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## ABSTRACT

The present study attempted to operationalize the constructs of empathy and egocentrism and contrast them with a cognitive explanation of the behavior of children on a task which required "S" to identify the affective state of himself and of others. Forty "Ss," aged 3-5, were presented a series of 23 stories describing an event which had occurred to a same-sex child (O). "S" was asked to indicate "how O felt" by pointing to one of five faces which "S" had previously identified as Happy, Sad, Afraid, Mad, and Neutral. With each stimulus story, "S" was also asked to show how he felt. A counterbalanced design was employed in which half the "Ss" were questioned regarding their own affective state prior to indicating how O felt, while the remaining "Ss" responded to O's affective state first. Order of questioning had no effect on "Ss" responses. Results indicate that: (a) young children are capable of correctly identifying the affective states of others (57 percent); (b) their self-responses are generally unrelated to their O-responses (69 percent); (c) "Ss" typically described themselves as Happy (67 percent) regardless of the emotion described in the stimulus; and (d) errors tend to be random, i.e. unrelated to either the particular affective state described in the story or to their S-response (80 percent). Neither empathy nor egocentrism account for "Ss" performance on this task; rather, "Ss" appear to have a cognitive understanding of O's affective state. (Author/CS)

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## CENTER FOR THE STUDY OF COGNITIVE PROCESSES

YOUNG CHILDREN'S UNDERSTANDING OF THE AFFECTIVE  
STATES OF OTHERS: EMPATHY OR COGNITIVE AWARENESS?

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The development of positive social behavior in children has been receiving greater attention recently by researchers. One question of considerable theoretical and practical importance to those involved with young children concerns the nature and extent of empathy during the early years. The past two decades have seen an increasing number of empirical studies of empathy in young children that in general support the developmental nature of this socio-cognitive phenomena (Borke, 1971, 1972; Burns and Cavey, 1957; Feshbach and Feshbach, 1969; Feshback and Roe, 1968; Flappan, 1968; Gollin, 1958; Rothenberg, 1967; and Rothenberg, 1970). Research in this area, however, has been beset with both conceptual and methodological inconsistencies. The difficulty inherent in operationalizing a global construct such as empathy has been compounded by the procedural problems present in any exploration of the abilities of young children and by conceptual ambiguity surrounding the meaning of empathy itself.

Empathy has been defined in two ways in the psychological literature: the intellectual identification with or the vicarious experience of the feelings, thoughts, or attitudes of another. Sometimes the cognitive aspect of empathy is emphasized by defining empathy as the capacity to intellectually participate in another's experience in order to understand

or predict another's responses (e.g., Borke, 1971; Rothenberg, 1970). At other times the vicarious-affective aspect of empathy is stressed. In this sense empathy is conceived as a vicarious emotional response of a perceiver to the emotional experience of another person (e.g., Berger, 1962; Feshbach and Feshbach, 1969; Feshbach and Roe, 1968). Very few investigators have distinguished measures of both the cognitive and vicarious-affective meanings of empathy in one study (Feshbach and Feshbach, 1969; Feshbach and Roe, 1968).

Feshbach and Roe (1968) measured empathy in seven year olds using a series of slide sequences which depicted stories about a control character. After each story Ss were asked to report how they themselves felt. If the response matched the intended affective state of the story character it was scored as empathic. A subset of the subjects in this study were then retested with the same set of stories but with new instructions to identify the story character's feelings. Many Ss who did not empathize with the story character responded correctly to this second question. Feshbach and Feshbach (1969) tested a full sample on the same task with both questions and found similar results. The authors concluded that empathy as a vicarious emotional response may be contingent on cognitive awareness, but that cognitive awareness of how another feels may occur without an empathic response. Empathy was found most likely to occur if the story character was of the same sex as the subject. This finding supported the notion that similarity between perceiver and perceived facilitates empathy in the vicarious-emotional sense.

It is likely that the similarity between the perceiver and the perceived facilitates awareness of how another feels in various situations

through a process of projection. A person might be able to accurately identify another's reactions by simply anticipating or remembering one's own response to the same set of circumstances. However, this could be viewed as an egocentric response and not empathy. As Chandler and Greenspan (1972) argue in their critique of Borke (1971), egocentric "projection" and non-egocentric empathy are inseparable if the subject and the other person are alike in thought and feeling. To separate the wheat from the chaff, a test for empathy must measure the ability to understand another's thoughts and feelings when those thoughts and feelings are different from one's own.

Borke (1971) examined young children's (C.A. = 3 yrs. to 8 yrs.) ability to identify the affective state of others as a measure of empathy, which she contrasted with Piaget's notion of egocentrism. Her task, called the Interpersonal Perception Test (IPT), consisted of 23 incomplete stories describing circumstances leading to pleasure, sadness, fear, or anger. The children were first asked to label four pictures of faces as happy, sad, angry, and frightened, and then to select one face that showed how the child in the story feels. Responses which matched the intended characterization were scored as empathic. With this simple procedure young children were capable of identifying the affective state, i.e., capable of empathizing, which Borke interpreted as evidence of non-egocentric thought. She cited naturalistic observations of children as consistent with her results and suggested that other studies, not supportive of her findings, used tasks which exceed the response limitations of young children.

Chandler and Greenspan (1972), while agreeing that simplified procedures are necessary, took issue with their interpretation that success

on the IPT indicates an ability to empathize in a non-egocentric way. They argued that, given the stereotypic, common themes of the IPT stories, successful performance is probably due to young childrens egocentrically projecting their own affective experience onto a similar person. Chandler and Greenspan went on to demonstrate using a different task that such young children are incapable of non-egocentric thought.

Chandler and Greenspan's task (1972) consisted of first presenting children with a cartoon story sequence which showed a central character in circumstances that would result in his feeling angry, afraid, or sad. The children were questioned as to how the story character felt. Then they were shown a continuation of the story which depicted the central character behaving in a manner consistent with his recently aroused emotion. In this continuation, a second story character appears for the first time and sees the central character's emotional expression and behavior but is unaware of the reasons for the emotion. After the presentation, the children were asked to relate the story events as they themselves saw them and then as the second story character saw them. A story was scored as egocentric if the child attributed to the second story character knowledge that only the child had access to. Chandler and Greenspan found, like Borke (1971), that young children often are able to accurately anticipate how a story character feels. However, it was also clear that young children egocentrically confuse their own point of view with the viewpoint of another.

A major purpose of the present investigation is to clarify the meaning of young children's responses on the Interpersonal Perception Test. Specifically, through a procedural alteration in the administration of the IPT in order to obtain a more refined measure of performance, the

present study intends to determine the relationship of responses to the IPT and the constructs of empathy and egocentrism. This was accomplished by incorporating Feshbach and Feshbach's (1969) double question technique in the administration of the test and introducing a scaling technique which permitted the scoring of each subject's two responses -- how S himself felt and how the other child (O) in the story felt -- to each story statement into one of four response categories depending upon the relationship of his responses to the story and to each other.

### Method

#### Subjects

Forty preschoolers from lower-middle to lower socio-economic class backgrounds, participated in this study. Ss were divided into two age groups. Nine boys and eleven girls were in the younger group (Mean C.A.= 3 yrs. 10 months, S.D.= 3.11 months). Eleven boys and one girl were in the older group (Mean C.A.= 4yrs. 11 months, S.D.= 4.1 months).

#### Materials

The Interpersonal Perception Test (Borke, 1972), consists of 23 stories in two parts. The eleven stories of Part I describe events leading up to the story character's affective state caused by someone other than S himself, e.g., "How does Nancy feel when her mother makes her eat something she doesn't like?" Part II stories (12) describe events leading up to the story character's affective state caused directly by S himself, e.g., "How does Nancy feel when you tell her a ghost story?".

The only modification of the IPT was the addition of a neutral face to the original set of four faces. The selections in the present study were identified happy, sad, afraid, angry, and "just looking".

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## Procedure

Ss were tested individually. They were asked to identify the five face choices, and, if errors were made, told the face names. Prior to test administration Ss were also asked to identify how they felt. Using the standard IPT instructions, Ss were then presented with a practice item followed by the 23 stories, each of which described an event which had occurred to a same sex and race other (O). S was asked to indicate "how O felt" by pointing to one of the five face selections (O-response). With each story S was also asked to show how he himself felt (S-response). A counterbalanced design was employed in which half the subjects in each age group were questioned regarding their own affective state prior to indicating how O felt, while the remaining Ss responded to O's affective state first. Order of questioning had no effect on Ss' responses:

Ss' responses were scored in two ways. The number of correct O-responses, defined by Borke's (1972) scoring key, was used to examine the effect of age, sex, and Parts I and II. A four category system was devised to examine (1) the relationship between O- and S- responses: an empathic response was one in which S correctly identified O's affective state and indicated the same affective state for himself; (2) an egocentric response was one in which both O- and S- responses matched, but O-response was incorrect; (3) a cognitive response was one in which a correct O-response was given, but unmatched with the S-response; and (4) a random error response was one in which O's affective state was incorrectly identified and unmatched with the S-response. All responses were assigned to one of these four categories with the exception of 2% of responses of "Don't know."



## Results

### Variables affecting IPT performance

To examine the effects of age and order of elicitation of Other Child (O) and Self (S) responses on Ss' performance on the IPT, as well as to compare scores on the two parts of the IPT, a three-way ANOVA was used. Results of the analysis indicate that none of the main effects or interactions was significant. Table 1 shows the means and standard

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 Insert Table 1 about here  
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deviations for each of the cells of the analysis.

The attempt to alter S's affective state by describing him as the cause of O's emotion (Part II) had no significant effect on Ss' response accuracy. Reweighting Part I scores to equate for the fact that Part I had 11 items while Part II had 12 resulted in an even more clearer absence of any effect of the manipulation which Part II stories represented. Reanalysis revealed that the main effect of Parts, with 1 and 36 dfs, went from  $F=3.51, p > .08$ , to  $F=0.01, p > .5$ . The reweighted means are also shown in Table 1.

The accuracy of O-responses was also unaffected by the order in which they were elicited; i.e., whether they preceded or followed the S-response. As a result of these analyses, Ss in the two elicitation-order conditions were combined as were scores for Parts I and II.

Age did not affect Ss' performance on the IPT although the trend was in the expected direction of older Ss typically achieving a higher score than younger Ss. For a more detailed examination, correct responses to each of the affective conditions, as well as total scores, were analyzed to determine the effects of age and sex. Two factor analyses

of variance revealed no significant effect of either factor on any of the conditions. Furthermore, none of the interactions were significant. As a result of these analyses, total sample data were used for further investigation.

#### Level of IPT performance

Performance of Ss in the present study replicate the findings of Borke (1971, 1972) that even young children are capable of correctly identifying the affective state of another child. The t-tests shown in Table 2 for each of the five conditions as well as the total score

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 Insert Table 2 about here  
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clearly indicate that Ss respond significantly more accurately than would be expected by chance. Happy showed the consistently highest rate of correct responses over individual items.

The frequency with which each of the faces was selected as an 0-response, whether correct or incorrect, is reported in Table 3 along

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 Insert Table 3 about here  
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with the frequencies which would be expected if all responses were correct. The expected frequencies have been weighted to account for the differing probabilities associated with the five items which are scored correct for either Sad or Mad. Results indicate that Ss selected Happy significantly more often than chance, and Sad significantly less often ( $\chi^2=48.06$ ,  $df=3$ ,  $p < .001$ ). Since Neutral was selected so infrequently as either an 0- or an S-response (6% of total response), it was eliminated from the analysis.

### Relationship of O- and S-responses

The main purpose of the present study was to examine the relationship between S's responses to the affective state of others and his own affective state in an attempt to clarify the responses to the IPT. Table 4 shows the distribution of S-responses. Ss selected Happy as an

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 Insert Table 4 about here  
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S-response significantly more often than any other emotion ( $\chi^2=1561.05$ ,  $df=4$ ,  $p<.0001$ ) and tended to describe themselves as Happy over all items on the test (range from 53% to 83%). Furthermore, when the distribution of S-responses is compared to the O-responses in Table 3, Happy was selected as an S-response significantly more often than as an O-response, while Sad, Mad, and Afraid were used as S-responses less frequently ( $\chi^2=500.09$ ,  $df=3$ ,  $p<.001$ ). A significant increase in the frequency of non-responses was also observed among the S-responses. This increase represents the reluctance of some Ss to answer the same question (How do you feel?) in the same way (Happy) over and over again.

To clarify the relationship of the "self" and "other" responses, a scoring procedure was used that assigned each of S's pairs of responses to one of the four categories: empathic, egocentric, cognitive, and random. The distribution of responses, shown in Table 5, reveals the

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 Insert Table 5 about here  
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significant degree of accuracy of the overall performance of the sample of preschool children. There were 522, or 57%, correct responses when a total of 224 would have been expected by chance. Furthermore, with only 29% of all responses in the empathic and egocentric categories

combined, there was clearly no tendency for O- and S-responses to match ( $\chi^2=150.79$ ,  $df=1$ ,  $p<.001$ ).

With regard to the distribution of correct responses by categories, cognitive responses were given more than twice as frequently as empathic responses. This may be considered a very conservative estimate of the cognitive category since the 100 pairs of responses in which Happy was given both as a correct O-response as well as an S-response were counted as empathic. These 100 pairs of responses account for 64.5% of the empathic category.

Examination of the distribution of error responses indicates that random errors clearly account for the majority of incorrect responses. Egocentric responses account for only 27% of all errors. This may also be considered a liberal estimate of the category since the incorrect use of Happy (54% of the egocentric responses) again inflates the category.

In general, then, Ss performance on the IPT is best typified as correct or incorrect identification of another's affective state unrelated to S's own affective state.

## Discussion

### Empathy and egocentrism

If egocentrism is defined as the inability of a child to take the perspective of another, as suggested by Borke (1971, 1972), then egocentrism would result in responses to the IPT which are generally incorrect and one would predict that the responses of preschool children would not exceed chance level. However, preschool children are capable of correctly identifying the affective state of another, and in Borke's sense of the word are non-egocentric.



Borke chose to consider children's correct responses to the IPT as a measure of empathy. Her procedures, however, did not allow access to Ss' own affective state. If one acknowledges Feshbach and Feshbach's definition (1969) of empathy as an internal (self) response to the affective state of another, then the present data would suggest that empathy as a construct is insufficient to explain Ss' behavior on the IPT. That is, the affect of the other child can be successfully gauged by S without his necessarily sharing that affect.

Chandler and Greenspan (1971), on the other hand, have criticized Borke's use of the construct of egocentrism, insofar as that construct is generally interpreted from Piaget's writings. Borke's task did not require that the child respond to a situation in which his own perspective of that situation was in conflict with the child in the story, whereas Chandler and Greenspan experimentally induced that conflict. The present study compares children's estimation of the affective state of the child in the story with their reports of their own affective state, a non-experimentally manipulated "perspective". It was apparent that Ss' own affective state did not interfere with his ability to understand the affective state of another. Neither was Ss' affective state altered by that of O's. There was no evidence to suggest that Sad, Mad, or Afraid, when used as S-responses, were in any way systematically associated with either the given O-response or with the correct, keyed response. The child is capable, then, of distinguishing between how he feels and how O feels.

The absence, then, of any relationship between O- and S-responses, especially in the presence of correct O-responses, fail to support a notion of empathy or Chandler and Greenspan's suggestion that egocentrism

is not an appropriate construct for the evaluation of IPT performance.

### A cognitive Interpretation

An alternate explanation is that correct O-responses reflect a cognitive understanding of the task which is unrelated to S's affective state and has no effect on S's affective state. The response is solely a cognitive one. In general, the situations described in the IPT stories have a high probability of actually having been experienced by the child in some manner and may reflect the child's ability to remember how he actually felt in a similar situation. Furthermore, S's responses may reflect an internalization of cultural norms of how anyone would feel under the given conditions. Even the attempt to manipulate S's affective state by verbally projecting him into the story as the agent of O's condition (Part II items) does not interfere with S's understanding of how O feels or alter the relationship between O- and S-responses.

Some evidence for the "internalized norms" explanation was observed. If the children are actually responding to internalized norms, the situations for which the norms are inconsistent should result in more inconsistent responses to the IPT. A small group of adults (N=12) were asked to indicate what they would consider the correct response to each of Borke's items. Every instance in which these responses differed from Borke's key involved Sad or Mad items, with Sad given for Mad and vice versa in about 90% of the variant responses. This suggests that the cultural norms of feeling appropriately Sad or Mad are less consistent than Happy or Afraid.

Children in the present study had the highest error rates on items



keyed Sad or Mad, and that the most frequent erroneous response was an incorrect Mad or Sad. Borke (personal communication) has shown cross-cultural differences in response to these items when comparing Chinese and American children. Since Ss in the present study were primarily from lower socioeconomic class homes while Borke's Ss were middle- and upper-middle class children, the variance in response to these items by the present sample may reflect another kind of cross-cultural difference, with somewhat different normative bases. If the present sample were used as the norm group, only one of the sentences involving Sad or Mad would be keyed with a single response.

In addition to the doubt raised by the present study of Borke's use of the construct of empathy, there is also some question about the Feshbach findings. There was very little tendency for Ss in this study to match their self-response to either their own O-response or to the correct response. The two Feshbach studies on the other hand report high frequencies of empathic responses. The present study differed from the Feshbach studies in that: 1) the IPT items are brief one-sentence stories presented verbally while the Feshbach items are more lengthy, descriptive, and supplemented with a series of colored slides; and 2) the present study elicited both O- and S-responses to one item before presenting the next item while the Feshbach's elicited S-responses to all items followed by the re-presentation of all items in order to obtain the C-responses. The Feshbach's may have obtained a higher proportion of empathic responses because the detailed stories drew S into the situation of O to a greater extent. It may be the case, however, that these more involved stories set up an expectancy in S to respond to O's situation. S may then respond on the basis of that

expectancy despite the question he is actually being asked. The present study emphasized the differentiation between the S- and O-response by the contiguity of their occurrence, providing a more salient contrast between the two. Preliminary examination of new data being collected by the present authors suggests that there is some relationship between the ability to anticipate the O-question, differentiate S from O, and correct response to IPT items.

#### Summary

The present study required Ss to identify their own affective state and the affective state of another same-sex child, in order to clarify the abilities which contribute to successful performance of the task. Ss' pairs of responses were operationally defined as empathic, egocentric, cognitive, or random, based on two factors: correctness of the O-responses and matching O- and S-responses. The results indicate that correct responses to the IPT reflect a cognitive understanding of the situation of, rather than an affective identification with, the subject of the story. Secondly, errors were more often random rather than egocentric. The order in which S- and O-responses were elicited did not effect performance, nor did the variations in the stories in which approximately half of them described S as the agent of O's condition. The results indicate that empathy as a construct is both insufficient to explain Ss' performance on the IPT as well as an inappropriate contrast to the construct of egocentrism, at least as the latter is described by Piaget. In addition, no age or sex differences in performance were observed. However, the limited sample size and age range require further research to verify these findings.



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Table 1. Means and S.D.s: Correct 0-responses to Parts I and II of the IPT given by Younger and Older Ss under two Orders of Elicitation (Reweighted means in parentheses)

	Younger		Older		Total	
	0-first (N=10)	S-first (N=10)	0-first (N=10)	S-first (N=10)	0-first	S-first
Part I	$\bar{X}$	5.40 (5.89)	6.40 (6.98)	7.10 (7.75)	5.90 (6.43)	6.55 (7.14)
	S.D.	1.50	1.43	2.17	1.54	2.33
Part II	$\bar{X}$	6.70	6.90	7.00	6.80	6.85
	S.D.	1.10	1.51	2.28	1.33	2.26
Sub Total	$\bar{X}$	12.10 (12.55)	13.30 (13.88)	14.10 (14.75)	12.70 (13.23)	13.40 (13.99)
	S.D.	2.26	2.61	3.91	2.51	3.93
Total	$\bar{X}$	12.40 (12.92)	13.70 (14.32)		13.05 (13.62)	
	S.D.	3.15	3.35		3.32	

Table 2  
 Mean Number of Correct O-Responses and t-tests  
 for Five Affective Stimulus Conditions

Stimulus Condition	No. of Items	$\bar{X}_{corr.}$	$\bar{X}_{exp.}$	t
Happy	4	3.10	0.80	16.43*
Sad	6	2.58	1.20	5.11*
Mad	4	1.65	0.80	4.47*
Sad/Mad	5	3.45	2.00	7.25*
Afraid	4	2.28	0.80	9.87*
Total (obs.)	23	13.05	5.60	14.06*

\*p .001



Table 3

Distribution of 0-Responses (in percents) as a Function  
of Stimulus Conditions Represented in 23 Items of the IPT

Stimulus Condition	0-RESPONSES					Total # responses	
	Happy	Sad	Mad	Afraid	Neutral		Non- Response
Happy	77.5	5.0	4.4	6.3	6.3	0.6	160
Sad	12.9	42.9	22.1	11.7	7.1	3.3	240
Mad	11.3	27.5	41.3	11.3	6.9	1.9	160
Sad/Mad	13.0	41.0	28.0	13.5	2.5	2.0	200
Afraid	8.8	15.0	13.8	56.9	5.0	0.6	160
Total (Obs.)	f = 213	261	204	174	51	17	920
	% = 23.2	28.4	22.2	18.9	5.5	1.8	
Expected (chance)	f = 148	315	241	148			

Table 4

Distribution of S-Responses (in percents) as a Function of Stimulus  
Conditions Represented in 23 Items of the IPT (N=40)

## S-RESPONSES

Stimulus Condition	No. of Items	Happy	Sad	Mad	Afraid	Neutral	Non-Response	Total # Responses
Happy	4	74.4	2.5	3.8	3.8	4.4	11.3	160
Sad	6	67.5	5.8	5.0	2.1	7.5	12.1	240
Mad	4	64.4	5.6	8.1	5.6	4.4	11.9	160
Sad/Mad	5	67.5	5.5	6.0	5.0	6.0	9.0	200
Afraid	4	61.3	3.8	6.3	13.1	6.3	9.4	160
Total (Obs.)	23	f=617	46	53	51	54	99	920
		%= 67.1	5.0	5.8	5.5	5.9	10.8	100.0
Expected (chance)		f=164.2	164.2	164.2	164.2	164.2		

**Table 5**  
**Distribution of Responses to IPT by Two Age Groups**  
**Classified by Relationship of O- and S-Responses**

		O-RESPONSE			
		Correct	Incorrect	Total	
		Empathic	Egocentric		
S-RESPONSE	Matched to O	f	155	112	267
		%	17	12	29
			Cognitive	Random	
	Unmatched to O	f	367	269	636
		%	40	29	69
	Total	f	522	381	
		%	57	41	



## Abstract

Borke (1971) has examined the young child's ability to identify the affective state of others as a measure of empathy, which she has contrasted with Piaget's notion of egocentrism. Chandler and Greenspan (1972) have criticized this contrast. The present study attempted to operationalize the constructs of empathy and egocentrism and contrast them with a cognitive explanation of the behavior of children on a task which required S to identify both his own and others affective state.

Forty Ss, aged 3 - 5, were presented a series of 23 stories describing an event which had occurred to a same-sex child (O). S was asked to indicate "how O felt" by pointing to one of five faces which S had previously identified as Happy, Sad, Afraid, Mad, and Neutral. With each stimulus story, S was also asked to show how he felt. A counterbalanced design was employed in which half the Ss were questioned regarding their own affective state prior to indicating how O felt, while the remaining Ss responded to O's affective state first. Order of questioning had no effect on Ss' responses.

The double question allowed for four possible outcomes for each of S's responses: 1) an empathic response was one in which S correctly identified O's affective state and reported the same affective state for himself (correct and matched); 2) an egocentric response was incorrect and matched; 3) a cognitive response is correct and unmatched, and 4) a random error response is incorrect and unmatched.

Results indicate that: a) young children are capable of correctly identifying the affective states of others (57%), b) their self-responses are generally unrelated to their O-responses (69%), c) Ss typically describe themselves as Happy (67%) regardless of the emotion described

In the stimulus, and d) errors tend to be random, i.e., unrelated to either the particular affective state described in the story OR to their S-response (80%).

Empathy has generally been considered to mean that S understands and shares the feeling of another. Egocentrism would interfere to the extent that S's own affective state intrudes on his ability to empathize.

Results of the present study suggest that neither empathy nor egocentrism account for Ss performance on this task despite the fact that both measures are liberal estimates in that they include all correct and incorrect O-responses of Happy which would regularly be matched with a Happy S-response. Rather, Ss appear to have a cognitive understanding of O's affective state. This understanding is neither related to, nor intruded upon by, S's own affective state. Errors in O-responses follow the same pattern and appear to be random.



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