



1980

Role-Taking Abilities and Intellectual Level in Disturbed and Normal Adolescent Girls

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ROLE-TAKING ABILITIES AND INTELLECTUAL LEVEL
IN DISTURBED AND NORMAL ADOLESCENT GIRLS

by

Claudia DeWries Beversluis

A Thesis Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of

Master of Arts

January

1980

ACKNOWLEDGEMENTS

I would like to express my appreciation to Dr. Eugene Kennedy and Dr. Alan DeWolfe, members of my thesis committee, for their advice and encouragement during this study. Thanks are also due to the administrators and staff of Chicago Southwest Christian School, Roseland Christian School, Chicago Christian High School, Wedgewood Youth Homes, and Pine Rest Christian Hospital. Their cooperation and understanding in this project were beyond expectation.

VITA

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INTRODUCTION

More than twenty years ago, E. James Anthony (1956) suggested that Piagetian theory might be relevant to an understanding of psychopathology in children. Since this time research on cognitive development across the life span has mushroomed. Piagetian theories have been revised, extended, and applied. Specifically, "social cognition" has been the subject of much theory and research. Research on "social cognition" - or a person's understanding of the social world - has proceeded under various labels: person perception, social sensitivity, role-taking, egocentrism, and empathy. These labels each refer to slightly different aspects of the social cognitive process, but they overlap, and careful theoretical delineation awaits further research and more distinctive measures which differentiate the concepts.

Perhaps the most extensively studied of these aspects has been role-taking, or the ability to put oneself in the position of another. But the bulk of role-taking research has been with "normal", i.e., nonpsychopathological children and adolescents. Very little has been done to apply cognitive-developmental theories to an understanding of psychopathology. But if a child's knowledge of his or her social world has an influence on subsequent interpersonal

behavior, the function of role-taking skills in psychopathology and the application of findings to intervention strategies may be important areas for clinical research.

The Development of Role-taking Skills

Much of the role-taking research is based on Piaget's study of perceptual-cognitive development. Piaget was primarily interested in the child's knowledge of the physical, non-social world. However, his concept of egocentrism has had substantial influence on the understanding of social cognition. An egocentric child cannot take into account another's point of view, and attributes his or her own view to other people. Piaget and Inhelder (1956) tested egocentrism with a perceptual task. The child was asked to look at a display of three mountains and then to identify the view of another person who was on a different side of the display. Piaget and Inhelder identified three stages of perceptual role-taking ability:

Stage 1 (four to six years of age): Children attribute their own views to others and cannot take others' points of view.

Stage 2 (six to seven years of age): Children may understand that the views of others are different, but they cannot correctly specify another's view.

Stage 3 (seven to nine years of age): Children make few errors in specifying another's point of view.

Subsequent studies of perceptual role-taking have supported this stage concept, but the ages at which each stage is obtained differ depending on task complexity (Shantz, 1975). For example, Masangkay,

McCluskey, McIntyre, Sims-Knight, Vaughn, and Flavell (1974) found perceptual role-taking ability in two to five year olds, while Flavell (1968), using a more complex task, found that errors persisted into adolescence.

Many researchers have extended Piagets's concepts of egocentrism and role-taking into the child's conception of the social world. There have been similar attempts to assign ages and stages to the development of social role-taking abilities (Flavell, 1968; Selman and Byrne, 1974). The most comprehensive developmental theory of role-taking ability has been offered by Selman and Byrne (1974). Briefly, Selman and Byrne hypothesize four stages:

Stage 1: Before age six, children are characterized by egocentrism, and cannot distinguish between their own and others' thoughts and feelings.

Stage 2: Between six and ten years of age, children learn to infer the thoughts and feelings of others, and they begin to realize that others are also capable of thinking about them.

Stage 3: At approximately age ten, children can take the role of the "generalized other", i.e. mutual role-taking extends to the larger social system.

Byrne (1973) added another stage, which occurs during adulthood. The adult becomes aware that perspectives, values, and even facts are relative, and determined by one's own social group or cultural history.

While the concept of a stage model has received wide support in

the literature, research indicates that the transition from egocentrism to mature role-taking may be more gradual and complex than first suspected. There are disagreements, for example, about when role-taking first appears. Hoffman (1975) cites anecdotal evidence for the presence of role-taking skills in two year old children, while some researchers (Flavell, 1968; Selman, 1971) have not found evidence of role-taking until the age of six, seven, or eight years. The differences seem to depend less on theoretical distinctions, and more on differences in the difficulty and nature of role-playing tasks. For example, many tasks require verbal ability, and therefore cannot tap the skills of young children.

Moderate correlations between types of role-taking tasks prompted several researchers (Rubin, 1973; Shantz, 1975) to suggest that egocentrism might not be a unitary concept. Shantz (1975), in her review of the social cognition literature, suggests that "role-taking ability" is actually made up of several related abilities. She identified several types of skills that have been isolated and measured:

- spatial/perceptual (i.e., what is the other seeing?);
- thought (what is the other thinking?);
- emotional (what is the other feeling?);
- intentional (what does the other want?); and
- characteristic (what is the other like?).

Her review indicated that these abilities may be only moderately related to each other in normal subjects.

Relationship of Role-taking Skills to Other Factors

Role-taking abilities are correlated with measures of intelligence, but the correlations are only moderate, i.e. generally between .20 and .40 (Shantz, 1975; Coie and Dorval, 1973; Flavell, 1968). These correlations are lower for girls (Coie and Dorval, 1973) and they are lower with non-verbal measures of intelligence (Coie and Dorval, 1973; Rothenberg, 1970).

There have been frequent attempts to correlate Piagetian tasks with social-cognitive skills in an effort to see how Piagetian stages relate to role-taking stages (e.g. Hoffman, 1975). The highest correlations are between measures of conservation ability and role-taking skills (Rubin, 1973), but the correlations are not consistent (e.g. Hollos and Cowen, 1973) and it is not clear which abilities relate the two types of tasks.

It would be natural to question the relationship between socialization history and social role-taking abilities, but this relationship has not been studied extensively. Child-rearing practices have been suggested as an important variable by Hoffman (1975) and Kohlberg (1969). Role-taking skills may be increased by parents who label other people's responses to their child's behavior (Bearison and Cassel, 1975) but this relationship needs more study.

Relationship Between Role-taking Skills and Psychopathology

Piaget (1967) has suggested that role-taking skills might be reciprocally related to social behavior. Social experiences acquaint the child with views, thoughts, and feelings which are different than

his or her own, and thus contribute to role-taking skills. In turn, role-taking skills allow the child to relate appropriately to others. Other theorists have suggested that prosocial behaviors such as cooperation, generosity, and morality are related to role-taking skills (e.g., Aronfreed, 1968; Kohlberg, 1969; Hoffman, 1975). This reasoning, combined with clinical experiences with disturbed children and adolescents, has prompted researchers to question the role-taking skills of disturbed children.

Most studies of cognitive development in disturbed children have used Piagetian tasks such as conservation tasks or measures of spatial role-taking skills. Deficits in these areas have consistently been found in disturbed children, i.e., disturbed children develop conservation concepts slower, and lose egocentricity later than their normal peers (DeMeuron and Auerswald, 1971; Goldschmid, 1968; Fink, 1977). Several studies (e.g., Neale, 1966; Simeonsson, 1973) have shown that disturbed children were behind their peers in perceptual/spatial role-taking skills. These studies use spatial tasks as a representative measure of social cognitive ability. Therefore, interpersonal difficulties are explained in terms of spatial egocentrism. Fink (1977) stresses the inadequacy of the assumption that role-taking is a unitary construct, and calls for direct research on the social/emotional role-taking abilities of disturbed children and adolescents.

The social role-taking and communication skills of delinquent adolescent boys were the subject of an important study by Chandler

(1973). Chandler compared delinquent and non-delinquent boys, ages 11 to 13, on a measure of social egocentrism. His measure required the boys to tell a story from a set of seven pictures, and then tell another story from the viewpoint of someone who had seen only some of the pictures. If a boy used information in his second story that was only available from the complete set of pictures, he was judged to be egocentric. Chandler found that the delinquent boys were significantly more egocentric than their non-delinquent peers. After the initial assessment, Chandler conducted a ten-week training session in remedial role-taking for some of the delinquents. The training decreased the egocentrism scores of the participants, and more significantly, in the 18 months after the intervention, the participants had significantly fewer delinquent offenses than did the non-participants. These results support the presence of role-taking deficits in delinquent adolescents, and support the relationship between deficit and social behavior.

More research is needed to determine if the role-taking deficits found in delinquent boys are present in non-delinquent, disturbed adolescents. The pattern of relationships between types of role-taking skills in disturbed adolescents should also be assessed. The present study is designed to assess the role-taking skills of non-delinquent, disturbed adolescent girls, and to compare their skills to the skills of well-adjusted children and adolescents. It is hypothesized that:

a). disturbed adolescent girls will show a deficit in spatial,

thought, and emotional role-taking skills when compared to their normal cohorts;

b). disturbed adolescent girls with mild or borderline mental retardation will show a deficit in spatial, thought, and emotional role-taking skills when compared to their normal cohorts; and

c). there will be significant correlations between measures of spatial, thought, and emotional role-taking skills in both normal and disturbed subjects.

METHOD

Subjects

Five groups of subjects were used in this study.

Group A consisted of ten, 8-9 year old girls who were students at two urban parochial schools. These students were randomly selected from a list of students who, according to their teachers, showed no evidence of psychopathology. The mean age for this group was 8.88 years (SD = .27) and the mean Peabody Picture Vocabulary Test (PPVT) IQ was 107 (SD = 12).

Group B consisted of ten, 11-12 year old girls who were students at two urban parochial schools. These students were randomly selected from a list of students who, according to their teachers, showed no evidence of psychopathology. The mean age for this group was 12.08 years (SD = .31) and the mean PPVT IQ was 106 (SD = 14).

Group C consisted of ten, 14-15 year old girls who were students at a junior high and high school in an urban area. These students were randomly selected from a list of students who, according to their teachers, showed no evidence of psychopathology. The mean age for this group was 14.87 years (SD = .31) and the mean PPVT IQ was 106 (SD = 12).

Group D consisted of ten, 14-15 year old girls who were residents of two institutions for behaviorally and emotionally disturbed adolescents. Girls with a diagnosis of psychosis or with a court record for anything other than status offenses were not used in this sample. An adolescent girl qualified for this group if her PPVT IQ was over 85. The mean PPVT IQ for this group was 106 (SD = 18) and the mean age was 14.83 years (SD = .43).

Group E consisted of ten, 14-15 year old girls who were residents of two institutions for behaviorally and emotionally disturbed adolescents. Girls with a diagnosis of psychosis or with a court record for anything other than status offenses were not used in this sample. An adolescent girl qualified for this group if her PPVT IQ was less than 85, but greater than 55. Mean PPVT IQ for this group was 77 (SD = 8) and the mean age was 15.43 years (SD = .73).

Apparatus

The following materials were used for the five tasks in the study.

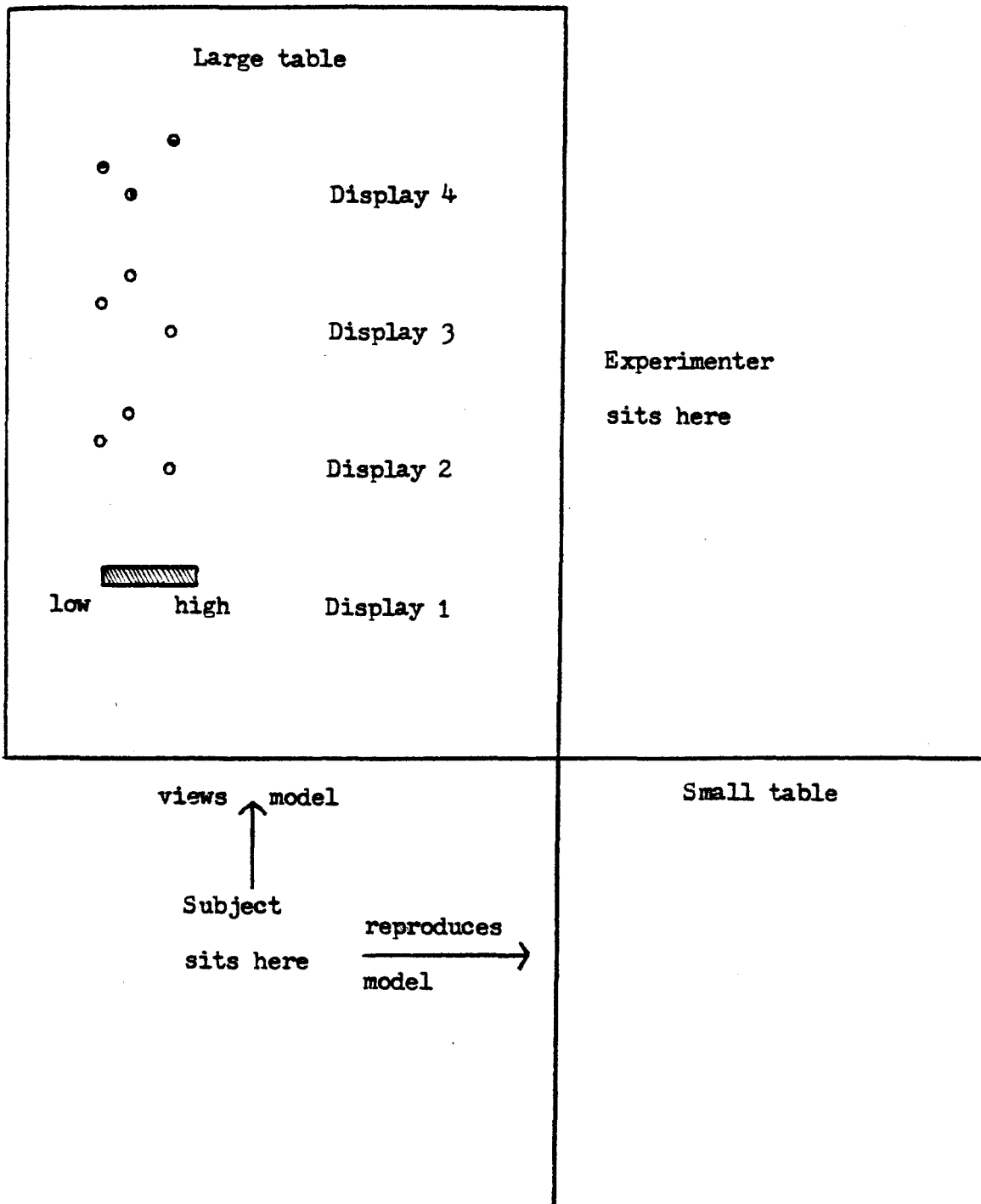
Task 1 - Verbal intelligence. The Peabody Picture Vocabulary Test (PPVT) was used to provide an estimate of verbal intelligence.

Task 2 - Spatial role-taking task. This task closely paralleled a task described by Flavell (1968) and was based on the spatial tasks of Piaget and Inhelder (1956). Two tables were arranged as shown in Figure 1. Four stimulus displays were used. Each display consisted of the following objects.

Display 1: a single red block of wood 10 cm. long and 2 cm.

Figure 1

Task 2. Arrangements of Tables and Materials



thick. The block is 6 cm. high on one end and 4 cm. high on the other.

Display 2: three identical red wooden cylinders, 6 cm. high and 2 cm. in diameter.

Display 3: three red wooden cylinders, 2 cm. in diameter, with heights of 10, 6, and 4 cm.

Display 4: three cylinders identical in size to those in Display 3, but with half of each circumference painted blue.

A second set of objects identical to those listed above was available to be used by the participant in the completion of the task.

Task 3 - Thought role-taking task. This task was also similar to a task developed by Flavell (1968). Task materials consisted of two inverted paper cups. A dime was glued on the bottom side of one (the "dime cup") and a nickel was glued on the bottom of the other (the "nickel cup"). An additional nickel and dime were also used.

Task 4 - Emotional role-taking task. This task was modeled directly on the task developed by Rothenberg (1970). Four one-minute audio recordings were used. Each recording consisted of an adult man and woman in conversation. In each recording, one character undergoes a change of feeling as a result of interaction with the other character. Each recording presents either happiness, anger, anxiety, or sadness. Transcripts of each recording are presented in Table 1.

Table 1

Transcripts of the Four Tape-recorded Conversations

Tape 1 - Happiness - Woman

- M I wonder if there's anything good on TV tonight.
- W I think there's one good program on at 10:00.
- M Oh, by the way, I was thinking today about our vacation and you're right. Going to Yellowstone is our best bet.
- W You mean it? (sounds happy and excited)
- M Uh-huh.
- W That's tremendous. When do you think we can go?
- M We could leave next Friday.
- W Wonderful! I'll have enough time to get ready.
- M You'll be ready by Friday then?
- W Yes. It's going to be delightful. Sun and lakes and mountains. I can look forward to it all week.

Tape 2 - Anger - Man

- M Hi dear, I'm home. Have you been outside? It's a perfect day. There's a slight breeze, and not a cloud in the sky.
- W Please. I can't be bothered about the weather. There are too many things on my mind.
- M Is that so! (getting annoyed) I'm not sure why I even bother coming home anymore. I get such a friendly greeting from you.

Table 1 - Cont'd

W You never care about what's bothering people. You just come in completely unaware of what might be going on here.

M Oh. Come on. What do you think I am? A mind reader? Do I bring my troubles home with me? Well, do I?

W That's not the point.

M No. Of course not. Whatever I say is not the point. Only you can be right. No one else.

Tape 3 - Anxiety - Woman

W Well, since you have the evening off, why don't we just have pizza tonight?

M Oh, I forgot to tell you. My mother is coming for dinner tonight.

W Tonight? Oh no! How can we? I can't be ready.

M Sure you can. Let's just whip up anything. She's not fussy.

W But I'd have to clean up the house and pick some things up at the store. I couldn't ever be ready in two hours. How could you expect me to?

M Come on, there's plenty of time.

W Oh! I don't even know where to start.

Tape 4 - Sadness - Man

M How about driving over to my sister's house for a little visit now?

W Do I have to go?

Table 1 - Cont'd

M No, of course not. (beginning to sound sad) I just thought you might want to go.

W I guess I just don't like to do the things you like to do.

M Oh please don't say that.

W Well, it seems that way to me.

M You don't really think we can make our marriage work, do you?

W To be honest, sometimes I think we are just too different.

M I was afraid you'd say that.

Note. Abbreviations are M = man; W = woman.

Task 5 - Conservation. Two standard Piagetian tasks, as described by Elkind (1961a), were used to test conservation ability. Materials for this task consisted of two identical balls of clay, two identical beakers with the same amount of water in each of them, a short shallow beaker, a tall thin beaker, and four very small beakers.

Procedure

One week before testing, all subjects were given consent forms to be signed by their parents or guardians. Each subject was tested individually in a private room at the school or institution of the subject. Testing lasted about 40 minutes for each subject, and was finished in a single session. Each subject was given the following tasks in the indicated order.

Task 1 - Verbal intelligence. Each subject was given the Peabody Picture Vocabulary Test.

Task 2 - Spatial role-taking task. The subject was seated in front of a table with a smaller table at her right side (see Figure 1). The experimenter was seated on the right side of the large table. One object or several objects were placed on the table in front of the subject. She was then given another object or set of objects identical to the objects on the large table. The following instructions were given to the subject:

As you can see, there are several objects (is one object) on the table in front of you. Here are objects (is an object) just like the ones on the table. I'm going to give you instructions about what you should do with your objects. Listen carefully, and when I'm finished I want you to tell me in your own words what I want

you to do. OK? Now, you take your block and put it on this table here, so that it looks to you here, just like this block looks to me. So you see on your table just what I see on my table.

If the subject could not do the first item correctly, she was asked to move to the experimenter's position to see what the object looked like from there. She was then asked to try the first item again.

Four stimulus displays of increasing complexity, as described above, were used for this task. The display items were arranged in the positions indicated in Figure 1. They were placed on a marked board in order to keep the relationships between elements constant. Subjects arranged their objects on sheets of paper which were on the second table. Their arrangements were recorded by the experimenter by quickly tracing around the objects before going on to the next display.

Task 3 - Thought role-taking task. The two inverted cups were placed in front of the subject. The following instructions were given to the subject:

Now we are going to play something like a game. Do you see these two cups? One has a nickel on top of it, and that means there will be a nickel underneath it. The other has a dime on top, which means that there is a dime underneath it. I'll show you how this game works. If two people play, one of them takes the money from one of the cups. The other person guesses which cup still has the money. If he guesses the right cup, he gets to keep the money. See, if you and I played right now, I might secretly take the money from the nickel cup (demonstrate). If you guessed the nickel cup, you would be wrong, and you wouldn't get to keep any money. But if you guessed that the money was still under the dime cup, you would be right and you would get to keep the dime.

Now, I want you to pretend that you are going to play this game with me right now. You know how to play and I know how to play. You will be the one to secretly take the money out of one

cup, so you have to guess which cup I'm going to pick. Which cup do you think I will choose? Why do you think I will choose that cup?

Task 4 - Emotional role-taking. The following instructions were given to each subject:

Now I would like you to listen to some conversations that I recorded on this tape recorder. Each conversation is about one minute long and there will be four conversations to listen to. After each conversation I'll ask you several questions. OK? Here is the first (second, third, last) conversation. Listen closely to the woman (man).

After the subject listened to each tape, she was asked:

What was the woman (man) feeling? Why did she (he) feel that way? Why did that make her (him) feel (name feeling)?

Task 5 - Conservation. Conservation of weight was tested by the procedure described by Elkind (1961a). Subjects were shown the two identical balls of clay and were informed that they each weighed the same amount. Then one ball was transformed into several shapes: a flat, pancake shape, a long pencil shape, and four small balls. The subject was asked to compare the weight of each shape with the weight of the original ball. Conservation of quantity was also tested by the procedure described by Elkind (1961b). Two identical beakers were each filled with the same amount of water. The water in one beaker was then poured into beakers of different shapes: the large, shallow beaker, the tall, thin beaker, and the four small beakers. The subject was asked to compare the amount of water in each new beaker with the amount of water in the original beaker. Subjects' answers were scored according to criteria developed by Elkind (1961a,b).

After the above tasks were completed, the subject was thanked for her participation and dismissed.

Scoring

Tasks 2, 3, and 4 were scored according to the criteria elaborated in Appendix A. Written transcripts were scored by two independent judges. Interjudge reliability, measured by agreements over the total number of agreements and disagreements, was as follows: spatial role-taking task = .86; thought role-taking task = .96; and emotional role-taking task = .84.

RESULTS AND DISCUSSION

Age Related Changes in Role-taking Skills

Means and standard deviations for scores on the role-taking measures are presented in Tables 2 - 4. The age-related development of role-taking skills was measured using one-way analyses of variance on scores from Groups A, B, and C. Both thought role-taking, $F(1,18) = 4.04$, $p < .05$, and emotional role-taking, $F(1,18) = 4.52$, $p < .05$, show significant differences between groups. Spatial role-taking scores do not differ significantly between groups, but show a strong trend in that direction, $F(1,18) = 2.54$, $p < .1$.

A 2 x 3 ANOVA design was used to see if scores on one role-taking measure might account for additional variance within age groups. For example, emotional role-taking scores were divided into a high and a low group, which became a second independent variable, along with age groups, for an analysis of spatial role-taking scores. A two-way interaction between emotional role-taking scores and age groups accounts for a significant amount of spatial role-taking score variance, $F(2,24) = 4.31$, $p < .05$. Similar two-way analyses of variance conducted to account for thought and emotional role-taking score variances were not significant.

Table 2

Spatial Role-taking Task:

Means (M) and Standard Deviations (SD)N = 50

Spatial Task Displays	Groups				
	A	B	C	D	E
1 (<u>M</u>)	2.3	2.7	3.0	2.9	2.8
2 (<u>M</u>)	1.2	1.1	1.9	1.8	1.7
3 (<u>M</u>)	1.4	1.6	2.6	2.2	1.6
4 (<u>M</u>)	1.3	1.9	2.9	2.9	2.1
Total (<u>M</u>)	6.2	7.1	10.4	9.8	8.2
(<u>SD</u>)	4.4	3.4	5.2	6.0	4.4

Note. Each group consisted of ten members. Group A consisted of 8-9 year old, non-disturbed girls with average intelligence. Group B's members were 11-12 year old, non-disturbed girls with average intelligence. Group C consisted of 14-15 year old girls without psychopathology and with average intelligence. Group D consisted of 14-15 year old emotionally disturbed girls with average intelligence. Group E consisted of 14-15 year old girls with borderline to mild mental retardation and emotional disturbance.

Table 3

Thought Role-taking Task:

Strategy Frequency

 $N = 50$

Strategy	Groups				
	A	B	C	D	E
	<u>n</u>	<u>n</u>	<u>n</u>	<u>n</u>	<u>n</u>
O (0 pts.)	3	1	0	1	4
A (1 pt.)	6	9	6	7	4
B (2 pts.)	1	0	4	2	2
C (3 pts.)	0	0	0	0	0
Total <u>n</u>	10	10	10	10	10

Note. Group A consisted of 8-9 year old normal girls with average intelligence. Group B consisted of 11-12 year old normal girls with average intelligence. Group C's members were 14-15 year old normal girls with average intelligence. Group D consisted of 14-15 year old emotionally disturbed girls with average intelligence. Group E consisted of 14-15 year old girls with emotional disturbance and mild and borderline mental retardation.

Table 4
 Emotional Role-taking Task
 Means (M) and Standard Deviations (SD)

N = 50

Tapes	Groups				
	A	B	C	D	E
1 (<u>M</u>)	4.6	5.1	5.5	5.5	4.7
2 (<u>M</u>)	3.9	4.2	4.5	4.5	4.4
3 (<u>M</u>)	2.1	4.0	4.0	4.5	3.1
4 (<u>M</u>)	4.3	4.3	4.5	4.8	3.8
Total (<u>M</u>)	14.9	17.6	18.5	19.3	16.0
(<u>SD</u>)	3.0	1.6	3.4	2.5	3.7

Note. Each group consisted of ten members. Group A consisted of 8-9 year old normal girls with average intelligence. Group B consisted of 11-12 year old normal girls with average intelligence. Group C's members were 14-15 year old normal girls with average intelligence. Group D consisted of 14-15 year old emotionally disturbed girls with average intelligence. Group E consisted of 14-15 year old girls with emotional disturbance and borderline to mild mental retardation.

These findings of significant age-related differences are consistent with previous research in this area. Flavell (1968), whose methods have been adapted in this study, found significant developmental changes when testing second through eleventh graders on both the spatial and thought role-taking tasks. Rothenberg (1970), from whom the emotional role-taking task was adapted, tested only second graders in her study and therefore did not look for developmental changes. However, Rothenberg's scoring system was modified in the present study based on the work of Flapan (1968) who found age-related changes for similar tasks. Other researchers have postulated stages of role-taking ability (see introductory discussion) based on a large body of research. It is therefore likely that the significant differences obtained in this study represent real population differences and can provide an adequate backdrop for the study of emotionally disturbed adolescents.

Correlations Between Role-taking Measures

Correlation coefficients were computed between all measures of role-taking, as well as the measures of IQ and conservation (see Table 5). Spatial and emotional measures are not significantly correlated, but the spatial and thought measures, and thought and emotional measures are significantly correlated. Although these correlations drop somewhat when chronological age is partialled out, they remain significant (spatial with thought: $r = .38$, $p < .01$; thought with emotional: $r = .36$, $p < .01$). Similarly, when mental age is partialled out, correlations are moderate, but significant (spatial with

Table 5
 Correlations Between Role-taking Measures
 N = 50

Measures	Measures				
	TRTT	ERTT	PPVT	CON	MA
SRTT	.419**	.209	.107	.276*	.305
TRTT		.404**	.247*	.497**	.404*
ERTT			.234	.397**	.474*
PPVT				.169	.689**

Note. The symbols in the table stand for the following

measures: SRTT - Spatial Role-taking Task;

TRTT - Thought Role-taking Task;

ERTT - Emotional Role-taking Task;

PPVT - Peabody Picture Vocabulary Test;

CON - Conservation of weight and quantity tasks;

MA - Mental Age as measured by the PPVT.

* $p < .05$

** $p < .01$

thought: $r = .31$, $p < .01$; thought with emotional: $r = .26$, $p < .05$.

There are several possible explanations for the presence of moderate correlations between the measures used in this study. On the one hand, it is possible that spatial, thought, and emotional role-taking are divergent abilities, requiring different component skills. In this case, ideal measures of each ability would not yield any correlations between measures. The moderate correlations found in this and other studies might reflect methodological, rather than theoretical similarities. Both the thought and emotional tasks in this study relied on verbal skills; it is possible that the variance shared by the two measures represents verbal facility rather than role-taking skill. (This hypothesis was tested by correlating the number of words in a response with rating scores given. Correlations were not significant.) Similarly, spatial and thought measures both involve the use of physical objects. The role of the physical stimulus in the thought measure does not seem vital, but the importance of shared methodology cannot be ruled out, and deserves further study.

On the other hand, true correlations between role-taking abilities might be higher than those found in this study. In this case, the range of correlations points to faults in the measures themselves. It is possible that low internal reliability and questionable task validity may have artificially lowered correlations. Methodological issues in this study are discussed in a later section.

Previous studies have not clarified the nature of the rela-

tionship between role-taking abilities; they only illustrate the need for better studies. Several studies have found no significant correlations between different role-taking measures (Rothbaum, 1973; Sullivan and Hunt, 1967). Other studies have obtained moderate correlations (e.g., Hudson, 1978; Van Lieshout, Leckie, and Smits-Van Sonsbeck, 1973; and Rubin, 1973). This study, along with the equivocal evidence from previous work, suggests that if role-taking abilities are in fact related, the relationship does not seem to be a strong one.

If measures of spatial, thought, and emotional role-taking are only moderately intercorrelated, this has implications for the study of role-taking abilities and emotional disturbance. Most importantly, it should be evident that emotional role-taking deficits cannot automatically be assumed on the basis of low spatial role-taking scores. Several authors (Neale, 1966; Simeonsson, 1973) have linked spatial role-taking deficits to poor interpersonal behavior using "social cognition" as the explanatory variable. It is likely (but not empirically established) that emotional and thought role-taking are more involved in interpersonal behavior. Therefore spatial role-taking scores should not be used as a representative measure of "social cognition", and should not be used to predict social behavior unless an empirical relationship between spatial role-taking and behavior can be established.

Role-taking Skills of Emotionally Disturbed Girls with Average Intelligence

Emotionally disturbed 14 - 15 year old girls, with average intelligence, did not show a deficit in any of the measures of role-taking or conservation ability (see Table 6). This finding does not support the hypothesis of a role-taking deficit in emotionally disturbed adolescents.

However, this finding is not inconsistent with previous work in this area. DeMeuron and Auerswald (1971) and Goldschmid (1968) found that emotionally disturbed children developed conservation concepts and lost egocentrism later than their normal cohorts. But both of these studies tested younger children, and presumably by age 14 even the disturbed children in their studies would have obtained maximum scores on conservation tasks.

There have been no previous studies of thought and emotional role-taking in emotionally disturbed adolescents, so the results of the present study stand alone in this area. Based on this tentative evidence, we might hypothesize that there are no differences between disturbed and normal adolescents in these role-taking skills.

Any "explanation" of this lack of difference must be offered with care, both because this is the first finding in this area, and because of the limited sample employed in this study. There do not appear to be any differences in role-taking skills based on the length of stay in the institution, on clinical diagnosis, or on the contents of the patients' "problem lists" (e.g., interpersonal prob-

Table 6

Comparison of Age, IQ, and Role-taking Scores:

Means (M) and Standard Deviations (SD)

Group C with Group D

Measure	Group C	Group D	<u>F</u>	<u>df</u>	<u>t</u>	<u>p</u>
PPVT (<u>M</u>)	105.5	105.9	2.22	18	-0.06	.95
(<u>SD</u>)	11.8	17.6				
Age (<u>M</u>)	14.9	14.8	1.98	18	0.19	.85
(<u>SD</u>)	.3	.4				
SRTT (<u>M</u>)	10.4	9.8	1.34	18	0.24 ^a	.41
(<u>SD</u>)	5.2	6.0				
TRTT (<u>M</u>)	1.4	1.1	1.21	18	1.24 ^a	.11
(<u>SD</u>)	.5	.6				
ERTT (<u>M</u>)	18.5	19.3	1.97	18	-0.60 ^a	.56
(<u>SD</u>)	3.4	2.5				

Note. Group C consisted of girls without emotional disturbance, and Group D consisted of emotionally disturbed girls. Both groups had ten members. The abbreviations used in the table refer to the following measures: PPVT - Peabody Picture Vocabulary Test (IQ); SRTT - Spatial Role-taking Task; TRTT - Thought Role-taking Task; and ERTT - Emotional Role-taking Task.

^aSince these were directional hypotheses, one-tailed t tests were used.

lems verses intrapersonal problems). However, the group n was too small to draw any definite conclusions from this information, and it might be more profitable to compare such subgroups more carefully in a larger study.

It is interesting to compare the lack of role-taking deficits in emotionally disturbed girls with the presence of such deficits in delinquent boys (Chandler, 1973). There were three major differences between Chandler's study and the present one, any one of which could account for the different findings: type of psychopathology in the experimental group, sex of the population, and testing instrument. Sex is an important factor in role-taking development (Coie and Dorval, 1973) and it is possible that sex might interact with psychopathology to influence role-taking skills. But it is likely that the differences between emotional disturbance and delinquency are of primary importance. Socialization history, an important element in the development of specific types of psychopathology, has been shown to be important in the development of role-taking abilities (Hoffman, 1975). More research and theoretical work is needed in this area, and may prove fruitful in understanding or differentiating types of adolescent psychopathology. It may be possible, and useful in treatment, to differentiate between adolescents who lack role-taking skills (e.g., who cannot identify someone else's feelings), those who are capable of role-taking, but don't know how to use those skills effectively (e.g., who cannot act in response to those feelings), and those who use those skills toward different ends (e.g.,

who use their knowledge to manipulate).

Role-taking Skills of Emotionally Disturbed Adolescent Girls with Borderline or Mild Mental Retardation

The emotionally disturbed adolescents with low intelligence scored lower than their normal cohorts on the measures of spatial, thought, and emotional role-taking abilities. This difference was significant only for the thought role-taking task ($p < .05$), but closely approached significance for the emotional measure ($p < .07$) (see Table 7).

It is impossible to assign a cause to the lower thought and emotional role-taking abilities in this emotionally disturbed population. Emotional disturbance alone, low intelligence alone, or an interaction between these two factors are potential explanations.

The first possible "explanation" for lower role-taking scores in the emotionally disturbed, low intelligence group is that socialization experiences, apart from intelligence, are the cause of role-taking deficits. But Group D, whose members were also characterized by emotional disturbance, did not display role-taking deficits. It is possible that this difference can be accounted for by differences between the two samples. Group E was characterized by a greater percentage of behavioral, interpersonal problems than was Group D, which had a greater percentage of emotional, intrapersonal difficulties. However, this sampling difference between groups was not significant, and within group analyses suggested that diagnoses did not explain intragroup differences. It is therefore unlikely that

Table 7

Comparison of Age, IQ, and Role-taking Scores:

Means (M) and Standard Deviations (SD)

Group C with Group E

Measure	Group C	Group E	<u>F</u>	<u>df</u>	<u>t</u>	<u>p</u>
PPVT (<u>M</u>)	105.5	76.7	2.11	18	6.35	.00
(<u>SD</u>)	11.8	8.1				
Age (<u>M</u>)	14.9	15.4	5.75	18	-2.21	.04
(<u>SD</u>)	.3	.7				
SRTT (<u>M</u>)	10.4	8.2	1.40	18	1.03 ^a	.16
(<u>SD</u>)	5.2	4.4				
TRTT (<u>M</u>)	1.4	.8	2.33	18	2.01 ^a	.03
(<u>SD</u>)	.5	.8				
ERTT (<u>M</u>)	18.5	16.0	1.16	18	1.56 ^a	.07
(<u>SD</u>)	3.4	3.7				

Note. Group C consisted of girls without emotional disturbance, and Group E consisted of emotionally disturbed girls with borderline to mild mental retardation. Both groups had ten members. The abbreviations used in the table refer to the following measures: PPVT - Peabody Picture Vocabulary Test (IQ); SRTT - Spatial Role-taking Task; TRTT - Thought Role-taking Task; and ERTT - Emotional Role-taking Task.

^aSince these were directional hypotheses, one-tailed t tests were used.

Group E's deficits are related exclusively to their emotional disturbance.

It is also possible that low intelligence alone could account for lower role-taking abilities in this emotionally disturbed population. Limited social competence has long been associated with mild and moderate retardation in the clinical literature (McDaniel, 1960; Capobianco and Cole, 1960; and Goulet and Barclay, 1963). Affleck (1977) has suggested that role-taking deficits may be involved in the social limitations of this population. Role-taking abilities have been correlated with the attainment of specific cognitive skills (e.g. conservation), which in turn are related to mental age. Mentally retarded children attain cognitive abilities slower than their normal peers, so it is not difficult to see why they might be developmentally slower in role-taking skills. In the present study, emotional and thought role-taking scores were significantly correlated with conservation ability, lending support to the association between physical and social cognition. Significant correlations between mental age and role-taking scores (see Table 5) and comparisons between Group E and the younger subjects in the study indicate that Group E role-taking scores are consistent with what mental age alone would predict.

Although low intelligence alone may contribute to role-taking deficits, it is possible that borderline retardation and emotional disturbance interact to produce an even greater deficit. It is likely that low intelligence interacts with and structures social and emotional experiences. The individual, because of both limited

intelligence and unique socialization experiences, fails to develop adequate social cognitive skills. This, in turn, is related to specific emotional and behavioral disturbances. In this cycle, emotional disturbance both is caused by and influences limited role-taking ability.

The question arises whether "emotional disturbance" and "mental retardation" can even be considered to be two independent, though interacting forces. Intellectual level, role-taking skills, and interpersonal competence are intimately related in this population, and it is difficult to suggest causes and effects. Ginzberg (1973) wisely suggests the need for "a more integrated, holistic, and organismic conception of the problem which views the retardate as a whole, ongoing, phenomenological being in which there is no isolated entity 'mental retardation' on the one hand and 'emotional disturbance' on the other hand" (p. 96).

It is possible that the sample differences between Group D and Group E referred to earlier are not artifacts of this study, but rather reflect true population differences. True diagnostic matching could never take place between these two populations, because an "adjustment reaction", for example, will be a different disturbance for a borderline retarded adolescent than it is for an adolescent with average intelligence. This difference might relate primarily to social cognitive skills.

Regardless of the cause of role-taking deficits in emotionally disturbed, borderline retarded adolescent girls, these deficits

should be taken into account in therapy. Therapy with adolescents frequently depends in part on an interpersonal relationship with a therapist. Such a therapeutic relationship might be effective with this population, but only if social cognitive skills were not taken for granted. It would be difficult to expect that an adolescent girl will try to "please" a parent or a therapist, if the girl could not readily identify the emotions of the other person. Most therapies recognize this fact, and incorporate "role-taking" either formally or informally into their programs. For example, a patient might be asked: "how do you think your roommate feels about what you have just done?"

But if role-taking does play a part in the emotional and behavioral disturbances of this population, it might be preferable to develop a specific, effective training program in role-taking skills. Training in role-taking skills has been given to male delinquents (Chandler, 1973), with promising results. Perhaps such programs could be extended to include the emotionally disturbed, mentally retarded adolescent.

Some Comments on Methodology

One of the problems plaguing role-taking research has been the weakness of role-taking measures (see Shantz, 1975). The results of this study illustrate some of the weaknesses. The measures in this study vary in their validity and thus in their acceptability for future research.

Spatial role-taking task. This task is an acceptable measure,

and can be recommended for future research in spatial role-taking. However, very little work has been done to standardize this measure, and such work (e.g., on test-retest reliability, age norms, etc.) would be helpful before more research is conducted with the measure. This work would alleviate the necessity of establishing one's own developmental norms for comparison.

The need for procedural standardization was especially evident in this study, since the performances obtained were inferior to those obtained in Flavell's (1968) study. The task may have been altered in subtle but substantial ways when changes were made from Flavell's procedures. For example, Flavell asked each subject to reproduce the examiner's point of view, first from one side of the table, and then (after the examiner physically moved to the other side of the table) from the other side. In this study, the second half of each subtest, i.e., reproducing the examiner's second point of view, was omitted. However, changing the point of view to be copied might serve to reinforce the subject's awareness of the relativity of position, and would force the subject to continually visualize the other's point of view instead of relying on a (possibly wrong) formula. Such a reliance on a "formula" seemed to happen often in this study. When the display became difficult, most subjects did not revert to an egocentric position, as implied in Flavell's (1968) study; they simply duplicated the exact position of the blocks in space. They then did the same thing for subsequent displays without trying to again visualize the examiner's point of view. Again, standardized procedures would be helpful.

Thought role-taking task. This task has inherent problems which were evident to a large degree in this study. Most of the subjects (64%) in this study used a single strategy. Thus the task kept correlations with other measures low and could not optimally differentiate between different levels of role-taking ability.

Flavell (1968) mentions that this measure might tend to underestimate the subject's role-taking abilities. It is possible, for example, that a child might consider more advanced strategies, but then, for any number of reasons, use a simple strategy in the task. He also mentions that this task is a one-time measure, and so "scarcely a fair test of absolute capacity" (p. 48).

But the inherent weaknesses of Flavell's measure may have been augmented by an additional problem. Flavell's procedure was designed for two experimenters. He later indicated that it is possible to use only one experimenter, and ask the child to imagine a second person. Preliminary testing indicated that the game was clearer to children if they were asked to pretend to play the game with the experimenter rather than with an imaginary person. (At that time, it did not appear that the children were more reluctant to guess the experimenter's thoughts than those of an imaginary person. This might have been an additional difficulty however.) Occasionally confusion about the game was manifested during the experimental session; repeating the instructions generally cleared up the confusion. But it is possible that the confusion may have been more common, causing the children to perform below their actual abilities. It is also

possible that "pretending" to play failed to sufficiently motivate children to outwit the experimenter. Because many questions remain about the procedure, this task is not recommended for future investigative use.

Emotional role-taking task. Rothenberg's (1970) taped conversations were designed to test the social skills of younger children, and she was primarily interested in the correct identification of portrayed feelings. Because this study was designed to measure correct identification of the motivations for such feelings, a scoring system based on Flapan's (1970) work was devised. Although this method was adequate and could be recommended for future research, better conversational vignettes, based directly on Flapan's developmental work, might provide an even better measure of emotional role-taking ability. Again, standard procedures and age norms would be helpful.

Still other questions about this study, and role-taking research, in general, remain. Most of the role-taking measures have been designed to test role-taking in childhood rather than adolescence, when greater role-taking capacity is generally present. Adolescents have been said to return to a second period of egocentricity, but role-taking capacity does not decline. The relationship between tests of cognitive capacity and role-taking behavior may be different in adolescence than it is in childhood. Measures which allow for a better analysis of both behavior and cognitive capacity are necessary, especially for the study of emotional disturbance in adolescence.

CONCLUSIONS

The following conclusions are supported by this study:

A. Age-related development occurs in spatial, thought, and emotional role-taking skills of 8 - 14 year old girls.

B. Correlations between measures of spatial and thought, and thought and emotional role-taking are significant but moderate.

C. The spatial, thought, and emotional role-taking skills of emotionally disturbed adolescent girls do not differ significantly from the skills of their normal cohorts.

D. Emotionally disturbed, mildly retarded adolescent girls show significant deficits in thought role-taking skills when compared to their normal cohorts. They also showed a trend toward both spatial and emotional deficits. More research is needed to determine the cause and consequences of these deficits.

More research on the place of role-taking skills in emotional disturbance would be fruitful. Specifically, the following questions could be investigated:

1. How do these role-taking measures relate to the renewed egocentricity often said to be characteristic of adolescence? Could it be that conventional measures tap role-taking capacity, but not typical cognitive performance in adolescence? If so, how does

typical cognitive performance relate to psychopathology?

2. How do role-taking skills develop in emotionally disturbed children? Are there deficits at some ages and not at others? Longitudinal studies would be helpful.

3. How do different population characteristics, especially types of emotional disturbance, relate to role-taking abilities?

4. Can the role-taking deficits, and especially the trends toward deficits, be duplicated in another population of emotionally disturbed, mildly retarded adolescents?

5. Can clinical training programs to teach role-taking skills be developed, and will they have any impact on social behavior?

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APPENDIX A

APPENDIX A

Scoring Procedures

I. Task 2: Spatial Role-taking Task

This task is similar to the task described by Flavell (1968) and was scored according to his criteria. The following description of scoring procedures is taken from his monograph.

The major analysis of this data was carried out by means of a scoring system devised to assess Ss' achievement level on the task as a whole. This scoring system embodied several assumptions. First, it was assumed that an adequate performance on a more complex and demanding display should be weighted more heavily than success on a less complex and demanding one. Accordingly, the maximum scores for each subtask were 3, 4, 5, and 6 for Displays 1, 2, 3, and 4, respectively. It was also assumed that different levels or degrees of success within each subtask could be defined on an at least semilogical basis. For instance, it was supposed that an "egocentric" arrangement, one reproducing S's own point of view, constituted a prima facie less adequate performance than any other incorrect arrangement, that is, showed less evidence of role-taking activity. Other assumptions can be readily inferred from the following summary of the scoring system.

Display 1

- 3 configuration correct on first attempt
- 2 incorrect on first attempt, but correct on second attempt (after looking from the examiner's position)
- 0 incorrect on first attempt, and the second arrangement is the egocentric, Subject-perspective one
- 1 incorrect on the first attempt, and the second arrangement is any other incorrect one....

Display 2

- 4 configuration correct
- 1 miscellaneous
- 0 egocentric

Display 3

- 5 both configuration and height correct
- 4 configuration correct, L cylinder properly placed, but M and H cylinders incorrectly placed, relative to each other,

- on either the right-left or the front-back (or both) dimensions
- 3 configuration correct but height "more incorrect" than in 4
 - 2 configuration incorrect but height correct or partly correct (that is, correct ordering of cylinders on either right-left or front-back dimensions, but not both)
 - 1 miscellaneous
 - 0 egocentric (both in configuration and in height)

Display 4

- 6 configuration and color correct, and height at least partly correct
- 5 configuration correct, height at least partly correct, but color only partly correct (i.e. only two of the three cylinders properly oriented as regards color)
- 4 configuration correct, and either height or color (not both) at least partly correct
- 3 either of the following: (a) configuration correct but neither height nor color even partly correct, (b) configuration incorrect but both height and color at least partly correct
- 2 configuration incorrect, but either height or color (not both) at least partly correct
- 1 miscellaneous
- 0 egocentric (in configuration, height, and color)....

...Whenever, on these three displays, an S's arrangement was judged only minimally correct as regards configuration, 1 point was subtracted from whatever score would otherwise have been given on that subtask (Flavell, 1968, pp. 59-61).

II. Task 3: Thought Role-taking Task

This task is similar to the task described by Flavell (1968) and was scored according to criteria developed by him. The following description of scoring procedures was adapted from his monograph (pp. 46-47).

A logical analysis of this two-person game suggested a workable means of ordering S's choices and rationales in terms of the depth and complexity of interpersonal inference which they seemed to reflect. Accordingly, the judge was given the task of assigning each S's response protocol to one of four categories. Each category describes a game strategy imputed to E, a strategy which

leads her to select one cup rather than the other. The categories are entitled O, A, B, C, in order of increasing strategic complexity.

Strategy A (1 point). S asserts that E will choose a particular cup for one of two reasons: money or other. The first reason asserts that E is interested in obtaining the most money, and always accompanies a prediction that E will choose the dime cup. The second reason covers all other strategies of the same general level. For example, E is said to pick the nickel because "it's better" or "it's closest to your hand." The essence of this strategy is that S does not take into account any thoughts which E might have about S's behavior in the role of S's opponent.

The following is a protocol scored as Strategy A: "I think the dime." ("Why?") "Because it's worth more and I think you'd want more money."

Strategy B (2 points). S begins with a prediction about E's motives, just as in strategy A. But then she goes on to attribute additional thoughts to E: the recognition that S may have predicted precisely those intentions and that she, E, should change her choice, for example, from the dime cup to the less remunerative, but surer nickel cup.

The following protocol is an example of Strategy B: "Most likely you'd want the dime, cause it's more, but you'd think I was trying to fool you, so then you'd pick the nickel, so I guess I'd pick the nickel and then it wouldn't be there and you wouldn't get anything."

Strategy C (3 points). This category includes all imputed E strategies which are analogous to Strategy B, but are carried one or more steps further. Having first reasoned according to Strategy B, for instance, S might make the further inference that E will predict this reasoning too, and will consequently shift back again to her initial choice in order to combat it (for example, pick the dime cup after all).

There were no protocols which fit into this category.

Strategy O (0 points). This category includes all protocols which could not be assigned to any other category. Most of the protocols in this group were instances where S attributed a choice to E, but could not offer any rationale for it.

The following is an example of Strategy O: "The dime." ("Why?") "I don't know, I just picked one."

III. Task 4: Emotional Role-taking Task

This task is similar to the task described by Rothenberg (1970). Scoring criteria were developed based in part on her criteria (see Rothenberg, 1970, pp. 337-339) and in part on the work of Flapan (1968). Flapan found that children move from giving situational reasons to interpersonal and intrapersonal reasons for events and feelings. Thus additional elements were added to Rothenberg's scoring system to reflect this developmental progression.

The following general scoring criteria were used for each story.

Feeling identification

Give 0 points for a wrong identification or no identification of the portrayed feeling

or 1 point for a general identification of the feeling

or 2 points for an accurate identification of the feeling

Add 1 point if the subject mentioned that the character's feeling changed during the story

Motivation description

Give 0 points for no mention of motivation

or 1 point for simple repetition of the situation

or 2 points for the mention of simple feelings about the situation, for example, "she liked (the situation)"

or 3 points for inferences one step beyond the above, i.e., any reasonable explanation for the character's feelings that went beyond repetition or simple feelings

or 4 points for two or more explanations which would fit in the above category or more complex interpersonal or psychological explanations

Thus for any one story there would be a maximum of 7 points,

3 for feeling identification and 4 for the description of motivation. These general criteria were worked out more specifically for each story as follows:

Tape 1 Happiness - woman

Feeling

- 0 pts - no feeling or wrong feeling
- 1 pt - good, nice
- 2 pts - happy, excited
- +1 pt - accurate description of change in feeling

Motivation

- 0 pts - no motivation or irrelevant motivation
- 1 pt - she is going on vacation
there are lakes and trees there
or similar repetition
- 2 pts - she wanted to go
she likes vacations, trees, etc.
or similar motivation
- 3 pts - she hadn't had a vacation for a long time and really
needed it
she wanted to get away for a while
she had never been there before and really liked seeing
new things
- 4 pts - she knew it would be good to spend some time alone with
her husband
she had been afraid that her husband didn't want them
to go
specific mention of troubling things in her life she
might want to get away from
or similar motive

Tape 2 Anger - man

Feeling

- 0 pts - depressed, sad, or other inaccurate feeling

- 1 pt - upset, hurt, disappointed
- 2 pts - angry, mad, frustrated, disgusted
- +1 pt - accurate description of change in feeling: first he was feeling good, and then...

Motivation

- 0 pts - no motivation or irrelevant motivation
- 1 pt - she said "don't bother me"
she hassled him
or similar repetition
- 2 pts - he doesn't like that
or similar feeling
- 3 pts - she is that way all the time
he had a hard day at work and was looking forward to
a restful evening
he wanted her to enjoy the beautiful evening with him
or similar motive
- 4 pts - he is really getting tired of her attitude and so it
makes him angrier every time she acts that way
or similar motive

Tape 3 Anxiety - woman

Feeling

- 0 pts - happy, excited, or other inaccurate feeling
- 1 pt - upset, angry (also disappointed if accompanied with appropriate motivation)
- 2 pts - anxious, worried
- +1 pt - accurate description of change in feeling: first she was looking forward to spending the evening with him, and then...

Motivation

- 0 pts - no motivation or irrelevant motivation
- 1 pt - her mother-in-law was coming over
she had alot to do
or similar repetition

- 2 pts - she was afraid she couldn't get everything done
she didn't like it that he didn't tell her
or similar simple inference
- 3 pts - she was afraid of what her mother-in-law would think
she wanted to spend the evening with him
or similar motive
- 4 pts - she thinks that her mother-in-law will think that
she is not a good wife

Tape 4 Sadness - man

Feeling

- 0 pts - angry, mad, or other inaccurate feeling
- 1 pt - bad
- 2 pts - sad, disappointed, hopeless
- +1 pt - accurate description of change: first he was feeling
alright, but then...

Motivation

- 0 pts - no motivation or irrelevant motivation
- 1 pt -- she wouldn't go with him
or similar repetition
- 2 pts - he didn't like it that she wasn't willing to go
or similar simple inference
- 3 pts - he is very worried about his marriage
he is sad that his marriage isn't turning out because he
really loves her
or similar motive
- 4 pts - he was afraid that this might happen and now he
feels sad because it sounds like she has given
up hope

APPENDIX B

Appendix B

Parental Consent Form

Dear Parent,

I am currently a graduate student at Loyola University of Chicago. During the next week I will be doing some research at your child's school. The research is designed to study the development of several kinds of social skills in children and adolescents. Each participant in the study will be asked to complete several tasks which test aspects of social skills. The tasks are fun to do and they involve no deception or risk for the participant. It takes approximately 45 - 60 minutes for all the tasks to be completed.

Because your daughter is in one of the age groups that I am studying, I would like her to participate in the research. It is customary to ask parents to sign a consent form to allow their children's participation. Please keep the following things in mind:

-Children will perform all tasks individually, and all information will be kept completely confidential.

-If at any time you change your mind about your child's participation in this research, or if you would like to withdraw your child's performance-data from the analysis, please feel free to call me.

-If you have any questions about this research, please feel free to contact me.

PLEASE SIGN THIS FORM AND RETURN IT WITH YOUR CHILD TO HER TEACHER.
THANK YOU.

Sincerely,

Claudia DeVries Beversluis
1000 Loyola Apt. 2E
Chicago, IL 60626
phone - 262-2867

Child's Name _____

_____ I approve of my child's participation in this study.

_____ I do not approve of my child's participation in this study.

Date _____ Signed _____

APPROVAL SHEET

The thesis submitted by Claudia DeVries Beversluis
has been read and approved by the following committee:

Dr. Eugene Kennedy, Director
Professor, Psychology, Loyola University of Chicago

Dr. Alan DeWolfe
Professor, Psychology, Loyola University of Chicago

The final copies have been examined by the director of the thesis
and the signature which appears below verifies the fact that any
necessary changes have been incorporated and that the thesis is
now given final approval by the committee with reference to content
and form.

The thesis is therefore accepted in partial fulfillment of the
requirements for the degree of Master of Arts.

Jan 25, 1980
Date

Eugene Kennedy
Director's Signature