavior Scale and the behavior ratings discussed earlier, a difference in the specificity of the behaviors on which the teacher is asked to focus. The Student Role Behavior Scale asks the teacher about behaviors which are more concrete and specific than those reflected in the global behavior rating or the disruptiveness-in-the-classroom rating. Taken together, the data suggest that while change in specific behaviors may not always hold up, decrease in the children's disruptiveness and increase in the general acceptability of their behavior does continue, at least as long as the eighteen-month follow-up.

Feelings of personal distress. There were two items shown in Table 1, from the Pupil Information Form, on which the Re-Ed

and untreated children initially differed. For informational purposes, the follow-up data on these items are presented here.

One of the items had to do with the child's feelings of personal distress. The teacher was asked, "How much personal distress (unhappiness, anxiety, worry, fearfulness) do you think the child himself feels?" The response categories available were:

1. A very great deal
2. More than most children
3. About as much as most children
4. Less than most children
5. Almost none

For scoring purposes, the first category was given a value of 1, the second a value of 2, and the last three categories were combined and given a value of 3.

Mean ratings of personal distress at each round for the Re-Ed, untreated disturbed and normal children are shown in Table 43. The percentage of children with each score is shown in Table 44. It can be seen from the tables that while the Re-Ed children were rated as feeling more personal distress than the untreated children at Round 1, the ratings of the two groups did not differ at Rounds 2 or 3. At every round, both groups of children were rated as feeling more personal distress than the normal children.

Of the representative sample children in grades 1 through 8 from low and middle socioeconomic level schools, 3 per cent were rated as feeling a very great deal of personal distress, 17 per cent were rated as feeling more than most children, and 80 per cent were rated as feeling as much as or less than most children. There was no relationship between level of personal distress and socioeconomic level of school.

Receptiveness of the child's parents to suggestions from the school. There was also an initial difference for the Re-Ed and untreated children in teachers' answers to the question, "How receptive are the child's parents to suggestions from the school?" The response categories for this item were:

1. Indifferent or argumentative
2. Fairly cooperative in most ways
3. Warm participation in planning for the child

Mean ratings for the Re-Ed, untreated disturbed and normal groups are shown in Table 45; percentages for each response category are shown in Table 46. Parents of the untreated disturbed children were rated as less receptive to suggestions of the school at every round. Parents of children in both disturbed groups were rated as less receptive than parents of the normal children at every round.

TABLE 43

Mean Ratings of Personal Distress

	Re-Ed (N=106)	Untreated Disturbed (N=126)	Normal (N=128)	R vs UD t	R vs N t	UD vs N t
Round 1	1.7	2.1	2.9	4.43*	17.90*	10.95*
Round 2	2.4	2.3	2.9	0.25	7.71*	7.64*
Round 3	2.2	2.3	2.8	1.[illegible]	8.87*	6.85*

Note.--A higher score = less distress.
*p < .01

TABLE 44

Percentage of Re-Ed, Untreated Disturbed and Normal Children in Each Personal Distress Score Category at Each Round

	Categories		
	1	2	3
Re-Ed (N=106)			
Round 1	49	35	16
Round 2	11	42	47
Round 3	16	48	36
Untreated Disturbed (N=126)			
Round 1	26	37	37
Round 2	16	34	50
Round 3	17	33	50
Normal (N=128)			
Round 1	0	8	92
Round 2	1	9	90
Round 3	1	14	85

Note.--Category 1 = a very great deal of distress, category 2 = more than most children, category 3 = as much as or less than most children.

TABLE 45

Mean Ratings of Parents' Receptiveness
to Suggestions from the School

	Re-Ed (N=88)	Untreated Disturbed (N=104)	Normal (N=[illegible])	R vs UD t	R vs N t	UD vs N t
Round 1	2.3	1.9	2.6	4.6**	3.06**	7.95**
Round 2	2.3	2.1	2.6	2.39*	3.35**	6.00**
Round 3	2.2	2.0	2.5	2.28*	2.30*	4.63**

Note.--A higher score = higher receptiveness.
*p < .05
**p < .01

TABLE 46

Percentage of Re-Ed, Untreated Disturbed and Normal Children's Parents Rated in Each Parent Receptiveness Category at Ea[illegible] Round

	Categories		
	1	2	3
Re-Ed (N=88)			
Round 1	12	47	41
Round 2	9	53	38
Round 3	11	52	36
Untreated Dist[illegible]rbed (N=104)			
Round 1	25	61	14
Round 2	16	61	23
Round 3	26	46	28
[illegible]rmal (N=98)			
[illegible]ound 1	5	36	59
Round 2	[illegible]	31	63
Round 3	7	40	54

Note.--Category 1 = indifferent or argumentative; category 2 = fairly cooperative in most ways, category 3 = warm participation in planning for the child.

TABLE 47

Percentage of Representative Sample Parents Rated In Each Parent Receptiveness Category by Socioeconomic Level of the Child's School

Socioeconomic Level of School	Rating Category 1	2	3
Low (N=117)	17	37	46
Middle (N=119)	7	49	45
High (N=119)	2	37	61

Note: Category 1 = indifferent or argumentative, category 2 = fairly cooperative in most ways, category 3 = warm participation in planning for the child.

In the representative sample, parents of children from higher socioeconomic level schools were rated as more receptive to suggestions from the school than parents of children from lower socioeconomic level schools ($F = 7.35$, with 2 and 352 df, $p < .01$). Means for the low, middle and high socioeconomic level schools were 2.3, 2.4, and 2.6, respectively. Percentages in the various rating categories, by socioeconomic level of school, are shown in Table 47.

Academic Performance at Follow-Up

The Global Rating of Academic Performance

At Round 1, not all of the Re-Ed or untreated children had academic problems, but the majority of them did (68 per cent of the Re-Ed children and 63 per cent of the untreated disturbed children were rated as having fairly severe or very severe academic problems at Round 1). There was no significant difference between the Re-Ed and untreated children at Round 1 in mean global academic rating or percentage of children with fairly severe or very severe academic problems.

TABLE 48

Mean Global Academic Ratings of Re-Ed and Untreated Disturbed Children with Initial Academic Difficulties

	Re-Ed (N=83)	Untreated Disturbed (N=81)	t
Round 1	3.6	3.6	0.20
Round 2	2.7	3.3	3.76**
Round 3	2.9	3.2	1.93*

*p .05
**p .01

Academic outcomes for children in academic difficulty at Round 1 (children rated as having fairly severe or very severe academic problems) and for children not in academic difficulty at Round 1 (children rated as in the normal range or as having mild academic problems) were analyzed separately. Mean academic ratings at each round for Re-Ed and untreated disturbed children with initial academic difficulties are shown in Table 48. It can be seen from the table that while there was no significant difference between the two groups at Round 1, the Re-Ed children were seen as having fewer academic problems both at Round 2 and Round 3. Both groups showed significant academic improvement between Rounds 1 and 2 (Re-Ed $\underline{t}$ = 6.95, untreated $\underline{t}$ = 2.75) and between Rounds 1 and 3 (Re-Ed $\underline{t}$ = 5.35, untreated $\underline{t}$ = 3.60); neither group changed signficantly between Rounds 2 and 3. Improvement was greater for the Re-Ed than untreated children between Rounds 1 and 2 ($\underline{t}$ = 3.5[illegible], $p < .001$) and between Rounds 1 and 3 ($\underline{t}$ = 1.77, $p < .05$); there was no difference between the groups in amount of change between Rounds 2 and 3. Tables 49 and 50 show, for children with initial academic difficulties, the percentages of Re-Ed and untreated children receiving each academic rating at Round 2 (Table 49) and at Round 3 (Table 50).

TABLE 49

Round 2 Global Academic Ratings of Re-Ed and Untreated Disturbed Children with Initial Academic Difficulties

Academic Rating at Round 2	Re-Ed (N=83) N	%	Untreated Disturbed (N=81) N	%
Normal Range	18	22	7	9
Mild Problems	13	16	5	6
Fairly Severe Problems	26	31	23	28
Very Severe Problems	26	31	46	57

χ^2 for normal or mild problems vs. fairly severe or very severe problems, by group = 10.76, $p < .01$.

TABLE 50

Round 3 Global Academic Ratings of Re-Ed and Untreated Disturbed Children with Initial Academic Difficulties

Academic Rating at Round 3	Re-Ed (N=83) N	%	Untreated Disturbed (N=81) N	%
Normal Range	12	14	5	6
Mild Problems	17	20	11	14
Fairly Severe Problems	18	22	24	30
Very Severe Problems	36	43	41	51

χ^2 for normal or mild problems vs. fairly severe or very severe problems, by group = 4.75, $p < .05$.

TABLE 51

Mean Global Academic Ratings of Re-Ed and Untreated Disturbed Children without Initial Academic Difficulties

	Re-Ed (N=39)	Untreated Disturbed (N=47)	t
Round 1	1.5	1.6	0.60
Round 2	1.8	1.8	0.15
Round 3	1.9	1.9	0.25

Mean global academic ratings at each round for Re-Ed and untreated disturbed children without initial academic difficulties are shown in Table 51; percentages of children receiving each academic rating at Rounds 2 and 3 are presented in Tables 52 and 53. There were no significant differences between these subgroups of Re-Ed and untreated children at any round, and no significant differences in change between rounds; the majority of children in each group remained free of academic difficulties at both Rounds 2 and 3.

Table 54 is a summary table which shows for all Re-Ed, untreated disturbed and normal children, no matter what their initial academic status, the percentages receiving each rating at each round; Table 55 shows means for each round. For the total groups, improvement in academic status between Rounds 1 and 2 and Rounds 1 and 3 was significant for the Re-Ed children ($t = 4.57$, $p < .001$, and 2.79, $p < .01$, respectively), but not for the untreated children ($t = 1.19$ and 1.23, respectively). The Re-Ed children received significantly better ratings than the untreated children at Round 2; the difference was no longer significant at Round 3. At all rounds, both the Re-Ed and untreated disturbed children were viewed as less academically adequate than the normal children. At Round 3, both the Re-Ed and the untreated disturbed children were also rated as less academically adequate than the

TABLE 52

Round 2 Global Academic Ratings of Re-Ed and Untreated Disturbed Children without Initial Academic Difficulties

Academic Rating at Round 2	Re-Ed (N=39) N	%	Untreated Disturbed (N=47) N	%
Normal Range	18	46	23	49
Mild Problems	13	33	16	34
Fairly Severe Problems	6	15	4	9
Very Severe Problems	2	5	4	9

Mann-Whitney U = 892.5, z (corrected for ties) = 0.31, ns.

χ^2 for academic difficulties vs. no academic difficulties at Round 2, by group = 0.17, ns.

TABLE 53

Round 3 Global Academic Ratings of Re-Ed and Untreated Disturbed Children without Initial Academic Difficulties

Academic Rating at Round 3	Re-Ed (N=39) N	%	Untreated Disturbed (N=47) N	%
Normal Range	15	38	24	51
Mild Problems	14	36	9	19
Fairly Severe Problems	7	18	9	19
Very Severe Problems	3	8	5	11

Mann-Whitney U = 874.5, z (corrected for ties) = 0.46, ns.

χ^2 for academic difficulties vs. no academic difficulties at Round 3, by group = 0.18, ns.

TABLE 54

Percentage of Re-Ed, Untreated Disturbed and Normal children In Each Global Academic Rating Category at Each Round

	Normal Range	Mild Problems	Fairly Severe Problems	Very Severe Problems
Re-Ed (N=122)				
Round 1	16	16	26	42
Round 2	30	21	26	23
Round 3	22		20	32
Untreated (N=128)				
Round 1	16		23	40
Round 2	23	16	21	39
Round 3	23	16	26	36
Normal (N=128)				
Round 1	80	15	4	2
Round 2	67	15	12	6
Round 3	64	14	13	9

TABLE 55

Mean Global Academic Ratings at Each Round of the Re-Ed, Untreated Disturbed, and Normal Children

	Re-Ed (N=122)	Untreated Disturbed (N=128)	Normal (N=128)	R vs UD t	R vs N t	UD vs N t
Round 1	2.9	2.9	1.3	0.48	14.73**	14.15**
Round 2	2.4	2.8	1.6	2.23*	6.62**	8.96**
Round 3	2.6	2.8	1.7	0.86	6.92**	7.86**

*p < .05
**p < .01

TABLE 56

Percentage of Re-Ed, Untreated Disturbed, Normal, and Representative Sample Children in Each Global Academic Rating Category

	Normal Range	Mild Problems	Fairly Severe Problems	Very Severe Problems
Re-Ed (N=122)	22	25	21	32
Untreated Disturbed (N=128)	23	16	26	36
Normal (N=128)	64	14	13	9
Representative Sample (N=192)	53	15	16	17

χ^2 for normal range or mild problems vs. fairly severe or very severe problems:

Representative Sample vs. Re-Ed = 12.63, $p < .001$.
Representative Sample vs. Untreated Disturbed = 26.98, $p < .001$.
Representative Sample vs. Normal = 4.12, $p < .05$.

Note.--Round 3 ratings are shown for the Re-Ed, untreated disturbed and normal children.

representative sample children in grades 3 through 8 from low and middle socioeconomic level schools; the latter children were seen as having more academic problems than the normal children (see Table 56).

Representative sample children from schools of different socioeconomic levels received significantly different global academic ratings, with children from high socioeconomic level

TABLE 57

Mean Global Academic Ratings of the Acting-Out and Withdrawn Re-Ed Children

	Acting-Out (N=88)	Withdrawn (N=30)	t
Round 1	3.0	2.8	0.51
Round 2	2.4	2.5	0.56
Round 3	2.6	2.4	0.88

schools rated as most academically adequate. For all 384 representative sample children, the mean global academic rating for low socioeconomic level schools was 1.8 (SD = 1.1), for middle socioeconomic schools 1.9 (SD = 1.2), and for high socioeconomic level schools 1.6 (SD = 0.97), resulting in an F of 3.20 (with 2 and 381 df, $p < .05$).

Mean scores of the acting-out and withdrawn Re-Ed children on the global academic rating are shown in Table 57. It can be seen from the table that there were no significant differences between these groups at any round.

Analyses of the global academic ratings in which all children were included, those with and those without initial academic problems, indicated that the Re-Ed children improved significantly in academic status over time while the untreated children did not, but the difference between the groups in amount of change was not significant. When only those children who were in need of improvement were considered, however, improvement was significantly greater for the Re-Ed than for the untreated children. In contrast, when only children without initial academic problems were considered, there was no difference between the groups in academic outcome, with the majority of children in each group remaining free of academic problems. These findings received support from ratings made directly by the children's teachers.

TABLE 58

Mean Average Academic Standing at Each Round of the Re-Ed, Untreated Disturbed, and Normal Children

	Re-Ed (N=99)	Untreated Disturbed (N=127)	Normal (N=125)	R vs UD t	R vs N t	UD vs N t
Round 1	1.49	1.53	2.22	0.58	10.73*	10.24*
Round 2	1.62	1.59	2.14	0.43	6.64*	7.11*
Round 3	1.62	1.57	2.09	0.58	5.69*	6.03*

*$p < .01$

Table 58

Mean Average Academic Standing at Each Round of Re-Ed and Untreated Disturbed Children Rated as in the Lower One-Fourth of the Class in All Academic Subjects at Round 1

	Re-Ed (N=30)	Untreated Disturbed (N=42)	t
Round 1	1.0	1.0	0.00
Round 2	1.4	1.3	1.15
Round 3	1.4	1.2	1.83*

*p < .05

The Teachers' Ratings of Academic Performance

The Pupil Information Form asked the teacher to indicate how the child compared with other children in his class in reading, arithmetic, spelling, English, social studies, and science. For each subject area, the teacher categorized the child into one of the following categories:

1. Lower one-fourth of his class.
2. Middle half of his class.
3. Upper fourth of his class.

Three scores were derived: academic standing in reading, academic standing in arithmetic, and average academic standing. The latter score was the average of the child's ratings in all the academic subject areas. The number of subject areas included in the average varied according to the child's grade in school, since in the upper grades more subject areas are included in the curriculum.

Average academic standing. Mean average academic standing scores for the Re-Ed, untreated disturbed and normal children are shown in Table 58. The Re-Ed and untreated groups did not differ significantly at any round, although improvement between Rounds 1 and 2 (Re-Ed $t = 2.21$, untreated $t = 1.25$) and Rounds 1 and 3 (Re-Ed $t = 2.61$, untreated $t = 0.68$) was significant only for the Re-Ed children.

Table 59 shows scores for only those Re-Ed and untreated

TABLE 60

Mean Academic Standing in Reading at Each Round of the Re-Ed, Untreated Disturbed, and Normal Children

	Re-Ed (N=96)	Untreated Disturbed (N=123)	Normal (N=116)	R vs UD t	R vs N t	UD vs N t
Round 1	1.5	1.5	2.2	0.24	7.08*	7.47*
Round 2	1.6	1.6	2.1	0.16	5.20*	5.26*
Round 3	1.6	1.5	2.2	1.06	5.06*	6.83*

*P < .01

TABLE 61

Change in Academic Standing in Reading between Rounds 1 and 3 for Re-Ed and Untreated Disturbed Children Rated as in the Lower One-Fourth of the Class in Reading at Round 1

Change Between Rounds 1 and 3	Re-Ed (N=62)	Untreated Disturbed (N=74)
Improved	17	17
No Change	45	57

$\chi^2 = 0.36$, ns.

disturbed children who were doing poorly in all academic subjects at Round 1. By Round 3, the Re-Ed children in this group were rated as more academically adequate than the untreated children.

Academic standing in reading. Mean academic standing scores in reading for the Re-Ed, untreated disturbed and normal children are shown in Table 60. The Re-Ed and untreated groups did not differ significantly at any round, although improvement between Rounds 1 and 3 was significant only for the Re-Ed group (Re-Ed $t = 2.13$, untreated $t = 0.25$). Table 61 shows that for Re-Ed and untreated children rated in the lower fourth of the class in reading at Round 1, there was no significant difference in number who had improved sufficiently in reading by Round 3 to rank above the bottom quartile of the class.

Academic standing in arithmetic. Mean academic standing scores in arithmetic are shown in Table 62. Between Rounds 1 and 2 (Re-Ed $t = 1.71$, untreated $t = 0.38$) and between Rounds 1 and 3 (Re-Ed $t = 2.50$, untreated $t = 0.35$), improvement in arithmetic was significant for the Re-Ed but not the untreated children, and at Round 3, the Re-Ed children were rated as more adequate in arithmetic than the untreated children.

Table 63 indicates that of those children rated in the lower fourth of the class in arithmetic at Round 1, significantly

TABLE 62

Mean Academic Standing in Arithmetic at Each Round of the Re-Ed, Untreated Disturbed, and Normal Children

	Re-Ed (N=95)	Untreated Disturbed (N=125)	Normal (N=122)	R vs UD t	R vs N t	UD vs N t
Round 1	1.5	1.5	2.2	0.42	8.54**	8.65**
Round 2	1.6	1.5	2.2	1.42	7.17**	9.07**
Round 3	1.7	1.5	2.1	1.77*	4.59**	6.99**

*p ≤ .05
**p < .01

TABLE 63

Change in Academic Standing in Arithmetic between Rounds 1 and 3 for Re-Ed and Untreated Disturbed Children Rated as in the Lower One-Fourth of the Class in Arithmetic at Round 1

Change Between Rounds 1 and 3	Re-Ed (N=58)	Untreated Disturbed (N=70)
Improved	27	21
No Change	31	49

$\chi^2 = 3.71$, $p < .05$

TABLE 64

Change in Standing in Physical Education between Rounds 1 and 3 for Re-Ed and Untreated Disturbed Children Rated as in the Lower One-Fourth of the Class in Physical Education at Round 1

Change Between Rounds 1 and 3	Re-Ed (N=33)	Untreated Disturbed (N=28)
Improved	23	13
No Change	10	15

more Re-Ed than untreated children were rated as in the middle half or upper fourth of the class in arithmetic at Round 3.

Physical education. The teachers rated the children not only in the academic areas mentioned above, but also in physical education. The Re-Ed program places considerable emphasis on physical education, and it was expected that a significantly larger proportion of Re-Ed than untreated children who needed improvement in this area would improve. Table 64 indicates that this expectation was confirmed. Of those rated at Round 1 as in the lower fourth of the class in physical education, significantly more Re-Ed than untreated children were rated as in the middle half or upper fourth of the class at Round 3.

Table 65 indicates that the total groups of Re-Ed and untreated children did not differ significantly in standing in physical education at any round, but only for the Re-Ed children was improvement significant between Rounds 1 and 2 (Re-Ed t = 2.40, untreated t = 1.46) and between Rounds 1 and 3 (Re-Ed t = 1.94, untreated t = 1.15).

Despite the academic improvements made, both the Re-Ed and the untreated children continued to be seen as significantly less academically adequate than the normal children in all subject matter areas, and the scores of the representative sample children were more like those of the normal children than those of the Re-Ed children. For representative sample children in grades 1 through 8, physical education and arithmetic ratings were not related to socioeconomic level of school, but reading (F = 3.46 with 2 and 365 df) and average (F = 3.40, with 2 and 367 df) ratings were. For reading, arithmetic, and the average of all academic subjects, the mean rating of children from low socioeconomic level schools was 2.0, from middle socioeconomic level schools 1.9, and for high socioeconimic level schools 2.1. Physical education ratings followed the same pattern, but were in every case one-tenth of a point higher.

The Effect of Academic Status on the Stability of Behavioral Improvement in Re-Ed Children

The data which have been presented indicate that, as a group,

TABLE 65

Mean Standing in Physical Education at Each Round of the Re-Ed, Untreated Disturbed, and Normal Children

	Re-Ed (N=69)	Untreated Disturbed (N=98)	Normal (N=103)	R vs UD t	R vs N t	UD vs N t
Round 1	1.7	1.8	2.2	1.70	5.90*	4.60*
Round 2	1.8	1.9	2.2	0.42	4.24*	4.22*
Round 3	1.8	1.9	2.2	0.63	3.93*	3.33*

*p < .01

reached significance, with some consistency Round 3 scores for the Re-Ed children on measures of school behavior were poorer than Round 2 scores. One possible explanation was that the behavior of some of the Re-Ed children deteriorated between Rounds 2 and 3, while the behavioral gains of other children were maintained, and that the determining factor was the ability of the child to cope with the academic requirements of the school situation. Re-Ed puts more emphasis on academic remediation than many programs for emotionally disturbed children do. Many programs stress the contribution of psychological and behavioral problems to academic failure; they tend to assume that once these problems are ameliorated the academic deficits will disappear. The Re-Ed orientation puts more stress both on the child's need for specific help in making up his academic deficits, and on the contribution of academic failure to psychological and behavioral problems. The assumption at Re-Ed is that the negative responses the academically unsuccessful child receives from his parents, teachers and peers, and the failure and frustration he himself feels in the classroom, contribute significantly to the unacceptability of his behavior in school. A child who returned to school after Re-Ed to face academic failure would be expected to show less ability to maintain the behavioral gains made at Re-Ed than a child who returned to school able to meet the academic standards demanded of him.

To test the hypothesis that the behavior of children unable to meet academic standards after Re-Ed would deteriorate, while the behavior of children able to meet academic standards would not, two groups of Re-Ed children were compared on change in behavior between follow-ups (between Rounds 2 and 3). The first group consisted of Re-Ed children whose Round 2 reading scores on a standardized achievement test were more than 1.5 years behind grade level norms for their class. This was the group considered unable to cope with the academic requirements demanded of them. The second group consisted of Re-Ed children whose Round 2 reading scores were at grade level or above or no more than 1.5 years below grade level norms; these children were considered able to cope with academic requirements with at least some level of success. Since the analysis was done before data collection was complete, in order to increase N, all Cumberland House children for whom the necessary follow-up data were available were included in the analysis. Thus, some girls and black children were included.

The measure of behavior was the global behavior rating

TABLE 66

The Effect of Academic Status on the Stability of Behavioral Improvement in Re-Ed Children

Academic Status	Mean Global Behavior Rating Scores: Round 2	Round 3	N	Related t
Able to Cope	1.92	1.97	62	0.48
Unable to Cope	1.79	2.25	28	2.29*

Note.--A higher score = less adequate behavior
*p < .05

t = 0.56), but between Rounds 2 and 3, the group of children who were academically able to cope maintained the behavioral gains they had shown at Round 2, while the group academically unable to cope deteriorated behaviorally (see Table 66). Both groups behaved more acceptably at Round 3 than at Round 1, but they differed significantly ($t = 2.05$, $p < .05$) in amount of behavioral regression between Rounds 2 and 3.

As an additional method of checking the relationship between academic status and consequent behavioral change, a correlation was computed between the global academic rating the child received at Round 2 and the difference between the global behavior ratings he received at Rounds 2 and 3. The correlation of .48 ($N = 101$, $p < .001$) confirmed that children less able to cope with academic demands at Round 2 showed more behavioral regression between Rounds 2 and 3 than did children more able to cope academically at Round 2. The converse did not hold. There was no

that it is a worthwhile investment for treatment agencies to bring the academic skills of the disturbed child up near grade level before returning him to school; otherwise, the behavioral gains made during treatment may be endangered.

The Effect of Academic Status on Behavioral Improvement in the Re-Ed and Untreated Disturbed Groups

If academic problems do have a negative effect on school behavior, "spontaneous recovery" should be less likely for untreated children with academic problems than for untreated children without academic problems. In the Re-Ed group, where children with initial academic difficulties showed considerable improvement over time, one would expect the difference in behavioral improvement between children with and without initial academic problems to be smaller.

Improvement in school behavior for untreated children with and without initial academic problems is shown in Table 67. Improvement was defined as change from a rating of fairly severe or very severe behavior problems in school to a rating of mild behavior problems or no behavior problems. It can be seen from Table 67 that initial academic status was strongly related to change in school behavior between Rounds 1 and 2 in the untreated group: 51 per cent of the children without initial academic problems as compared with 24 per cent of the children with initial academic problems improved behaviorally between Rounds 1 and 2. The relationship in the untreated group between initial academic status and behavior change is even more striking when a longer time interval is considered. It can be seen from Table 67 that in the two-year interval between Rounds 1 and 3, 59 per cent of the untreated children without initial academic problems improved behaviorally while 21 per cent of the children with initial academic problems improved.

Table 68 indicates that for the Re-Ed children, improvement in school behavior was independent of initial academic status. Both between Rounds 1 and 2 and between Rounds 1 and 3, the percentages of Re-Ed children with and without initial academic problems who showed behavioral improvement were approximately the same.

TABLE 67

The Effect of Initial Academic Status on Behavioral Improvement in the Untreated Children

Change in Behavior between Rounds 1 and 2

Behavior at Round 2	Children without Initial Academic Difficulties		Children with Initial Academic Difficulties	
	N	%	N	%
Improved	20	51	19	24
Not Improved	19	49	59	76

$\chi^2 = 8.48$, $p < .01$

Change in Behavior between Rounds 1 and 3

Behavior at Round 3	Children without Initial Academic Difficulties		Children with Initial Academic Difficulties	
	N	%	N	%
Improved	23	59	16	21
Not Improved	16	41	62	79

TABLE 68

The Effect of Initial Academic Status on Behavioral Improvement in the Re-Ed Children

Change in Behavior between Rounds 1 and 2

Behavior at Round 2	Children without Initial Academic Difficulties		Children with Initial Academic Difficulties	
	N	%	N	%
Improved	19	58	40	51
Not Improved	14	42	39	49

$\chi^2 = 0.45$, ns

Change in Behavior between Rounds 1 and 3

Behavior at Round 3	Children without Initial Academic Difficulties		Children with Initial Academic Difficulties	
	N	%	N	%
Improved	16	48	33	42
Not Improved	17	52	46	58

TABLE 69

Mean Global Behavior Ratings at Each Round for Re-Ed and Untreated Disturbed Children without Initial Academic Problems

Round	Re-Ed (N=39)	Untreated Disturbed (N=47)	t
1	3.2	2.9	1.89
2	2.3	2.3	0.28
3	2.3	2.3	0.27

TABLE 70

Mean Global Behavior Ratings at Each Round for Re-Ed and Untreated Disturbed Children with Initial Academic Problems

Round	Re-Ed (N=83)	Untreated Disturbed (N=81)	t
1	3.5	3.4	1.18
2	2.4	3.1	4.64*
3	2.6	3.1	3.34*

without initial academic problems are shown in Table 69. These Re-Ed and untreated children did not differ significantly in amount of behavior change during any interval and they were essentially equivalent in mean behavior rating at all rounds.

The situation for children with initial academic problems was quite different. The behavior of the Re-Ed children improved significantly more than that of the untreated children between Rounds 1 and 2 ($t = 5.55$, $p < .001$) and between Rounds 1 and 3 ($t = 3.89$, $p < .001$), and the Re-Ed children were seen as significantly less deviant than the untreated children at both Round 2 and Round 3 (see Table 70).

These data indicate that the Re-Ed intervention is particularly useful for those children with behavior problems who also have academic difficulties. For children with behavior problems who were doing reasonably well academically, efforts by schools, families, and other agencies served as well as Re-Ed to improve school behavior.

CHAPTER VIII

THE ACADEMIC ACHIEVEMENT TEST RESULTS

Standardized achievement tests were administered as part of the annual testing program at most of the schools attended by the Re-Ed children before and after enrollment at Re-Ed. The schools were asked to provide for each child the results of four tests: the last two tests taken prior to enrollment at Re-Ed and the first two tests taken after Re-Ed. The schools of the untreated children were also asked to provide the results of four standardized achievement tests. For the untreated children, the time of nomination by the school was considered comparable to enrollment time for the Re-Ed children, and for most of the untreated children the "prior to Re-Ed" tests were those taken during the Round 1 year and the year earlier, while the "after Re-Ed" tests were those taken during Rounds 2 and 3. For a variety of reasons, results for all four tests were not available for some of the children: some of the younger children had not attended school long enough prior to Re-Ed or nomination to have taken two tests; some children missed tests because they were not enrolled in school or because they were ill or because they changed schools; in some schools achievement testing was omitted in some grades. Some schools administered the entire achievement test battery each year; some schools routinely, or in certain grades, administered only selected subtests. The time between successive tests averaged about a year for the untreated children. For the Re-Ed children, the time between the two tests prior to Re-Ed and the time between the two tests following Re-Ed also averaged about a year, but the average time between the last test before and the first test after Re-Ed was close to two years (some of the children's schools administered the annual test while the child was at Re-Ed; some of the children were not enrolled in school for a period of time before they enrolled in Re-Ed, etc.).

The achievement test data were collected for two purposes: to provide confirmation of the results described earlier based on the academic ratings and to provide information about rate of learning before and after Re-Ed.

Confirmation of the Results Based on the Academic Ratings

objective data. This is particularly important in view of the substantial correlations found between the academic and behavior ratings. The correlations to some extent certainly reflect a real relationship between academic learning and behavior in school. A child whose behavior is disruptive and who does not attend to his learning tasks is likely to have difficulty keeping up with his class academically, and likewise, a child who cannot cope academically will find unacceptable ways to occupy himself. But it is also possible that the teacher's belief in a relationship between behavior and learning may lead her to see the child whose behavior is appropriate, who listens and tries, as doing better academically than the child whose behavior is inappropriate. Confirmation of the results based on the academic ratings by the achievement test data would give assurance that the academic benefits of Re-Ed indicated by the academic ratings reflected more than halo effect from behavioral improvement in the Re-Ed children.

The global academic rating reflects the teacher's judgment of the severity of the child's academic problems, the extent to which his academic performance lags behind his classmates' performance and her norms for the class. The most comparable measure available from the achievement test data is a deviation score--the deviation of the score achieved by the child from the norm for his grade. The academic ratings indicated that not all the Re-Ed or untreated children were seen as having academic problems at Round 1. There was no difference in academic outcome as measured by the academic ratings between Re-Ed and untreated children without initial academic difficulties; the majority of such children in each group remained free of academic problems at Rounds 2 and 3. The Re-Ed and untreated children with initial academic problems did differ in academic outcome on the academic rating, with the Re-Ed children showing significantly more satisfactory academic performance after Re-Ed than the untreated children. It was expected that these findings would be reflected in the achievement test data in the following ways: a) not all the Re-Ed or untreated children would score behind their grade norms initially; b) results based only on those Re-Ed and untreated children who did score behind grade norms initially would indicate that after Re-Ed, the Re-Ed children were closer to grade norms than the untreated children; and c) results based on all children, those with and those without initial academic problems, would show the same trends as results based only on those children with initial academic prob-

child takes an advanced level Metropolitan Achievement test when he is in the first month of the seventh grade and achieves a score of 10.0 in reading, his deviation score will be +2.9. Since 10.0 is the highest possible score on the advanced level test, and he will take an advanced level test again in the eighth and ninth grades, his deviation scores must decrease even if he continues to make the top possible score each time. Ceiling effects, even in far less extreme cases, can seriously distort achievement test data involving academically adequate children; they are, of course, far less likely to be a problem for data based on children having academic difficulties.)

Results of four achievement tests had been collected for each child whenever possible in order that rate of gain between pairs of tests before and after Re-Ed could be compared. For the present set of analyses, four tests were not necessary and the following considerations led to the decision to use only three. Since the measure at issue was deviation of achieved score from grade norm, and change in amount of deviation over time was what was of interest, it was important that both grade norms and time intervals between tests be comparable for the Re-Ed and untreated children. Because the time between the last test prior to Re-Ed and the first test after Re-Ed averaged almost two years for the Re-Ed children, but only about one year for the untreated children, comparability of time intervals and grade norms could best be achieved by using as the prior-to-Re-Ed test for the Re-Ed children the last test taken prior to enrollment at Re-Ed and for the untreated children the test taken a year prior to nomination. In this way, for both groups, time between the prior-to-Re-Ed test and the first follow-up test was approximately two years, and time between the first and second follow-up tests was approximately one year.

Results for All Re-Ed and Untreated Children

Table 71 presents deviation-from-grade-norm data for all Re-Ed and untreated children, those with and those without initial academic problems, who had scores on both the reading and arithmetic subtests of each of the three appropriate achievement tests. As indicated in Table 71, the two groups of children did not differ significantly in actual grade level at the time of any test, in time interval between tests, or in IQ score.

TABLE 72

Mean Deviation from Grade Norm of Achievement Test Scores of Re-Ed and Untreated Children with Initial Academic Problems (Defined by Prior-to-Re-Ed Achievement Test Scores)

Test	Re-Ed	Untreated	t
Average of All Subtests	(N=28)	(N=24)	
Prior to Re-Ed	-1.3	-0.9	2.83**
First Follow-Up	-1.2	-1.6	1.77*
Second Follow-Up	-1.5	-2.4	3.30**
Reading	(N=30)	(N=28)	
Prior to Re-Ed	-1.5	-1.1	2.73**
First Follow-Up	-1.4	-2.1	2.57**
Second Follow-Up	-1.7	-2.7	3.01**
Arithmetic	(N=28)	(N=30)	
Prior to Re-Ed	-1.1	-0.9	1.91
First Follow-Up	-0.9	-0.9	0.22
Second Follow-Up	-1.2	-1.4	0.62

Note.--Two-tailed tests of significance were used for the prior-to-Re-Ed tests, one-tailed tests of significance were used for the follow-up tests.

*$p \leq .05$

**$p \leq .01$

passage of time relative to the Re-Ed children), the difference between the total groups in deviation score did not reach significance on either of the follow-up tests. As indicated earlier, findings of nonsignificant differences for the total groups of children were not unexpected.

Results for Children with Initial Academic Problems

Table 72 presents comparable data for only those children with initial academic difficulties (defined here as having a prior-to-Re-Ed achievement score more than five months behind grade norm). Results are presented for three subgroups of children: those whose average score for all subtests taken on the prior-to-Re-Ed test was more than five months behind grade norm, those who scored more than five months behind grade norm on the prior-to-Re-Ed reading subtest, and those who scored more than five months behind grade norm on the prior-to-Re-Ed arithmetic subtest (for some children, the arithmetic subtest score was the average of two or three separate subtests, each measuring different arithmetic skills--e.g., arithmetic computation and arithmetic problem solving). As indicated below, for these subgroups, time intervals between tests were not always as comparable as for the total groups whose data are presented in Table 71, but the size of the differences between the groups in amount of change generally so far exceeded the differences between them in time intervals that further analyses seemed unnecessary. Nevertheless, as a precaution, all analyses of change were repeated using analysis of covariance to statistically control for time interval between tests; these additional analyses led to no change in results.

Average achievement. Of the 64 Re-Ed and 80 untreated children whose results are presented in Table 71, 28 Re-Ed and 24 untreated children scored more than five months behind grade norm in average achievement test score on the prior-to-Re-Ed achievement test. The average score included a reading and an arithmetic subtest score for each child, and also scores for all other subtests (spelling, science, social studies, etc.) taken by him. The two groups of children did not differ significantly in IQ score (Re-Ed mean = 93.2, untreated mean = 95.2, $t = 0.72$), in actual grade level at the time of any test (at the time of the prior-to-Re-Ed test, mean Re-Ed grade level was 4.1, mean grade level for the untreated children was 4.0, $t = 0.51$), or in time interval between the prior-to-Re-Ed test and the first follow-up test (Re-Ed mean = 1.7 years, untreated mean = 1.9 years, $t = 1.64$); the two groups did differ significantly in time interval between the two follow-up tests (Re-Ed mean = 1.0 years, untreated mean = 1.1 years, $t = 2.21$, $p < .05$).

It can be seen from Table 72 that whereas on the prior-to-Re-Ed test the Re-Ed children were significantly farther behind grade norm in average achievement test score than the untreated children (four months farther behind), by the first follow-up test the untreated children were significantly farther behind grade level than the Re-Ed children (by four months), and at second follow-up the untreated children were again significantly farther behind than the Re-Ed children (by nine months).

Another way to look at the same data is to note that between the prior-to-Re-Ed test and the first follow-up test, in a period of one year and seven months, the retardation behind grade level of the Re-Ed children decreased by one month, while in one year and nine months the retardation behind grade level of the untreated children increased by seven months ($t = 3.48$, $p < .001$). Similarly, between the prior-to-Re-Ed test and the second follow-up test, the retardation of the Re-Ed children increased by two months, while the retardation behind grade level of the untreated children increased by one year and five months ($t = 4.73$, $p < .001$).

For the Re-Ed children, change in amount of retardation behind grade norm was not significant either between the prior-to-Re-Ed test and the first follow-up test ($t = 0.10$) or between the prior-to-Re-Ed test and the second follow-up test ($t = 1.17$). The untreated children, in contrast, showed significantly increased retardation with the passage of time (for the period between the prior-to-Re-Ed test and the first follow-up test, $t = 4.79$, $p < .001$, and for the period between the prior-to-Re-Ed test and the second follow-up test, $t = 9.26$, $p < .001$).

Reading. Thirty Re-Ed and 28 untreated children scored more than five months behind grade norm on the prior-to-Re-Ed reading subtest. These two groups of children did not differ significantly in IQ (mean for the Re-Ed group = 94.3, mean for the untreated group = 95.7, $t = 0.54$), in actual grade placement at any test (at the prior-to-Re-Ed test, mean for the Re-Ed group = 4.2, mean for the untreated group = 4.1, $t = 0.50$), or in time interval between the prior-to-Re-Ed and first follow-up test (mean for the Re-Ed group = 1.8 years, mean for the untreated group = 1.9 years, $t = 0.92$). The two groups did differ significantly in time interval between the two follow-up tests (mean for the Re-Ed group = 0.9 years, mean for the untreated group = 1.1 years, $t = 3.07$, $p < .01$).

It can be seen in Table 72 that the pattern of results for the reading subtest scores closely approximated that of the average achievement test scores. Whereas on the prior-to-Re-Ed test, the Re-Ed children were significantly farther behind grade norm in reading than the untreated children (four months farther behind), by first follow-up the untreated children were significantly farther behind grade level than the Re-Ed children (by seven months), and at second follow-up the untreated children were again significantly farther behind than the Re-Ed children (one year farther behind). The untreated children showed significantly greater increase in deviation from grade norm between the prior-to-Re-Ed test and the first follow-up test ($t = 4.49$, $p < .001$) and between the prior-to-Re-Ed test and the second follow-up test ($t = 4.21$, $p < .001$) than the Re-Ed children. The Re-Ed children did not show a significant change in amount of retardation behind grade norm either between the prior-to-Re-Ed

test and the first follow-up test ($t = 0.44$), or between the prior-to-Re-Ed test and the second follow-up test ($t = 0.83$). The untreated children increased significantly in amount of retardation behind grade norm both between the prior-to-Re-Ed test and the first follow-up test ($t = 6.97$, $p < .001$) and between the prior-to-Re-Ed test and the second follow-up test $t = 9.91$, $p < .001$).

Arithmetic. Twenty-eight Re-Ed and thirty untreated children scored more than five months behind grade norm on the prior-to-Re-Ed arithmetic subtest. The two groups of children did not differ significantly in IQ (Re-Ed mean = 93.9, untreated mean = 97.8, $t = 1.44$), or in time interval between the two follow-up tests (Re-Ed mean = 1.0 years, untreated mean = 1.1 years, $t = 1.76$), but they did differ significantly both in actual grade level at the time of the prior-to-Re-Ed test (mean for the Re-Ed children = 4.1, mean for the untreated children = 3.6, $t = 2.01$, $p < .05$) and in time interval between the prior-to-Re-Ed test and the first follow-up test (mean for the Re-Ed children = 1.6 years, mean for the untreated children = 1.9 years, $t = 2.97$, $p < .01$). It can be seen from Table 72 that the deviation-from-grade-norm scores in arithmetic showed a pattern similar to that described for the average and reading scores, but the differences between the Re-Ed and untreated children in arithmetic deviation scores did not reach significance. However, while the Re-Ed children did not significantly change in amount of retardation behind grade norm either between the prior-to-Re-Ed test and the first follow-up test ($t = 1.29$) or between the prior-to-Re-Ed test and the second follow-up test ($t = 0.75$), the untreated children showed a significant increase in retardation behind grade norm in arithmetic between the prior-to-Re-Ed test and the second follow-up test ($t = 2.61$, $p < .05$); change between the prior-to-Re-Ed test and the first follow-up test was not significant for the untreated children ($t = 0.30$).

In the analyses just described, the criterion used to define initial academic problems was based on scores on the prior-to-Re-Ed achievement test. Since the purpose of these analyses was to confirm findings based on the academic ratings, there was an advantage to keeping even the criterion used for defining groups independent of the academic ratings. There are also, however, advantages to using the prior-to-Re-Ed academic rating as the criterion for defining groups: 1) it is of interest to know whether results using the achievement test data confirm results based on the academic ratings when the same groups (groups defined by the same criterion) are used, and 2) use of the prior-to-Re-Ed academic rating to define children with initial academic problems leads to a substantial increase in the number of Re-Ed and untreated children whose data are included in analyses (a prior-to-Re-Ed achievement test is not required when the global academic

TABLE 73

Mean Deviation from Grade Norm of Achievement Test Scores of Re-Ed and Untreated Children with Initial Academic Problems (Defined by Prior-to-Re-Ed Academic Rating)

	Re-Ed (N=54)	Untreated (N=62)	t
Average of All Subtests			
First Follow-Up	-1.1	-1.2	0.82
Second Follow-Up	-1.3	-1.7	2.15*
Reading			
First Follow-Up	-1.3	-1.3	0.25
Second Follow-Up	-1.3	-1.8	1.67*
Arithmetic			
First Follow-Up	-0.8	-0.9	0.34
Second Follow-Up	-1.0	-1.3	1.42
Actual Grade Placement			
First Follow-Up	5.2	5.1	0.24
Second Follow-Up	6.2	6.1	0.21
Time between Tests in Academic Years	1.0	1.1	0.76
IQ Score	98.0	98.1	0.07
Mean Academic Rating at Round 1	3.54	3.58	0.47

*$p < .05$

rating is used to define the groups with initial academic problems).

Scores on two follow-up achievement tests were available for 54 Re-Ed and 62 untreated children who had been rated as having fairly severe or very severe academic problems on the basis of the Round 1 Pupil Information Form. As indicated in Table 73, these children did not differ significantly in mean grade level at the time of either follow-up test, in time between the follow-up tests, in IQ score, or in mean prior-to-Re-Ed academic rating.

It can be seen from Table 73 that although the Re-Ed and untreated children did not differ in retardation behind grade norm on the first follow-up subtests, the untreated children were significantly farther behind grade norm than the Re-Ed children in average score and in reading score (but not in arithmetic score) at the time of the second follow-up test. The untreated children increased significantly more than the Re-Ed children in retardation behind grade norm in average score ($t = 1.96$, $p < .05$) and in reading score ($t = 1.81$, $p < .05$), but not in arithmetic score.

The data summarized in Tables 72 and 73 and described above strongly confirm the finding, based on the academic ratings, that the Re-Ed intervention is effective in improving the academic adequacy of children with academic problems. The data also confirm the finding, often reported in the literature, that untreated disturbed children get farther behind grade norms the longer they remain in school; according to the data presented here, the Re-Ed intervention arrests this increase in disparity from classmates. The achievement test data also presented an opportunity to explore the effects of the Re-Ed intervention on two specific academic skills, reading and arithmetic. The data indicated that Re-Ed is effective in ameliorating reading problems, but failed to provide comparable evidence for arithmetic problems. The results for the two skill areas were somewhat surprising since teachers' ratings of the children's academic performance before and after Re-Ed had more clearly indicated Re-Ed effectiveness in arithmetic than in reading.

Rate of Learning before and after Re-Ed

For each child for whom all four achievement tests were available, rate of learning between the two prior-to-Re-Ed tests (the pretests) and between the two follow-up tests (the posttests) was computed separately for reading and arithmetic. Rate of learning per academic month was computed by dividing the difference between the scores achieved by the child on the two pretests or on the two posttests by the number of academic months which had elapsed between the two tests.

A child is normally expected to increase his achievement test score one grade level each year he attends school. This learning rate of 1.0 (one month increase in score per month spent in school) was achieved by relatively few of the Re-Ed or untreated children during the pretest interval. For example, in reading, a pretest month-for-month rate of learning was achieved by 20 per cent of the Re-Ed children and 30 per cent of the untreated children. A number of children in each group showed no change in score (a zero rate of learning) or a decrease in score (a negative rate of learning) between the first pretest and the second. In reading, for example, 35 per cent of the Re-Ed and 27 per cent of the untreated children had a zero or negative rate of learning during the pretest interval. The remaining children increased their scores from the first pretest to the second, but at a rate of less than 1.0! Any rate of learning less than 1.0 means that the child is continually getting farther behind grade norms. It is a common finding that disturbed children learn at a less than 1.0 rate. The analyses reported here focused on whether the Re-Ed intervention helped the children to achieve a month-for-month rate of learning after Re-Ed.

As with the deviation data, results will be reported both for all children (those with and those without initial academic problems) and for only those children with initial academic problems. Again it was expected that results based on data only for children in need of academic help would show a more clear-cut pattern than results based on data for all the children since children not in need of improvement and children for whom ceiling effects would be a problem are eliminated from the former analyses.

Table 74 shows, for all Re-Ed and untreated children for whom two pretests and two posttests were available, and to whom reading and arithmetic subtests were administered each time, mean grade in school at the time each test was taken, mean time between pretests and between posttests, and mean IQ score. The Re-Ed and untreated children did not differ significantly in IQ score or in grade in school at the time of either posttest. Because more time elapsed between the last pretest and first posttest for the Re-Ed than untreated children, the mean grade level of the Re-Ed children was significantly lower at both pretests. Mean time interval between pretests and between posttests was a month greater for the untreated children.

Table 75 shows, for pretest and posttest, separately for reading and arithmetic, the percentage of Re-Ed and untreated children who learned at a zero or negative rate, the percentage who learned at a rate which was positive but less than 1.0, and the percentage who learned at a rate of 1.0 or more. Statistical tests of significance were applied to the data in terms of the following questions:

TABLE 74

Information about the Re-Ed and Untreated Children for Whom Two Pretests and Two Posttests Were Available

	Re-Ed (N=54)	Untreated (N=78)	t
Grade in School at Time of Test			
Pretest 1	3.2	3.6	2.00*
Pretest 2	3.9	4.5	3.05**
Posttest 1	5.4	5.4	0.31
Posttest 2	6.3	6.4	0.16
Time between Tests in Academic Years			
Pretests	0.9	1.0	1.06
Posttests	1.0	1.1	3.26**
IQ Score	99.5	102.5	1.42

*p < .05
**p < .01

1. Did the Re-Ed and untreated groups differ in rate of learning during the pretest period? (The statistical test was a two-tailed χ^2 test in which the frequencies of Re-Ed and untreated children in the three categories shown in Table 75 were compared.)

1a. More specifically, during the pretest period did the groups differ in number of children who learned at a rate of 1.0 or more? (The statistical test was a two-tailed χ^2 test in which

TABLE 75

Pretest and Posttest Rates of Learning for All Re-Ed and Untreated Children for Whom Two Pretests and Two Posttests Were Available (Percentages Shown)

	Rate of Learning between Tests		
	Zero or Negative	Positive, But Less Than 1.0	1.0 or More
Reading			
Re-Ed (N=54)			
Pretest	35	44	20
Posttest	28	28	44
Untreated (N=78)			
Pretest	27	44	30
Posttest	31	31	39
Arithmetic			
Re-Ed (N=54)			
Pretest	28	50	22
Posttest	19	41	41
Untreated (N=78)			
Pretest	8	47	45
Posttest	22	44	35

the number of Re-Ed and untreated children who gained at a rate of 1.0 or more at pretest were compared with the number who gained at a less than 1.0 rate.)

2. During the posttest period, was the Re-Ed children's rate of learning higher than the untreated children's? (The statistical test was a one-tailed χ^2 test comparing numbers of Re-Ed and untreated children in the three categories at posttest.)

2a. More specifically, during the posttest period did more

Re-Ed than untreated children learn at a rate of 1.0 or more? (The statistical test was a one-tailed χ^2 test in which the number of Re-Ed and untreated children gaining at a rate of 1.0 or more at posttest were compared with the number gaining at a lower rate.)

When the Re-Ed children's rate of learning at pretest was significantly lower than the untreated children's, or when significantly fewer Re-Ed than untreated children learned at a 1.0 rate at pretest, a significance level of .10 rather than .05 was used for the posttest analysis.

3. Did the Re-Ed children increase their rate of learning from the pretest to the posttest period? (The statistical test was a one-tailed McNemar test for the significance of changes in which the number of Re-Ed children who moved into a higher rate-of-learning category from pretest to posttest was compared with the number who moved into a lower category.)

3a. Did more Re-Ed children learn at a rate of 1.0 or more at posttest than at pretest? (The statistical test was a one-tailed McNemar test in which the number of Re-Ed children moving into the 1.0 or more learning rate category from pretest to posttest was compared with the number moving out.)

4. Did the untreated children change in rate of learning from pretest to posttest? (The statistical test was the McNemar as in 3 above, but two-tailed.)

4a. Did the untreated children, from pretest to posttest, change in number of children learning at a 1.0 rate or better? (The statistical test was a two-tailed version of 3a above.)

Results for All Re-Ed and Untreated Children for Whom Two Pretests and Two Posttests Were Available

Reading. The Re-Ed and untreated children whose data are shown in Tables 74 and 75 did not differ significantly during the pretest period in rate of learning in reading (χ^2 = 1.75, with 2 df) or in number of children who learned at a rate of 1.0 or more (χ^2 = 1.39, with 1 df). Nor did the groups differ during the posttest period (χ^2 = 0.47 both for all three categories and for the 2 X 2 table comparing numbers of children with a 1.0 or greater rate of learning).

Table 76 shows the number of Re-Ed and untreated children whose rate of learning in reading increased sufficiently from pretest to posttest to put them in a higher learning rate category at posttest than at pretest (e.g., from the zero or negative

TABLE 76

Change In Learning Rate Category From Pretest to Posttest for All Re-Ed and Untreated Children for Whom Two Pretests and Two Posttests Were Available

	Learning Rate Category at Posttest Compared to Pretest		
	Lower	Same	Higher
Reading			
Re-Ed (N=54)	13	16	25
Untreated (N=78)	21	31	26
Arithmetic			
Re-Ed (N=54)	12	19	23
Untreated (N=78)	36	23	19

learning rate category to the positive, but less than 1.0 learning rate category), the number whose rate decreased sufficiently from pretest to posttest to put them in a lower learning rate category at posttest than at pretest, and the number of children whose change in rate of learning from pretest to posttest was not sufficient to move them to a different category at posttest. It can be seen from Table 76 that from pretest to posttest 25 Re-Ed children moved to a higher rate-of-learning category in reading while 13 moved to a lower category. The McNemar test for the significance of changes, yielded a χ^2 of 3.79 ($p < .05$), indicating a significant increase in rate of learning for the Re-Ed children from the pretest to posttest period. Change in rate of learning from pretest to posttest was not significant for the untreated children ($\chi^2 = 0.53$). From pretest to posttest, 17 Re-Ed children increased their rate of learning from less than 1.0 to 1.0 or more, while 4 Re-Ed children decreased their rate of learning from 1.0 or more to less than 1.0. The McNemar test yielded a χ^2 of 8.05 ($p < .01$), indicating that after Re-Ed significantly more Re-Ed children were achieving at the normal expected rate than prior to Re-Ed. From

pretest to posttest, 19 untreated children moved into and 12 untreated children moved out of the 1.0 or more learning rate category. The χ^2 of 1.58 was not significant, indicating no significant change from pretest to posttest in the number of untreated children achieving at the normal expected rate in reading.

Arithmetic. The Re-Ed and untreated children differed significantly in rate of learning in arithmetic during the pretest period, with the Re-Ed children showing a lower rate of learning at pretest. This was true both for the analysis involving all three categories ($\chi^2 = 12.73$, with 2 df, $p < .01$) and for the 2 X 2 table comparing numbers of children with a 1.0 or greater rate of learning ($\chi^2 = 7.14$, with 1 df, $p < .01$). The two groups did not differ significantly in rate of learning in arithmetic during the posttest period ($\chi^2 = 0.55$ for the analysis involving all three categories, $\chi^2 = 0.51$ for the analysis comparing numbers of children with a 1.0 or greater rate of learning).

It can be seen from Table 76 that in arithmetic, from pretest to posttest 23 Re-Ed children moved to a higher rate-of-learning category while 12 moved to a lower rate-of-learning category. The McNemar test yielded a χ^2 of 3.46 ($p < .05$), indicating a significant increase in learning rate for the Re-Ed children from the pretest to posttest period. In the untreated group, on the other hand, 36 children moved to a lower rate-of-learning category from pretest to posttest, while 19 children moved to a higher rate-of-learning category. The χ^2 of 5.25 was significant ($p < .05$), indicating a significant decrease in rate of learning for the untreated children in arithmetic. From pretest to posttest, 16 Re-Ed children increased their rate of learning from less than 1.0 to 1.0 or more while six Re-Ed children showed a decrease in rate of learning from 1.0 or more to less than 1.0. The McNemar test yielded a χ^2 of 4.55 ($p < .05$), indicating that after Re-Ed significantly more Re-Ed children gained at the normal expected rate in arithmetic than prior to Re-Ed. From pretest to posttest, 17 untreated children moved into and 25 untreated children moved out of the month-for-month learning rate category. The χ^2 of 1.52 was not significant, indicating no significant change from pretest to posttest in the number of untreated children achieving at the normal expected rate in arithmetic.

Results for Children with Initial Academic Problems

As expected, the rate of learning data for the total groups of Re-Ed and untreated children provided only minimal support for the effectiveness of the Re-Ed intervention in improving the academic adequacy of disturbed children. It was expected that data based only on those children in need of academic improvement would provide more clear-cut results.

TABLE 77

Information about the Re-Ed and Untreated Children with Initial Academic Problems for Whom Two Reading Pretests and Two Reading Posttests Were Available

	Re-Ed (N=45)	Untreated (N=55)	t
Grade in School at Time of Test			
Pretest 1	3.2	3.7	2.65**
Pretest 2	3.9	4.6	3.46**
Posttest 1	5.3	5.5	0.80
Posttest 2	6.2	6.5	1.17
Time between Tests in Academic Years			
Pretests	1.0	1.0	0.32
Posttests	1.0	1.1	2.50*
IQ Score	96.8	97.6	0.32

*p < .05
**p < .01

For these analyses, a child was assumed to be in need of academic improvement if he received a Round 1 academic rating of fairly severe problems or very severe problems. In order to maximize the number of children whose data could be utilized, both reading and arithmetic subtests at all four test administrations were not required. Children with initial academic problems were included in the reading rate-of-learning analyses if they had taken two reading pretests and two reading posttests; they were included

TABLE 78

Information about the Re-Ed and Untreated Children with Initial Academic Problems for Whom Two Arithmetic Pretests and Two Arithmetic Posttests Were Available

	Re-Ed (N=44)	Untreated (N=55)	t
Grade in school at Time of Test			
Pretest 1	3.2	3.7	2.71*
Pretest 2	3.9	4.7	3.92*
Posttest 1	5.3	5.6	1.15
Posttest 2	6.2	6.6	1.70
Time between Tests in Academic Years			
Pretests	0.9	1.0	1.37
Posttests	1.0	1.1	2.93*
IQ Score	96.6	97.3	0.27

*p < .01

in the arithmetic rate-of-learning analyses if they had taken two arithmetic pretests and two arithmetic posttests. This means that different but largely overlapping groups were used to study rate of learning in reading and arithmetic in children with initial academic problems. Mean grade in school at the time each test was taken, mean time between pretests and posttests, and mean IQ scores for the Re-Ed and untreated children in each group are shown in Tables 77 and 78. The means are similar to the means shown in Table 74 for the larger group which included children without initial academic problems. Rate-of-learning data for children with initial academic problems are shown in Tables 79 and 80.

TABLE 79

Pretest and Posttest Rates of Learning for Re-Ed and Untreated Children with Initial Academic Problems (Percentages Shown)

	Rate of Learning between Tests		
	Zero or Negative	Positive, But Less Than 1.0	1.0 or More
Reading			
Re-Ed (N=45)			
Pretest	36	40	24
Posttest	27	22	51
Untreated (N=55)			
Pretest	29	49	22
Posttest	33	35	33
Arithmetic			
Re-Ed (N=44)			
Pretest	27	59	14
Posttest	25	27	48
Untreated (N=56)			
Pretest	6	55	40
Posttest	20	46	35

Reading. The Re-Ed and untreated children with initial academic problems did not differ significantly in pretest rate of learning in reading ($\chi^2 = 0.85$ for the three learning rate categories, $\chi^2 = 0.10$ for number of children with a learning rate of 1.0 or more). At posttest, the difference between the two groups in rate of learning was not significant ($\chi^2 = 3.64$, with 2 df), but significantly more Re-Ed than untreated children ($\chi^2 = 3.46$, with 1 df, $p < .063$) learned at a month-for-month rate at posttest.

It can be seen from Table 80 that more Re-Ed children showed an increase in rate of learning in reading from pretest to posttest

TABLE 80

Change in Learning Rate Category from Pretest to Posttest for Re-Ed and Untreated Children with Initial Academic Problems

	Learning Rate Category at Posttest Compared to Pretest		
	Lower	Same	Higher
Reading			
Re-Ed (N=45)	9	15	21
Untreated (N=55)	16	18	21
Arithmetic			
Re-Ed (N=44)	9	13	22
Untreated (N=55)	25	14	16

than showed a decrease. The increase in rate of learning was significant ($\chi^2 = 4.80$, with 1 df, $p < .05$). There was no significant change in rate of learning in reading from pretest to posttest for the untreated children ($\chi^2 = 0.68$). From pretest to posttest, 15 Re-Ed children increased their rate of learning in reading from less than 1.0 to 1.0 or more, while three Re-Ed children decreased in rate of learning from 1.0 or more to less than 1.0. The increase from pretest to posttest in number of Re-Ed children with a learning rate of 1.0 or more was significant ($\chi^2 = 8.00$, with 1 df, $p < .01$). The untreated group showed no significant change in number of children with a learning rate of 1.0 (14 untreated children moved into the 1.0 or more learning rate category from pretest to posttest and eight moved out, $\chi^2 = 1.64$).

Arithmetic. The Re-Ed and untreated children with initial academic problems differed significantly in pretest rate of learning in arithmetic, with the Re-Ed children showing a lower rate of learning ($\chi^2 = 13.73$, with 2 df, $p < .01$) and with significantly

fewer Re-Ed than untreated children achieving a rate of learning of 1.0 or more ($\chi^2 = 8.38$, with 1 df, $p < .01$). At posttest, the groups again differed significantly, but this time the Re-Ed children showed a higher rate of learning ($\chi^2 = 3.49$, with 2 df, $p < .10$) and a higher proportion of children who achieved a learning rate of 1.0 or more ($\chi^2 = 1.76$, with 1 df, $p < .10$).

It can be seen from Table 80 that more Re-Ed children moved into a higher learning rate category from pretest to posttest than moved into a lower category, while the opposite was true for the untreated children. Increase in rate of learning was significant for the Re-Ed children ($\chi^2 = 5.45$, with 1 df, $p < .01$); change in rate of learning from pretest to posttest was not significant ($\chi^2 = 1.98$) for the untreated children. From pretest to posttest, 18 Re-Ed children increased their rate of learning in arithmetic from less than 1.0 to 1.0 or more, while three Re-Ed children decreased in rate of learning from 1.0 or more to less than 1.0; the increase in number of Re-Ed children with a learning rate of 1.0 or more was significant ($\chi^2 = 10.71$, with 1 df, $p < .001$). The untreated group showed no significant change in number of children with a learning rate of 1.0 or more (15 untreated children moved into the 1.0 or more learning rate category from pretest to posttest and 18 moved out, $\chi^2 = 0.27$).

The rate-of-learning data for children with initial academic problems confirm that Re-Ed is effective in improving the academic performance of disturbed children who are in need of such improvement. The Re-Ed children increased their rate of learning in both reading and arithmetic over their pre-Re-Ed rate; during the same interval, the learning rate of the untreated children remained unchanged. After Re-Ed, more Re-Ed than untreated children were learning at the normal expected rate of 1.0 in both reading and arithmetic.

CHAPTER IX

THE SOCIOMETRIC RESULTS

At the same time the teacher filled out the Pupil Information Form, she administered a sociometric questionnaire (Appendix E) to the class. Each child in the class was asked to indicate which five of his classmates he would invite to a party. The children were also asked if there were any children in the class they would not want to ask to their party; three blank spaces were provided, but the children were free to write in only as many names as they wished. As noted earlier, sociometric data were not available for a number of Re-Ed children; they were also unavailable for a few untreated disturbed and normal children. Sociometric questionnaires were not collected for children who were not in school prior to Re-Ed either because they had been expelled or because they entered Re-Ed during the summer. They were not collected for some other Re-Ed children because they entered Re-Ed before the teacher had time to administer the questionnaire; it was considered mandatory that the child be present in class on the day the questionnaire was administered. Sociometric questionnaires were not requested for children in small special classes. Finally, data are not available for a few children because their teachers found the idea of a sociometric questionaire repugnant and were unwilling to administer it.

Positive nominations and negative nominations or rejections received by each child were counted. To control for differences in class size, T scores rather than raw scores were used in data analyses. Data for both positive nominations and rejections were analyzed, in the expectation that they might tap two different aspects of peer relationship: positive nominations tapping what is commonly thought of as popularity, and rejections tapping the extent to which the child stands out as a target of active dislike. Correlations between the two measures at each round are shown in Table 81; it can be seen from the table that the correlations ranged between .45 and .52. Table 81 also shows stability coefficients for sociometrics administered one and two years apart. The stability coefficients for positive nominations ranged between .46 and .55; for rejections they ranged between .58 and .63. Neither the positive nomination T score (r = -.07 and .00, respectively) nor the rejection T score (r = .02 and -.08, respectively) was related to age or IQ score.

It was expected that at Round 1, the Re-Ed and untreated groups would not differ in number of positive nominations or rejections, and that both would be less liked and more rejected than the

TABLE 81

Intercorrelations of the Sociometric T Scores for the Normal and Untreated Disturbed Groups Combined (N = 251 to 256)

T Scores	Positive Nominations		Rejections		
Positive Nominations	Round 2	Round 3	Round 1	Round 2	Round 3
Round 1	.55	.46	-.52	-.44	-.44
Round 2		.54	-.40	-.45	-.43
Round 3			-.41	-.40	-.46
Rejections					
Round 1				.63	.58
Round 2					.60

normal children. Change was expected to be greater for the Re-Ed than untreated children, and the Re-Ed children were expected to be viewed more favorably by their classmates than the untreated children at Rounds 2 and 3. The acting-out Re-Ed children were expected to be less liked and more rejected than the withdrawn children at Round 1, to show more positive change than the withdrawn children over time, and to be viewed as favorably as the withdrawn children at Rounds 2 and 3.

Positive Nominations

Mean positive nomination T scores for the Re-Ed, untreated disturbed and normal children are shown in Table 82. It can be seen from the table that at Round 1, the Re-Ed and untreated children did not differ and both groups were less liked than the normal children. The same pattern held for Rounds 2 and 3. Neither the Re-Ed nor the untreated children changed significantly in any of the time intervals (between Rounds 1 and 2, Re-Ed $t = 1.55$, untreated $t = 0.86$; between Rounds 1 and 3, Re-Ed $t = 1.22$, untreated

TABLE 82

Mean Positive Nomination T Scores

	Re-Ed (N=56)		Untreated Disturbed (N=124)		Normal (N=127)		R vs UD	R vs N	UD vs N
	Mean	SD	Mean	SD	Mean	SD	t	t	t
Round 1	43.1	9.5	45.4	9.7	54.4	8.8	1.46	7.83*	7.72*
Round 2	45.6	9.6	46.2	9.4	53.8	9.2	0.42	5.48*	6.47*
Round 3	44.9	8.4	46.7	9.8	54.4	9.5	1.23	6.52*	6.36*

*p < .01

TABLE 83

Mean Positive Nomination T Scores for the Acting-Out and Withdrawn Children

	Acting-Out (N=40)	Withdrawn (N=13)	t
Round 1	42.2	46.5	1.42
Round 2	44.9	47.2	0.80
Round 3	45.8	43.8	0.76

t = 1.34; and between Rounds 2 and 3, Re-Ed t = 0.59, untreated t = 0.59), nor did they differ in amount of change during any of the time intervals (between Rounds 1 and 2, t = 0.84; between Rounds 1 and 3, t = 0.16; between Rounds 2 and 3, t = 0.80).

The acting-out and withdrawn children. Mean positive nomination T scores for the acting-out and withdrawn children are shown in Table 83. The two groups of Re-Ed children did not differ significantly at any round, although change toward being more liked by peers between Rounds 1 and 3 was significantly greater for the acting-out than withdrawn children (t = 1.90). Change between Rounds 1 and 3 was significant for the acting-out children (t = 2.22), but not for the withdrawn children (t = 0.90).

Rejections

Mean rejection T scores for the Re-Ed, untreated disturbed and normal children are shown in Table 84. The pattern is the same as for the positive nomination T scores. At every round, the Re-Ed and untreated children were equally rejected and both were more rejected than the normal children. Decrease in rejection by peers was significant for both the Re-Ed and untreated children between Rounds 1 and 2 (Re-Ed t = 1.94, untreated t = 2.62), but was significant only for the Re-Ed children between Rounds 1 and 3 (Re-Ed t = 2.01, untreated t = 1.73). Neither group changed significantly between Rounds 2 and 3 (Re-Ed t = 0.04, untreated t = 0.96). There was no difference between the groups in amount of change during any interval (between Rounds 1 and 2, t = 0.20; between Rounds 1 and 3, t = 0.51; between Rounds 2 and 3, t = 0.45).

TABLE 84

Mean Rejection T Scores

	Re-Ed (N=56)		Untreated Disturbed (N=124)		Normal (N=127)		R vs UD	R vs N	UD vs N
	Mean	SD	Mean	SD	Mean	SD	t	t	t
Round 1	62.8	7.9	61.5	8.8	47.0	6.8	0.97	13.74*	14.56*
Round 2	60.2	10.4	59.2	9.9	47.3	7.0	0.65	9.90*	11.05*
Round 3	60.3	10.0	60.0	8.9	48.0	8.1	0.21	8.82*	11.16*

*$p < .01$

TABLE 85

Mean Rejection T Scores for the Acting-Out and Withdrawn Children

	Acting-Out (N=40)	Withdrawn (N=13)	t
Round 1	64.2	58.6	2.22*
Round 2	61.8	56.2	1.74
Round 3	62.5	55.5	2.34*

*$p < .05$

The acting-out and withdrawn children. Mean rejection T scores for the Re-Ed acting-out and withdrawn children are shown in Table 85. The acting-out children were significantly more rejected by their classmates than the withdrawn children at Round 1 and again at Round 3, though not at Round 2. Neither group changed significantly between Rounds 1 and 3 (acting-out $t = 1.08$, withdrawn $t = 1.58$), nor was the difference between them in amount of change between Rounds 1 and 3 significant ($t = 0.49$).

Summary

The sociometric data provide far less support for the effectiveness of the Re-Ed intervention than any of the data presented thus far. Only the Re-Ed children, and not the untreated children, received fewer rejections from classmates at Round 3 than at Round 1, but the difference between the groups in amount of change between Rounds 1 and 3 was not significant. Similarly, the acting-out Re-Ed children showed an increase in positive nominations between Rounds 1 and 3, and the untreated children did not, but again the difference between the Re-Ed and untreated children in amount of change was not significant. The evidence that the Re-Ed intervention leads to greater liking and less rejection by peers is not convincing.

The difference between the sociometric results and the results presented earlier is the more surprising because of the size of the relationships between the sociometric measures and the school behavior and academic measures (at Round 1, for example, for all groups combined, the positive nomination T score correlated -.45 and the rejection T score correlated .67 with the global behavior rating). The data offer no explanation of the difference, but the following possibilities may be considered. Casual observation of children suggests that their standards for each other may be more stringent and more black-and-white than those held for them by adults; the results may reflect this difference between adults and children. Or perhaps the Re-Ed children actually changed more in their behavior with adults than with peers. The work of Raush and his associates (e.g., Raush, Dittman and Taylor, 1960) provides evidence that this type of differential change may result from interventions planned by adults. Using direct observations of children's interactions with adults and peers rather than ratings or sociometric questionnaires, these workers found improvement, after eighteen months of residential treatment, in children's interactions with adults but not with peers. Whatever the reasons underlying the sociometric results, however, one thing seems clear. Considering the increasing importance of peer acceptance to the healthy development of children as they grow older, special attention needs to be given this area in the future development of the Re-Ed program.

With the opportunity for peer living a Re-Ed school provides, one might expect peer relationships to be an area of strength rather than weakness. The problem may be in the level of deviance among peers at Re-Ed, which may result in an unusually high tolerance for behavior unacceptable to a group of normal children. At Re-Ed, the child interacts with normal adults, who continually expose him to and explicitly teach him normal standards for behavior in interactions with adults. There is no comparable opportunity for guided interaction with normal peers. Perhaps the children need more opportunity before discharge from Re-Ed to participate, with support and guidance from their teacher-counselors, in groups composed predominantly of normal children.

CHAPTER X

THE PARENT RATING SCALES

As part of the application to Re-Ed, the child's parents, working independently, each completed three rating scales describing the child--a Symptom Checklist, a Social Maturity Scale, and a Semantic Differential (see Appendix B); the parents completed the same scales again at follow-ups six and eighteen months after the child's discharge from Re-Ed. Mothers of the untreated disturbed and normal children completed the scales after the children were nominated for the study (Round 1) and again one and two years later (Rounds 2 and 3); if the child had no mother or mother figure, his father completed the scales. Omitted from analyses were children who had a change in mother figure between rounds, children who lived in institutions, children whose parents could not understand scale items or instructions (most frequent with the semantic differential), and children admitted to Re-Ed before the scales were developed.

The Symptom Checklist. The Symptom Checklist is composed of problem behaviors commonly ascribed to disturbed children (demanding too much attention, crying, temper tantrums, worrying or feeling afraid, etc.); parents may list additional behaviors which disturb them if they wish. Parents indicate the frequency with which each behavior has occurred in the previous two weeks. Score is the number of behaviors which the parent indicates have occurred, weighted by frequency of occurrence. Symptom Checklist scores at enrollment from mothers and fathers of 59 Re-Ed children correlated .51. Retest reliabilities (see Table 86) for ratings made one and two years apart by mothers of untreated disturbed and normal children ranged between .58 and .69.

The Social Maturity Scale. The Social Maturity Scale, included because of the frequency with which Re-Ed children are described as immature prior to enrollment, was adapted from the Vineland and its variations (Cain, Levine, Tallman, Elzey, and Kase, 1958; Doll, 1947; Farber, 1959). Thirty-four behaviors are listed. Score is the number of behaviors the parent indicates the child usually performs. Social Maturity Scale scores at enrollment from mothers and fathers of 59 Re-Ed children correlated .76. Retest reliabilities (see Table 86) for ratings made one and two years apart by mothers of untreated disturbed and normal children ranged between .64 and .73.

The Semantic Differential. The Semantic Differential consists of polar adjectives which represent the factors Becker (1960) derived from his analyses of parent and teacher ratings: warm extroversion versus hostile withdrawal, relaxed versus nervous, lack of aggression versus aggression, dominance versus submission, and an activity dimension which seemed particularly relevant for Re-Ed children. The parents fill out the scale twice at each sitting,

pretest to posttest, 19 untreated children moved into and 12 untreated children moved out of the 1.0 or more learning rate category. The χ^2 of 1.58 was not significant, indicating no significant change from pretest to posttest in the number of untreated children achieving at the normal expected rate in reading.

Arithmetic. The Re-Ed and untreated children differed significantly in rate of learning in arithmetic during the pretest period, with the Re-Ed children showing a lower rate of learning at pretest. This was true both for the analysis involving all three categories ($\chi^2 = 12.73$, with 2 df, $p < .01$) and for the 2 X 2 table comparing numbers of children with a 1.0 or greater rate of learning ($\chi^2 = 7.14$, with 1 df, $p < .01$). The two groups did not differ significantly in rate of learning in arithmetic during the posttest period ($\chi^2 = 0.55$ for the analysis involving all three categories, $\chi^2 = 0.51$ for the analysis comparing numbers of children with a 1.0 or greater rate of learning).

It can be seen from Table 76 that in arithmetic, from pretest to posttest 23 Re-Ed children moved to a higher rate-of-learning category while 12 moved to a lower rate-of-learning category. The McNemar test yielded a χ^2 of 3.46 ($p < .05$), indicating a significant increase in learning rate for the Re-Ed children from the pretest to posttest period. In the untreated group, on the other hand, 36 children moved to a lower rate-of-learning category from pretest to posttest, while 19 children moved to a higher rate-of-learning category. The χ^2 of 5.25 was significant ($p < .05$), indicating a significant decrease in rate of learning for the untreated children in arithmetic. From pretest to posttest, 16 Re-Ed children increased their rate of learning from less than 1.0 to 1.0 or more while six Re-Ed children showed a decrease in rate of learning from 1.0 or more to less than 1.0. The McNemar test yielded a χ^2 of 4.55 ($p < .05$), indicating that after Re-Ed significantly more Re-Ed children gained at the normal expected rate in arithmetic than prior to Re-Ed. From pretest to posttest, 17 untreated children moved into and 25 untreated children moved out of the month-for-month learning rate category. The χ^2 of 1.52 was not significant, indicating no significant change from pretest to posttest in the number of untreated children achieving at the normal expected rate in arithmetic.

Results for Children with Initial Academic Problems

As expected, the rate of learning data for the total groups of Re-Ed and untreated children provided only minimal support for the effectiveness of the Re-Ed intervention in improving the academic adequacy of disturbed children. It was expected that data based only on those children in need of academic improvement would provide more clear-cut results.

TABLE 77

Information about the Re-Ed and Untreated Children with Initial Academic Problems for Whom Two Reading Pretests and Two Reading Posttests Were Available

	Re-Ed (N=45)	Untreated (N=55)	t
Grade in School at Time of Test			
Pretest 1	3.2	3.7	2.65**
Pretest 2	3.9	4.6	3.46**
Posttest 1	5.3	5.5	0.80
Posttest 2	6.2	6.5	1.17
Time between Tests in Academic Years			
Pretests	1.0	1.0	0.32
Posttests	1.0	1.1	2.50*
IQ Score	96.8	97.6	0.32

*p < .05
**p < .01

For these analyses, a child was assumed to be in need of academic improvement if he received a Round 1 academic rating of fairly severe problems or very severe problems. In order to maximize the number of children whose data could be utilized, both reading and arithmetic subtests at all four test administrations were not required. Children with initial academic problems were included in the reading rate-of-learning analyses if they had taken two reading pretests and two reading posttests; they were included

TABLE 78

Information about the Re-Ed and Untreated Children with Initial Academic Problems for Whom Two Arithmetic Pretests and Two Arithmetic Posttests Were Available

	Re-Ed (N=44)	Untreated (N=55)	t
Grade in school at Time of Test			
Pretest 1	3.2	3.7	2.71*
Pretest 2	3.9	4.7	3.92*
Posttest 1	5.3	5.6	1.15
Posttest 2	6.2	6.6	1.70
Time between Tests in Academic Years			
Pretests	0.9	1.0	1.37
Posttests	1.0	1.1	2.93*
IQ Score	96.6	97.3	0.27

*p < .01

in the arithmetic rate-of-learning analyses if they had taken two arithmetic pretests and two arithmetic posttests. This means that different but largely overlapping groups were used to study rate of learning in reading and arithmetic in children with initial academic problems. Mean grade in school at the time each test was taken, mean time between pretests and posttests, and mean IQ scores for the Re-Ed and untreated children in each group are shown in Tables 77 and 78. The means are similar to the means shown in Table 74 for the larger group which included children without initial academic problems. Rate-of-learning data for children with initial academic problems are shown in Tables 79 and 80.

TABLE 79

Pretest and Posttest Rates of Learning for Re-Ed and Untreated Children with Initial Academic Problems (Percentages Shown)

	Rate of Learning between Tests		
	Zero or Negative	Positive, But Less Than 1.0	1.0 or More
Reading			
Re-Ed (N=45)			
Pretest	36	40	24
Posttest	27	22	51
Untreated (N=55)			
Pretest	29	49	22
Posttest	33	35	33
Arithmetic			
Re-Ed (N=44)			
Pretest	27	59	14
Posttest	25	27	48
Untreated (N=55)			
Pretest	6	55	40
Posttest	20	46	35

Reading. The Re-Ed and untreated children with initial academic problems did not differ significantly in pretest rate of learning in reading ($\chi^2 = 0.85$ for the three learning rate categories, $\chi^2 = 0.10$ for number of children with a learning rate of 1.0 or more). At posttest, the difference between the two groups in rate of learning was not significant ($\chi^2 = 3.64$, with 2 df), but significantly more Re-Ed than untreated children ($\chi^2 = 3.46$, with 1 df, $p < .063$) learned at a month-for-month rate at posttest.

It can be seen from Table 80 that more Re-Ed children showed an increase in rate of learning in reading from pretest to posttest

TABLE 80

Change in Learning Rate Category from Pretest to Posttest for Re-Ed and Untreated Children with Initial Academic Problems

	Learning Rate Category at Posttest Compared to Pretest		
	Lower	Same	Higher
Reading			
Re-Ed (N=45)	9	15	21
Untreated (N=55)	16	18	21
Arithmetic			
Re-Ed (N=44)	9	13	22
Untreated (N=55)	25	14	16

than showed a decrease. The increase in rate of learning was significant ($\chi^2 = 4.80$, with 1 df, $p < .05$). There was no significant change in rate of learning in reading from pretest to posttest for the untreated children ($\chi^2 = 0.68$). From pretest to posttest, 15 Re-Ed children increased their rate of learning in reading from less than 1.0 to 1.0 or more, while three Re-Ed children decreased in rate of learning from 1.0 or more to less than 1.0. The increase from pretest to posttest in number of Re-Ed children with a learning rate of 1.0 or more was significant ($\chi^2 = 8.00$, with 1 df, $p < .01$). The untreated group showed no significant change in number of children with a learning rate of 1.0 (14 untreated children moved into the 1.0 or more learning rate category from pretest to posttest and eight moved out, $\chi^2 = 1.64$).

Arithmetic. The Re-Ed and untreated children with initial academic problems differed significantly in pretest rate of learning in arithmetic, with the Re-Ed children showing a lower rate of learning ($\chi^2 = 13.73$, with 2 df, $p < .01$) and with significantly

fewer Re-Ed than untreated children achieving a rate of learning of 1.0 or more ($\chi^2 = 8.38$, with 1 df, $p < .01$). At posttest, the groups again differed significantly, but this time the Re-Ed children showed a higher rate of learning ($\chi^2 = 3.49$, with 2 df, $p < .10$) and a higher proportion of children who achieved a learning rate of 1.0 or more ($\chi^2 = 1.76$, with 1 df, $p < .10$).

It can be seen from Table 80 that more Re-Ed children moved into a higher learning rate category from pretest to posttest than moved into a lower category, while the opposite was true for the untreated children. Increase in rate of learning was significant for the Re-Ed children ($\chi^2 = 5.45$, with 1 df, $p < .01$); change in rate of learning from pretest to posttest was not significant ($\chi^2 = 1.98$) for the untreated children. From pretest to posttest, 18 Re-Ed children increased their rate of learning in arithmetic from less than 1.0 to 1.0 or more, while three Re-Ed children decreased in rate of learning from 1.0 or more to less than 1.0; the increase in number of Re-Ed children with a learning rate of 1.0 or more was significant ($\chi^2 = 10.71$, with 1 df, $p < .001$). The untreated group showed no significant change in number of children with a learning rate of 1.0 or more (15 untreated children moved into the 1.0 or more learning rate category from pretest to posttest and 18 moved out, $\chi^2 = 0.27$).

The rate-of-learning data for children with initial academic problems confirm that Re-Ed is effective in improving the academic performance of disturbed children who are in need of such improvement. The Re-Ed children increased their rate of learning in both reading and arithmetic over their pre-Re-Ed rate; during the same interval, the learning rate of the untreated children remained unchanged. After Re-Ed, more Re-Ed than untreated children were learning at the normal expected rate of 1.0 in both reading and arithmetic.

CHAPTER IX

THE SOCIOMETRIC RESULTS

At the same time the teacher filled out the Pupil Information Form, she administered a sociometric questionnaire (Appendix E) to the class. Each child in the class was asked to indicate which five of his classmates he would invite to a party. The children were also asked if there were any children in the class they would not want to ask to their party; three blank spaces were provided, but the children were free to write in only as many names as they wished. As noted earlier, sociometric data were not available for a number of Re-Ed children; they were also unavailable for a few untreated disturbed and normal children. Sociometric questionnaires were not collected for children who were not in school prior to Re-Ed either because they had been expelled or because they entered Re-Ed during the summer. They were not collected for some other Re-Ed children because they entered Re-Ed before the teacher had time to administer the questionnaire; it was considered mandatory that the child be present in class on the day the questionnaire was administered. Sociometric questionnaires were not requested for children in small special classes. Finally, data are not available for a few children because their teachers found the idea of a sociometric questionaire repugnant and were unwilling to administer it.

Positive nominations and negative nominations or rejections received by each child were counted. To control for differences in class size, T scores rather than raw scores were used in data analyses. Data for both positive nominations and rejections were analyzed, in the expectation that they might tap two different aspects of peer relationship: positive nominations tapping what is commonly thought of as popularity, and rejections tapping the extent to which the child stands out as a target of active dislike. Correlations between the two measures at each round are shown in Table 81; it can be seen from the table that the correlations ranged between .45 and .52. Table 81 also shows stability coefficients for sociometrics administered one and two years apart. The stability coefficients for positive nominations ranged between .46 and .55; for rejections they ranged between .58 and .63. Neither the positive nomination T score (r = -.07 and .00, respectively) nor the rejection T score (r = .02 and -.08, respectively) was related to age or IQ score.

It was expected that at Round 1, the Re-Ed and untreated groups would not differ in number of positive nominations or rejections, and that both would be less liked and more rejected than the

TABLE 81

Intercorrelations of the Sociometric T Scores for the Normal and Untreated Disturbed Groups Combined (N = 251 to 256)

T Scores	Positive Nominations		Rejections		
Positive Nominations	Round 2	Round 3	Round 1	Round 2	Round 3
Round 1	.55	.46	-.52	-.44	-.44
Round 2		.54	-.40	-.45	-.43
Round 3			-.41	-.40	-.46
Rejections					
Round 1				.63	.58
Round 2					.60

normal children. Change was expected to be greater for the Re-Ed than untreated children, and the Re-Ed children were expected to be viewed more favorably by their classmates than the untreated children at Rounds 2 and 3. The acting-out Re-Ed children were expected to be less liked and more rejected than the withdrawn children at Round 1, to show more positive change than the withdrawn children over time, and to be viewed as favorably as the withdrawn children at Rounds 2 and 3.

Positive Nominations

Mean positive nomination T scores for the Re-Ed, untreated disturbed and normal children are shown in Table 82. It can be seen from the table that at Round 1, the Re-Ed and untreated children did not differ and both groups were less liked than the normal children. The same pattern held for Rounds 2 and 3. Neither the Re-Ed nor the untreated children changed significantly in any of the time intervals (between Rounds 1 and 2, Re-Ed $t = 1.55$, untreated $t = 0.86$; between Rounds 1 and 3, Re-Ed $t = 1.22$, untreated

TABLE 82

Mean Positive Nomination T Scores

	Re-Ed (N=56)		Untreated Disturbed (N=124)		Normal (N=127)		R vs UD	R vs N	UD vs N
	Mean	SD	Mean	SD	Mean	SD	t	t	t
Round 1	43.1	9.5	45.4	9.7	54.4	8.8	1.46	7.83*	7.72*
Round 2	45.6	9.6	46.2	9.4	53.8	9.2	0.42	5.48*	6.47*
Round 3	44.9	8.4	46.7	9.8	54.4	9.5	1.23	6.52*	6.36*

*$p < .01$

TABLE 83

Mean Positive Nomination T Scores for the Acting-Out and Withdrawn Children

	Acting-Out (N=40)	Withdrawn (N=13)	t
Round 1	42.2	46.5	1.42
Round 2	44.9	47.2	0.80
Round 3	45.8	43.8	0.76

t = 1.34; and between Rounds 2 and 3, Re-Ed t = 0.59, untreated t = 0.59), nor did they differ in amount of change during any of the time intervals (between Rounds 1 and 2, t = 0.84; between Rounds 1 and 3, t = 0.16; between Rounds 2 and 3, t = 0.80).

The acting-out and withdrawn children. Mean positive nomination T scores for the acting-out and withdrawn children are shown in Table 83. The two groups of Re-Ed children did not differ significantly at any round, although change toward being more liked by peers between Rounds 1 and 3 was significantly greater for the acting-out than withdrawn children (t = 1.90). Change between Rounds 1 and 3 was significant for the acting-out children (t = 2.22), but not for the withdrawn children (t = 0.90).

Rejections

Mean rejection T scores for the Re-Ed, untreated disturbed and normal children are shown in Table 84. The pattern is the same as for the positive nomination T scores. At every round, the Re-Ed and untreated children were equally rejected and both were more rejected than the normal children. Decrease in rejection by peers was significant for both the Re-Ed and untreated children between Rounds 1 and 2 (Re-Ed t = 1.94, untreated t = 2.62), but was significant only for the Re-Ed children between Rounds 1 and 3 (Re-Ed t = 2.01, untreated t = 1.73). Neither group changed significantly between Rounds 2 and 3 (Re-Ed t = 0.04, untreated t = 0.96). There was no difference between the groups in amount of change during any interval (between Rounds 1 and 2, t = 0.20; between Rounds 1 and 3, t = 0.51; between Rounds 2 and 3, t = 0.45).

TABLE 84

Mean Rejection T Scores

	Re-Ed (N=56)		Untreated Disturbed (N=124)		Normal (N=127)		R vs UD	R vs N	UD vs N
	Mean	SD	Mean	SD	Mean	SD	t	t	t
Round 1	62.8	7.9	61.5	8.8	47.0	6.8	0.97	13.74*	14.56*
Round 2	60.2	10.4	59.2	9.9	47.3	7.0	0.65	9.90*	11.05*
Round 3	60.3	10.9	60.0	8.9	48.0	8.1	0.21	8.82*	11.16*

*p < .01

TABLE 85

Mean Rejection T Scores for the Acting-Out and Withdrawn Children

	Acting-Out (N=40)	Withdrawn (N=13)	t
Round 1	64.2	58.6	2.22*
Round 2	61.8	56.2	1.74
Round 3	62.5	55.5	2.34*

*$p < .05$

The acting-out and withdrawn children. Mean rejection T scores for the Re-Ed acting-out and withdrawn children are shown in Table 85. The acting-out children were significantly more rejected by their classmates than the withdrawn children at Round 1 and again at Round 3, though not at Round 2. Neither group changed significantly between Rounds 1 and 3 (acting-out $t = 1.08$, withdrawn $t = 1.58$), nor was the difference between them in amount of change between Rounds 1 and 3 significant ($t = 0.49$).

Summary

The sociometric data provide far less support for the effectiveness of the Re-Ed intervention than any of the data presented thus far. Only the Re-Ed children, and not the untreated children, received fewer rejections from classmates at Round 3 than at Round 1, but the difference between the groups in amount of change between Rounds 1 and 3 was not significant. Similarly, the acting-out Re-Ed children showed an increase in positive nominations between Rounds 1 and 3, and the untreated children did not, but again the difference between the Re-Ed and untreated children in amount of change was not significant. The evidence that the Re-Ed intervention leads to greater liking and less rejection by peers is not convincing.

The difference between the sociometric results and the results presented earlier is the more surprising because of the size of the relationships between the sociometric measures and the school behavior and academic measures (at Round 1, for example, for all groups combined, the positive nomination T score correlated -.45 and the rejection T score correlated .67 with the global behavior rating). The data offer no explanation of the difference, but the following possibilities may be considered. Casual observation of children suggests that their standards for each other may be more stringent and more black-and-white than those held for them by adults; the results may reflect this difference between adults and children. Or perhaps the Re-Ed children actually changed more in their behavior with adults than with peers. The work of Raush and his associates (e.g., Raush, Dittman and Taylor, 1960) provides evidence that this type of differential change may result from interventions planned by adults. Using direct observations of children's interactions with adults and peers rather than ratings or sociometric questionnaires, these workers found improvement, after eighteen months of residential treatment, in children's interactions with adults but not with peers. Whatever the reasons underlying the sociometric results, however, one thing seems clear. Considering the increasing importance of peer acceptance to the healthy development of children as they grow older, special attention needs to be given this area in the future development of the Re-Ed program.

With the opportunity for peer living a Re-Ed school provides, one might expect peer relationships to be an area of strength rather than weakness. The problem may be in the level of deviance among peers at Re-Ed, which may result in an unusually high tolerance for behavior unacceptable to a group of normal children. At Re-Ed, the child interacts with normal adults, who continually expose him to and explicitly teach him normal standards for behavior in interactions with adults. There is no comparable opportunity for guided interaction with normal peers. Perhaps the children need more opportunity before discharge from Re-Ed to participate, with support and guidance from their teacher-counselors, in groups composed predominantly of normal children.

CHAPTER X

THE PARENT RATING SCALES

As part of the application to Re-Ed, the child's parents, working independently, each completed three rating scales describing the child--a Symptom Checklist, a Social Maturity Scale, and a Semantic Differential (see Appendix B); the parents completed the same scales again at follow-ups six and eighteen months after the child's discharge from Re-Ed. Mothers of the untreated disturbed and normal children completed the scales after the children were nominated for the study (Round 1) and again one and two years later (Rounds 2 and 3); if the child had no mother or mother figure, his father completed the scales. Omitted from analyses were children who had a change in mother figure between rounds, children who lived in institutions, children whose parents could not understand scale items or instructions (most frequent with the semantic differential), and children admitted to Re-Ed before the scales were developed.

The Symptom Checklist. The Symptom Checklist is composed of problem behaviors commonly ascribed to disturbed children (demanding too much attention, crying, temper tantrums, worrying or feeling afraid, etc.); parents may list additional behaviors which disturb them if they wish. Parents indicate the frequency with which each behavior has occurred in the previous two weeks. Score is the number of behaviors which the parent indicates have occurred, weighted by frequency of occurrence. Symptom Checklist scores at enrollment from mothers and fathers of 59 Re-Ed children correlated .51. Retest reliabilities (see Table 86) for ratings made one and two years apart by mothers of untreated disturbed and normal children ranged between .58 and .69.

The Social Maturity Scale. The Social Maturity Scale, included because of the frequency with which Re-Ed children are described as immature prior to enrollment, was adapted from the Vineland and its variations (Cain, Levine, Tallman, Elzey, and Kase, 1958; Doll, 1947; Farber, 1959). Thirty-four behaviors are listed. Score is the number of behaviors the parent indicates the child usually performs. Social Maturity Scale scores at enrollment from mothers and fathers of 59 Re-Ed children correlated .76. Retest reliabilities (see Table 86) for ratings made one and two years apart by mothers of untreated disturbed and normal children ranged between .64 and .73.

The Semantic Differential. The Semantic Differential consists of polar adjectives which represent the factors Becker (1960) derived from his analyses of parent and teacher ratings: warm extroversion versus hostile withdrawal, relaxed versus nervous, lack of aggression versus aggression, dominance versus submission, and an activity dimension which seemed particularly relevant for Re-Ed children. The parents fill out the scale twice at each sitting,

TABLE 56

Inter-correlations among the Parent Rating Scales

	Symptom Checklist		Social Maturity Scale			Semantic Differential		
Symptom Checklist	Round 2	Round 3	Round 1	Round 2	Round 3	Round 1	Round 2	Round 3
Round 1	.58	.62	-.25	-.28	-.33	.59	.44	.44
Round 2		.69	-.26	-.50	-.44	.41	.61	.47
Round 3			-.21	-.37	-.46	.47	.53	.61
Social Maturity								
Round 1				.73	.64	-.19	-.17	-.15
Round 2					.73	-.23	-.31	-.21
Round 3						-.33	-.35	-.36
Semantic Differential								
Round 1							.58	.59
Round 2								.64

Note.--Correlations are based on scores for the untreated disturbed and normal children. N's range between 247 and 252. All correlation coefficients are significant at the .05 level or less.

first describing the child and then indicating how they would like the child to be. The semantic differential discrepancy score is the sum, over all items, of the squared differences between the way the parent describes the child and the way he wants him to be. Scores at enrollment from mothers and fathers of 50 Re-Ed children correlated .50. Retest reliabilities (Table 86) for scores one and two years apart ranged from .58 to .64.

Intercorrelations among the scales are shown in Table 86. It can be seen from the table that scores from the three scales were related, with a particularly close relationship between scores from the Symptom Checklist and Semantic Differential.

Mean scores at each round from mothers of Re-Ed, untreated disturbed and normal children are shown in Table 87. It can be seen from the table that at Round 1, the Re-Ed children were rated as displaying more inappropriate behaviors (Symptom Checklist), as more immature (Social Maturity Scale), and as more discrepant from parental standards (Semantic Differential) than the untreated children. Both groups were rated more favorably on all scales at Rounds 2 and 3 than they were at Round 1 (see Table 88), with the Re-Ed children showing more improvement on all scales than the untreated children between Rounds 1 and 2 ($t = 4.77$ for the Symptom Checklist, 5.25 for the Social Maturity Scale, and 4.43 for the Semantic Differential) and between Rounds 1 and 3 ($t = 4.62$ for the Symptom Checklist, 5.62 for the Social Maturity Scale, and 5.25 for the Semantic Differential). At Rounds 2 and 3, the Re-Ed and untreated children did not differ in Social Maturity Scale score or Semantic Differential discrepancy score; the differences between them in Symptom Checklist score would have been significant under two-tailed hypotheses. At all rounds, both the Re-Ed and untreated children were rated less favorably than the normal children.

The differences between the Re-Ed and untreated groups in initial parent ratings make it difficult to evaluate the follow-up parent ratings. The problem is compounded by the effects the Re-Ed intervention may have had on the mothers themselves. It is part of the Re-Ed strategy to help parents learn to assess their children's strengths and weaknesses realistically; the follow-up ratings by mothers of Re-Ed children may reflect changes in their ways of perceiving their children as well as changes in the children's behavior. But the reasons for the initial differences in the parent ratings are more important than their effects on the evaluation of the parent rating data.

Did the untreated children behave better at home initially than the Re-Ed children, were their mothers more tolerant of deviant behavior, or were the mothers of the untreated children more defensive than the mothers of the Re-Ed children? As noted earlier, the difference in rating conditions for the two sets of mothers was

TABLE 87

Mean Scores on the Parent Rating Scales

	Re-Ed		Untreated Disturbed		Normal		R vs UD	R vs N	UD vs N
	Mean	SD	Mean	SD	Mean	SD	t	t	t
Symptom Checklist (106, 123, 125)									
Round 1	38.3	16.2	22.2	16.4	10.0	7.4	7.48*	16.60*	7.50*
Round 2	24.4	13.9	17.9	13.3	11.7	8.3	3.64	8.61*	4.41*
Round 3	24.0	14.8	17.9	13.5	11.0	8.0	3.29	8.47*	4.87*
Social Maturity (105, 123, 125)									
Round 1	22.6	4.8	26.1	4.4	28.0	4.0	5.71*	9.32*	3.63*
Round 2	27.3	4.0	28.0	4.1	29.9	3.1	1.12	5.37*	4.21*
Round 3	28.3	3.5	28.8	3.5	30.5	2.6	1.23	5.72*	4.38*
Semantic Differential (94, 120, 121)									
Round 1	128.6	57.8	79.9	(55.9)	48.8	39.7	6.23*	11.45*	4.98*
Round 2	77.6	55.0	63.3	(55.1)	37.5	31.8	1.94	6.28*	4.62*
Round 3	72.0	48.1	63.6	(52.6)	38.4	31.1	1.20	5.89*	4.53*

Note.--Beneath the title of each scale is shown the number of Re-Ed, untreated disturbed and normal children, respectively, upon whose scores the means are based.

*$p < .01$

TABLE 88

Related t's for Score Changes on the Parent Rating Scales

	Re-Ed	Untreated Disturbed	Normal
Symptom Checklist (106, 123, 125)			
Between Rounds 1 and 2	8.87**	3.29**	-2.32*
Between Rounds 1 and 3	8.08**	3.38**	-1.63
Between Rounds 2 and 3	0.44	0.01	1.26
Social Maturity (105, 123, 125)			
Between Rounds 1 and 2	13.35**	6.92**	7.50**
Between Rounds 1 and 3	13.28**	9.22**	8.42**
Between Rounds 2 and 3	2.88**	3.30**	2.89**
Semantic Differential (94, 120, 121)			
Between Rounds 1 and 2	7.50**	3.70**	-3.36**
Between Rounds 1 and 3	9.05**	3.55**	3.25**
Between Rounds 2 and 3	1.23	-0.14	-0.33

Note.--Beneath the title of each scale is shown the number of Re-Ed, untreated disturbed and normal children, respectively, upon whose scores the t values are based.

*p < .05

**p < .01

considerable. The mothers of the Re-Ed children had already agreed to send their children to Re-Ed; they had already admitted problems with the child to themselves and others. Further, their ratings would be used by Re-Ed staff who would be trying to help the child and therefore needed to know all his problems. The mothers of the

untreated children, on the other hand, were describing the child for a research study; they certainly had less motivation to be candid.

Whatever the reasons for the initial differences in the parent rating scale data, they reflect differences in the two groups of children (e.g., different behaviors in the home) and/or differences in the children's situations (e.g., more tolerant or more defensive mothers for the untreated children, or at least mothers who have not yet defined their children as requring residential treatment for their problems). The parent rating scale data thus raise again the question of the comparability of the Re-Ed and untreated children, a basic question about the study.

CHAPTER XI

RELATIONSHIPS OF THE TEACHER, PEER, AND PARENT MEASURES TO EACH OTHER AND TO OTHER VARIABLES

Correlations among evaluations of the child by his mother, teacher, and classmates are shown in Table 89; the correlations are based on Round I data from children in all three groups. All evaluations, from all raters, were significantly related. The highest correlations across raters involved the global behavior rating (based on the teacher's descriptions and ratings of the child's behavior), rejections from classmates, and score from the mother on the Symptom Checklist; these ranged from .49 to .67. The lowest correlations across raters all involved the Social Maturity Scale ($r = .19$ with positive nominations by peers, $-.26$ with the teacher's evaluation of the child's academic performance, and $-.26$ with rejections from peers).

Table 89 also shows relationships between evaluations of the child and scores he achieved on the self-concept, locus of control and impulsivity measures. Correlations between evaluations of the child and his scores on the social schemata measures were not significant and are not shown in the table.

The child's self-concept score was significantly related to all the evaluations except social maturity. When a child felt dissatisfied with his own behavior, his mother also felt dissatisfied with it; she was seen by his teacher and by his mother as having behavior problems; he was not liked by his peers and was rejected by many of them; and his teacher saw him as doing poor schoolwork.

The mother-father discrepancy was related to evaluations by the teacher and the mother, but not to evaluations by peers. A child who felt he was receiving conflicting directions for his behavior from his mother and father was seen by his mother and teacher as behaving inappropriately, by his mother as socially immature and discrepant from her expectations, and by his teacher as having academic problems.

Locus of control was related to all the evaluations except positive nominations from peers. A child who felt able to affect events by his behavior was seen as behaviorally and academically competent by his teacher; he was seen by his mother as socially mature, as having few behavior problems, and as being the kind of child she wanted; and he was rejected by few of his classmates.

TABLE 50

Relationships of the Teacher, Peer, and Parent Measures to Each Other and to Other Variables

	Teacher		Peer			Parent	
	Global Behavior	Global Academic	Positive Nominations	Rejections	Symptom Checklist	Social Maturity	Semantic Differential
Global Academic	.69**						
Positive Nominations	-.45**	-.37**					
Rejections	.57**	.48**	-.55**				
Symptom Checklist	.55**	.37**	-.36**	.59**			
Social Maturity	-.37**	-.26**	.19**	-.26**	-.47**		
Semantic Differential	.43**	.36**	-.31**	.36**	.65**	-.38**	
Self-Ideal Discrepancy	.24**	.19**	-.23**	.16**	.23**	.01	.18**
Mother-Father Discrepancy	.15**	.14**	.09	.07	.12*	-.12*	.12*
Locus of Control	-.25**	-.23**	.07	-.23**	-.15**	.24**	-.15**
MFFT Latency	-.13**	-.16**	.07	-.11*	-.08	.07	-.08
Spiral	-.09	-.13**	-.01	-.02	.00	.11*	-.09
Acting-out or Withdrawn[a]	-.35**	.05	.16	-.26*	-.33**	.15	.01
Age	.11*	.15**	-.12	.00	.00	.45**	.09
IQ	.20**	-.20**	-.13	-.05	-.08	.13*	-.14**
Father's Occupation	.01	-.07	-.09	-.01	.03	.09	-.03

Note.--The correlations are based on Round 1 data from children in all three groups; N's range between 286 and 378. Exceptions are the point biserial correlations involving the acting-out vs. withdrawn dichotomy, which includes only Re-Ed children. For them, N's range from 109 to 115, except for correlations involving the sociometric measures, for which N is 56.

[a]The dichotomy was scored 1 = acting-out, 2 = withdrawn.

*p < .05

**p < .01

The impulsivity measures were related to fewer of the mother, teacher and peer evaluations than the self-report measures were. A child with cognitive impulsivity was seen as having behavior and academic problems by his teacher and was rejected by his peers. A child with motor impulsivity was seen as doing poor academic work by his teacher and as socially immature by his mother.

Also presented in Table 89 are relationships between evaluations of the child, his age, his IQ, his socioeconomic status (father's occupation), and type of problem (acting-out or withdrawn; available only for the Re-Ed children). It can be seen from the table that the acting-out children were seen as having more behavior problems by both their mothers and teachers, and were more rejected by their peers than the withdrawn children. Older children were seen by their mothers as more socially mature and by their teachers as having more severe behavior and academic problems. Children with higher IQ scores were seen by their teachers as having fewer behavior or academic problems, and by their mothers as more socially mature and as more like the mothers wanted them to be. None of the evaluations by any of the raters was related to socioeconomic status of the child's family.

CHAPTER VII

CONCLUSIONS

The purpose of the study was to evaluate the effectiveness of a Re-Ed school in improving the behavioral and academic adjustment of disturbed children. The data which have been presented clearly indicate that the Re-Ed intervention leads to positive changes in the attitudes, behavior and learning of disturbed children.

After Re-Ed, the Re-Ed children, as compared with the untreated children, had more positive self-concepts and greater conviction that they could affect their situations by their behavior. They perceived their parents as more unified in the standards and expectations they held for them. Children initially characterized by Re-Ed staff as acting out, for whom impulsivity had been a problem, learned to control their motor behavior when necessary and to spend more time evaluating choices before making them.

After Re-Ed, the Re-Ed children were seen by their teachers as better adjusted behaviorally than the untreated children. This was true both for children with less severe behavior problems prior to Re-Ed and for children with more severe problems. Within the range of children it serves, the effectiveness of a Re-Ed school does not seem to be affected by severity of initial behavior problems.

Re-Ed children in need of academic remediation prior to Re-Ed scored closer to grade norms on standardized achievement tests after Re-Ed than did comparable children in the untreated group, and most of the Re-Ed children retested learned at the normal, expected, month-for-month rate after Re-Ed, arresting the increasing retardation in academic achievement over time characteristic of disturbed children.

[illegible] Re-Ed staff rated [illegible] per cent [illegible] children [illegible] moderately or greatly improved [illegible] referring agencies [illegible] rated [illegible] the children about whom they had [illegible] as moderately or greatly improved. Eighteen months after the children returned home from Re-Ed, their mothers reported a good deal of improvement or great improvement in comparison with pre-Re-Ed adjustment for 73 per cent of the Re-Ed children; the figure for ratings by fathers was 81 per cent. Yet, although the Re-Ed children improved more than the untreated children on rating scales filled out by mothers, their improvement was not great enough to compensate for the difference between the mothers in their initial ratings of the children. Before Re-Ed, the Re-Ed children were rated significantly more negatively on the parent rating scales than the untreated children, and the amount of improvement shown [illegible] their mothers [illegible] the scales was not sufficient for

the Re-Ed children to be rated more positively than the untreated children after Re-Ed. As noted earlier, it is unclear whether the differences in ratings between the two sets of mothers reflected differences in the children, differences in the mothers, or differences in rating conditions.

In contrast to ratings from adults, which indicated that Re-Ed helped the children come closer to adults' expectations, sociometric data from classmates indicated no improvement as a result of Re-Ed in relationships with peers. This represents an important gap in program effectiveness, one well worth additional effort and experiment. One suggestion is additional experience for the children, before discharge, in guided interaction with normal children.

In all, the data suggest important improvement in the Re-Ed children, especially in their attitudes and in school behavior and learning. Not all of the children improved, however, or became problem-free, and after Re-Ed, the Re-Ed children, though doing better than the untreated children, continued to differ on most measures from a group of children defined by their schools as not having behavior problems and from a group of randomly selected children. The difference between the Re-Ed graduates and these other groups was not unexpected because the Re-Ed program does not attempt to complete the child's reeducation. To increase the economic feasibility of the program and to decrease the length of time the child is separated from his normal social world, Re-Ed's goal is more modest: sufficient improvement so that the child can return to his home, school and community and continue to develop appropriately there. It is expected that over time the reeducation process started at Re-Ed will continue--for more time than was provided in the course of this study.

Follow-up data on the children were collected twice, six and eighteen months after discharge, in order to see whether improvement noted after discharge would hold up. This was important. The Re-Ed liaison staff is apt to have contact with the child's family and school for some months after discharge; such contact is relatively rare after six months. By eighteen months, the honeymoon period which may have followed the child's return to home, school and community is likely to have ended; parents, teachers, friends, and the child himself are likely to be behaving and perceiving in accustomed ways, no longer making whatever special, temporary efforts may have followed the child's return. By eighteen months, also, any durable effect (improvement related to feeling specially treated) in the child or his family or school should have dissipated. It was very possible that the eighteen-month follow-up would show less encouraging results than the six-month follow-up.

On the whole, however, improvements held up quite well. One exception was the deterioration in behavior of children whose academic retardation was so great that they had difficulty coping with their schoolwork.

The literature on "spontaneous improvement" (e.g., Levitt, 1957) suggests that most disturbed children improve without special intervention. This was not found to be true for the untreated group in this study. For example, two-thirds of the untreated children initially rated as having fairly severe or very severe behavior problems by the teacher were again rated as having fairly severe or very severe problems two years later, and there was no decrease in the two years in the percentage of children in the untreated group rated as having very severe problems. Only when the untreated child had no academic deficits associated with his behavior problems was he likely to improve behaviorally over time. Fifty-nine per cent of the untreated children without initial academic difficulties, as opposed to twenty-one per cent of the untreated children with initial academic deficits, changed from a rating of fairly severe or very severe behavior problems to a rating of mild problems or no problems over a two-year span. Indeed, in contrast to children with initial academic difficulties, untreated disturbed children without initial academic problems were doing as well on the behavior ratings after two years as comparable children who spent time in a Re-Ed school.

Parents and teachers often feel uncertain about whether to provide special treatment for children with behavior problems or whether to wait, in the hope the children will outgrow their problems. This study cannot really speak to that question because the children called "untreated" in the study were untreated only in the sense that they did not enter a Re-Ed school. During the two years they participated in the study, and earlier, many attempts were made to help the untreated children. Schools tried to provide help through school psychologists, school social workers, special class placement and/or a number of other special program adjustments; families sought help from physicians, mental health clinics and/or others. Had the "untreated" children truly been untreated, the results concerning the effect of initial academic status on behavioral improvement might suggest that special treatment be provided for children with both behavior and academic problems, while parents and teachers of children able to cope academically wait for the behavior problems to work themselves out. Considering the investment of resources made in the untreated groups, however, it seems more reasonable to conclude that for children with behavior problems who are doing moderately well academically, efforts by families, school and other agencies may serve as well as Re-Ed to improve behavior, while Re-Ed schools are particularly useful for children with behavior problems who also have academic problems.

The data which have been presented suggest that there are children for whom present school programs cannot adequately provide, and for whom the Re-Ed program is particularly well suited. Among current programs for disturbed children, Re-Ed is one of the most education-focused and education-relevant. Its primary staff, those who work directly with the children and their significant others, are specially trained teachers; its goals, strategies and vocabulary are those of education; its most striking benefits are in school behavior and academic achievement. Because it does not rely heavily on expensive mental health personnel, its cost per day is economical, and because the length of time the child spends in the program is relatively short, the cost per child served is especially economical. Taken together, these factors provide persuasive support for widespread adoption of the Re-Ed program as a short-term, intensive intervention resource for schools. They also encourage study of the Re-Ed program to see what may profitably be adopted for special education programs within the schools themselves--and for education programs for normal children.

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APPENDIX A

PEABODY CHILD DEVELOPMENT SURVEY

HOME VISIT I

Name of Parent(s) ____________________

Address ____________________ Telephone Number ____________

Child's Name ____________________

Interviewer's Name ____________________ Date ____________

Child's Present Age ____________________ Birthday ____________

Academic History

1. [illegible] when he entered first grade? ______ years ______ months
(PROBE: [illegible] birthday?)

IF NOT [illegible] FOR [illegible] FIRST GRADE, ASK:

[illegible] 1. [illegible] 2. Early 3. Late

[illegible] ____________________

____

____

[illegible] ______ Tennessee ______ Not Tennessee

[illegible] ______ Yes ______ No

[illegible] Circle one:

[illegible]

[illegible] Circle one:

6. Illness
7. [illegible]
8. Sensory Handicap
9. Other ____________

has he ever skipped a grade? ____ YES ____ NO

IF YES: Which? ____________

Why? ____________

____

... failed a (another) grade? ____ YES ____ NO

IF YES: Which? ____________

Why? DON'T READ. Circle one or two:

1. Misbehavior
2. Bizarre behavior
3. Truancy
4. Immaturity
5. Inability or refusal to learn
6. Illness
7. Moved
8. Sensory Handicap
9. Other ____________

____

____

... best work?

... bad

... best for repeated grade

... school work now? ____________

(IF DOING AVERAGE OR BELOW, ASK):

a. Has his teacher reported any problems with his school work this year? YES NO

(PROBE IF NECESSARY): What problems did she report?

_____

_____

6. How do you feel his grades compare with his ability? Circle one:

1. Working up to ability
2. Not working up to ability
3. Don't know

7. Has he ever received any tutoring (outside help with his school work) or gone to summer school because of poor work?

Tutoring: YES NO Summer School: YES NO

Other, specify: _____

(IF YES, ASK):

a. Grade in which boy received tutoring, summer school, etc. _____

Name, location, and tutor: _____

_____

b. (PROBE IF NOT GIVEN): Is he receiving it now? YES NO

Name, location, and tutor: _____

_____

8. What does _____'s teacher(s) tell you about his behavior in school this year?

_____

_____

(PROBE ON KIND OF TROUBLE, IF ANY) _____

_____

_____

[illegible] suggest his earlier teachers mention problems about _____'s behavior [illegible]?

YES NO

(IF YES, ASK):

a. What [illegible] was that?

b. What did they say?

(RECORD CASE)

_____

_____

_____

_____

_____

_____

Ask again: Did any of his earlier teachers mention problems about _____'s behavior. Fill in above. Keep asking until Mother says no.

Has _____'s school ever suggested that you get special help for _____ either for schoolwork or for a behavior problem?

YES NO

(IF YES, ASK):

a. In what grade did they suggest you get help for him? _____

b. What kind of help did they suggest?

1. Academic
2. Behavioral
3. Both

c. Did _____ receive that type of help?

YES NO

d. If "NO," ask:

Why wasn't _____ able to receive (that) help?

_____

_____

_____

e. Ask again [illegible] an answer: Was there any other time [illegible] that you get special help for ______?

YES NO

IF YES, [illegible]

[illegible] In [illegible] grade [illegible]? ______

[illegible] type [illegible] help [illegible]?

1. Academic
2. [illegible]
3. Both

[illegible] ______ [illegible] that type of help? YES NO

[illegible]

[illegible] ______ able [illegible] receive (that) help?

______

______

______

f. [illegible] any other [illegible] help for ______?

YES NO

IF YES, [illegible]

[illegible]? ______

[illegible]

1. [illegible]
2. [illegible]
3. Both

m. [illegible] ______ receive that type of help? YES NO

n. [illegible]

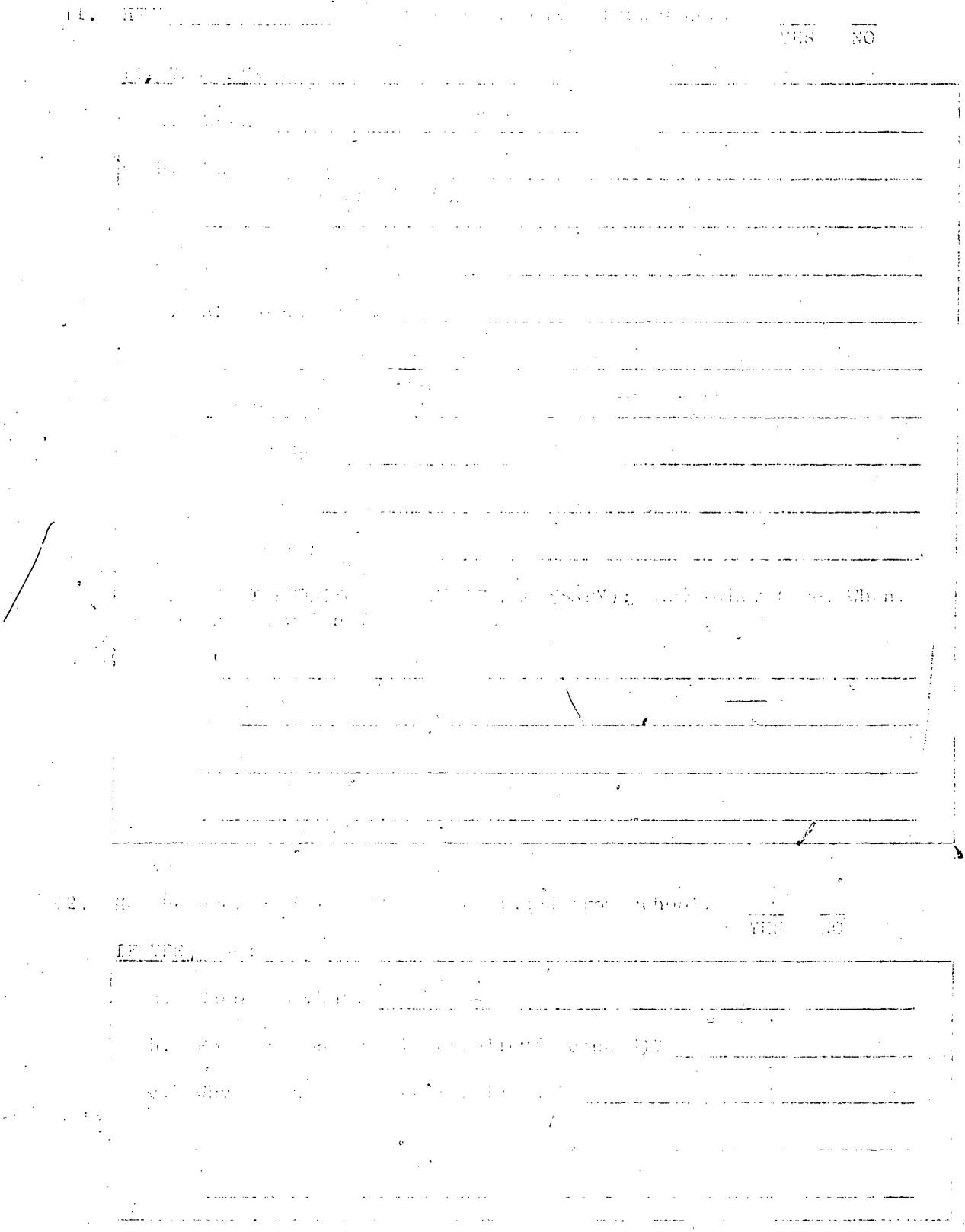
[illegible] ______ able to receive (that) help?

______

______

______

5. [illegible] help? ______



[illegible] in general

[illegible] DIFFERENT CHILDREN [illegible] DIFFERENT THINGS.

13. Will you [illegible] this out for [illegible]

GIVE PARENT [illegible]

[illegible] accurately with no omissions. Answer any questions she has. Have her continue through all scales on Mother Q. Before Semantic Differential, orally give fuller directions--if necessary. Note answer pattern on Semantic Differential as she works. If it is odd, ask if she means to say what she is saying and if necessary, explain again. Watch that there are no omissions on any scale.

14a. Do you think [illegible] behaves the way a boy his age should? YES NO

IF NO, EXPLAIN: ______________________________

____

b. Do [illegible] think [illegible] ________ [illegible] more or fewer problems than most other boys his age?

[illegible]

1. [illegible] many more problems than most boys his age

2. [illegible]

3. [illegible] problems than most [illegible] his age

4. [illegible]

5. [illegible] problems as most boys his age

6. [illegible]

7. [illegible] than most boys his age

15. What do you think [illegible] ________'s strong points?

(RECORD [illegible])

____

____

____

____

YES NO

18. Have [illegible] advice about any problem [illegible]

YES NO

IF NO, GO [illegible] page 10

(IF YES, ASK:)

a. [illegible] the problem(s)?

___ Yes, for behavior or emotional problems
___ Yes, for psychosomatic problem
___ No

[illegible] have you seen? ________

[illegible] (earliest age)

[illegible] did he (they) do? ________

b. [illegible] agencies for help with the problem(s). (SPECIFY WHICH, WHEN, FOR HOW LONG AND WHAT HAPPENED)

1st MENTION:

1. [illegible] ________

2. [illegible] ________

3. How [illegible] ________

4. [illegible] ________

2nd MENTION:

1. Which clinic? ________

2. How long did he go? ________

3. How old [illegible] then? ________

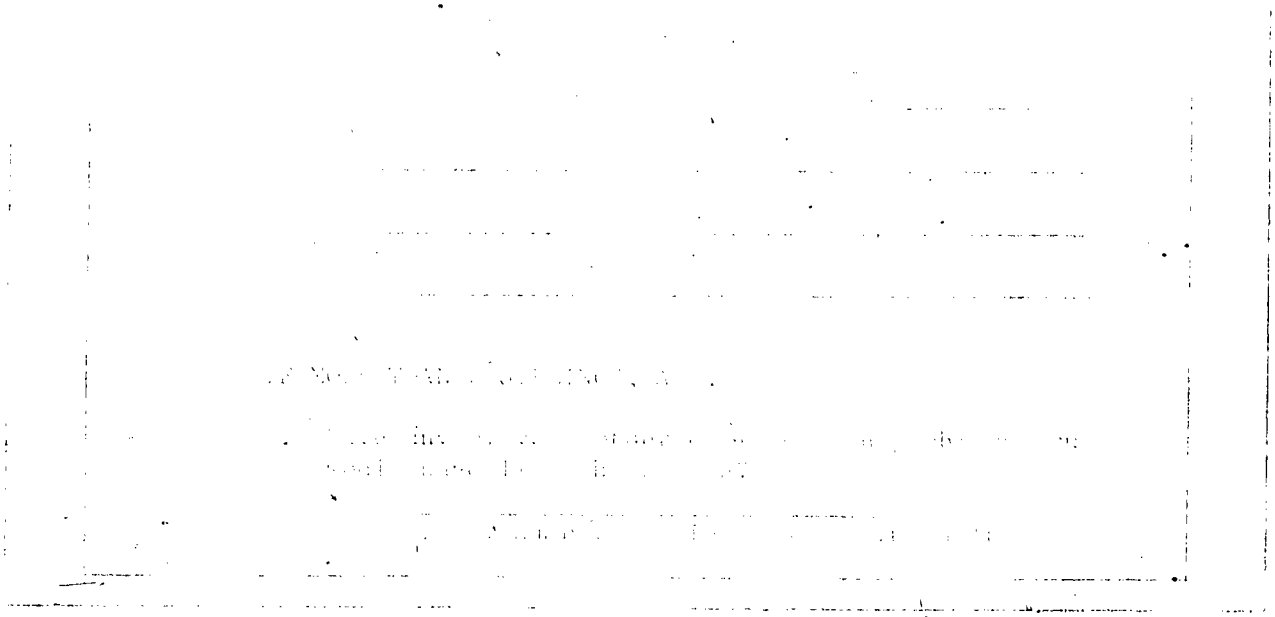
4. [illegible] happened? ________

How [illegible] 1 2 3 4 5 or more

... getting help

...ldren ever had problems ... outside help with?

50



Now ... YOUR ... BACKGROUND

28. How far did you ... ?

(DON'T READ ... CIRCLE CORRECT ...)

1. Finished ... grades or less
2. Some ... school, no diploma
3. Finished high school
4. High school plus vocational training or some college
5. Finished college
6. Some graduate work

(IF ...)

29. How far did ... in school? ______ (USE SAME CODE AS ABOVE)

30. Do you ... your ... ?

... what ... you ...

... JOB DESCRIPTION

... full or part time ______

... have you ... ______

(...)

31. What type of work did ... 's father do?

______

... JOB DESCRIPTION

______

... this ______

(IF BOTH HUSBAND AND WIFE [illegible] ASK):

32. In general, how would you say that you and your husband [illegible]?

REA[illegible]

1. [illegible]
2. [illegible]
3. [illegible] (CIRCLE CORRECT NUMBER)
4. [illegible]
5. [illegible]

33. [illegible] family decisions, like where the family will live or how money will be spent, who has the most "say," you or your husband? (CIRCLE CORRECT NUMBER)

1. Father has all the say
2. Father has the most say, but mother has some
3. Both about the same
4. Mother has the most say, but father has some
5. Mother has all the say

34. When it comes to decisions about __________ who has the most "say," you or your husband? (CIRCLE CORRECT NUMBER)

1. Father has all the say
2. Father has the most say, but mother has some
3. Both about the same
4. Mother has the most say, but father has some
5. Mother has all the say

35. Do you and your husband [illegible] with each other in your methods of handling [illegible] disciplining __________? YES NO

IF NO, 1. In what ways do you disagree? __________

____

____

(Mother) [illegible] disagreement? __________

____

[illegible] (Father) [illegible] disagreement? __________

____

2. [illegible]? YES NO

____

____

36. (IF MOTHER ... ASK): Has ______ ... with you ... since ... birth?

YES NO

(IF NO

... MARRIED TO CHILD'S FATHER, ASK):

a. Who did ______ ... with when he was born? How long was that?

From age to age (child's)	Lived with

... that.

37. ... ______ lived ...

Name of child: [illegible] (Last) (First) (Middle)

Name of [illegible] (Last) (First) (Middle)

Da[illegible]

What is the one thing [illegible] admire the most?

What is [illegible] least?

How [illegible] behavior during the past [illegible] weeks

	Not at All	Once or Twice	Several Times	Occurred Regularly
1. [illegible]				
2. [illegible]				
3. [illegible]				
4. Stoma[illegible]				
5. [illegible]				
6. [illegible]				
7. [illegible]				
8. [illegible] sleep				
9. Nightmares				
10. [illegible]				
11. [illegible]				
12. [illegible]				
13. [illegible] from [illegible]				

	Not at All	Once or Twice	Several Times	Occurred Regularly
14. Restless, [illegible]				
15. Temper tantrum				
16. Disobedience				
17. Talking back to [illegible]				
18. Using bad language				
19. Being quarre[illegible]				
20. Getting his [illegible] by				
21. Daydreaming, not paying attention				
22. Complaining				
23. [illegible]				
24. [illegible]				
25. Blaming others when he has done wrong				
26. Feeling nobody likes him				
27. Demanding too much attention				
28. Showing off				
29. [illegible] by other children				
30. Picked on by other children				
31. Picking on other children				
32. [illegible]				
33. [illegible]				
34. Lying				
35. Stealing				
36. Running away				

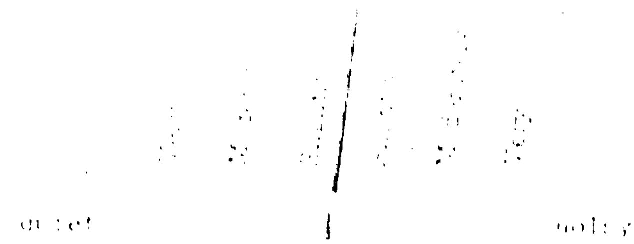
Other: [illegible] the child's behaviors which disturb you:

Below is a list of different kinds of child behavior. If your child usually does the thing listed, put a check in the "yes" column. If he does not usually do it, put a check in the "no" column.

YES	NO	
( )	( )	1. Puts his toys away after playing with them.
( )	( )	2. Plays outdoor games like tag or ball with children his age.
( )	( )	3. Plays in own neighborhood without supervision.
( )	( )	4. Draws pictures well enough that an adult can guess what he is trying to draw.
( )	( )	5. Names colors correctly.
( )	( )	6. Cuts a straight line with scissors.
( )	( )	7. Gets hands and face clean, using soap and water, without help.
( )	( )	8. Goes to toilet without needing any help—neither wets nor has bowel movements in pants.
( )	( )	9. Washes hands before meals without being told.
( )	( )	10. Can tell left from right without mistakes.
( )	( )	11. Plays games with other children which require taking turns and following rules, usually without getting into arguments.
( )	( )	12. Uses table knife to spread butter or jam on bread.
( )	( )	13. Ties own shoes and makes bow.
( )	( )	14. Visits overnight in friends' homes.
( )	( )	15. Goes to movies alone or with other children.
( )	( )	16. Uses table knife for cutting meat.
( )	( )	17. Can tell time correctly to the quarter hour.
( )	( )	18. Travels by bus alone.
( )	( )	19. Brushes or combs hair without help.
( )	( )	20. Cleans and polishes own shoes.
( )	( )	21. Makes change properly (that is, he knows how many pennies and nickels are in a dime, quarter, etc.).
( )	( )	22. Uses simple tools (such as hammer, screwdriver, sewing equipment, or garden tools).
( )	( )	23. Hangs his coat and shirts on hangers.
( )	( )	24. Regularly does certain household chores (such as making bed, dusting, helping with dishes, setting or clearing table).
( )	( )	25. Reads (books, magazines, comic books, etc.) on his own for fun or information.
( )	( )	26. Takes bath without needing help in preparing bath, washing or drying himself.
( )	( )	27. Makes small purchases for himself or others (money need not be his own).
( )	( )	28. Occasionally earns money doing odd jobs.
( )	( )	29. Occasionally writes short letters without help.
( )	( )	30. Makes telephone calls on his own.
( )	( )	31. Is sometimes left alone at home for an hour or more and takes care of himself.
( )	( )	32. Fixes own lunch if left alone at lunch time.
( )	( )	33. Will give up immediate pleasures for promise of getting something good later.
( )	( )	34. Sticks to a job until it is finished.

Now we would like to get a general picture of your child.

For example, [illegible]



1. First ask yourself if your child is basically a quiet or basically a noisy child.

2. If he is basically a quiet child, use the half of the line which is closer to the word "quiet."

   Then ask yourself: is he very quiet, moderately quiet, or slightly quiet and place a check mark on that half of the line under the word which tells how quiet he is.

   For example, if he is slightly quiet, it would look like this:

3. If he is basically a noisy child, put a check mark on the noisy half of the line and show if he is slightly noisy, moderately noisy, or very noisy.

   For example, if he is very noisy, the line would look like this: