The relationship between empathic role-taking abilities and empathic behaviors observed in both naturalistic and experimental settings was examined in 14 children between the ages of 53 and 65 months. Children were observed at the McGill Daycare Centre twice a week for 8 weeks, totalling approximately 30 hours. Event sampling was used to record the frequency and duration of empathic behavioral interactions, defined as the presence (or absence) of a prosocial response to a peer's display of one of four categories of emotion (e.g., comforting responses, participation, etc., in response to peer's observed emotional state of happy, sad, angry, or afraid). Midway through the observation period, role-taking tasks were individually administered. These included measures of perceptual-cognitive and affective role-taking skills. At the end of the 8 week period an experimental task was administered in which children could privately donate from 0 to 10 pennies to an unknown child. Results provide information (1) describing the frequency and duration of various kinds of emotional behaviors and the responses to them in a naturalistic setting, and (2) intercorrelating the various cognitive, naturalistic, and experimental measures of empathy. (Author/SS)
EMPATHY AND EGOCENTRISM IN PRESCHOOLERS

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Paper presented at the meetings of the Canadian Psychological Association
Empathy has been regarded as a construct that mediates a variety of prosocial behaviors such as helpfulness and altruism (Ianotti, 1975). There have been 3 general approaches to defining empathy, focusing on either affect, cognition, or motivation. A frequent definition of empathy used in research with children is a cognitive one. The defining question here is: does the child understand how another person feels. Another prevalent definition stresses the affective component, and the defining question is: does the child feel the same way as another person feels. The motivational component of empathy seems to have been the least researched. It entails the question of whether empathy (either cognitively or affectively experienced) leads a child to do anything (Hoffman, 1977)

At this point a philosophic discussion of whether we're really dealing with the nature of "empathy" or "sympathy" may come to mind, but this is not the path I'd like to follow. Instead, there are some empirical considerations to deal with. These considerations involve the choice of methods and response criteria for assessing empathy in children. Another issue is whether and how different measures of empathy converge.

Role-taking measures using stories were originally developed to find out about the empathic judgments of children at various ages. However, the main concern, it seems to me, is not whether children can or cannot process these stories, but whether the inferred skills involved might have consequences for the development of empathic behaviors.

Another line of investigation has used more direct experimental methods to assess empathically motivated behaviors. For example, children
given pennies for themselves are told a story about a poor, far-off child. The dependent variable is how many pennies they choose to donate (Rushton & Wiener, 1973). The behavior measured in this task is more concrete and deals more directly with behavioral consequences than do the role-taking tasks, but the child's response is still to an imaginary situation prevaricated by an adult. This brings us to what I think is the central issue -- real life behaviors. And, in particular, those real life behaviors that are consequences of processing emotional and situational cues presented by another person in a real life context. Once we know something of this we can investigate these behaviors in relation to role-taking and to experimental tasks, and in this way assess the construct validity of empathy.

The present study was designed to investigate the relationship between role-taking abilities and behaviors observed in an experimental and a naturalistic setting.

**Method**

The subjects of this study were 14 children (10 boys, 4 girls) whose mean age was 59 months (range = 53-65 mos.), and who attended the McGill Daycare Center.

Children were given two role-taking tasks. The first was a perceptual cognitive task developed by Flavell and colleagues (1968) that required the child to recognize the particular face of a cube that another person saw in contrast to what the child herself saw. The other task (based on Urberg & Docherty, 1976) involved affective role-taking. Children were shown pictures and read an accompanying story.
The characters in the first set of pictures (n=3) have facial expressions different from ones typical of that situation. For example, a birthday boy is shown frowning. The child is asked how the story child feels. A second series of pictures and stories (n=3) requires the child to assess the different emotions of story characters based on their different experiences. The subject's information conflicts with the story child's information, and she is asked how the story child feels.

The naturalistic observations of these children took place at the daycare center twice a week for eight weeks, and totalled approximately 30 hours. Event sampling was used to record the frequency and duration of empathic behavioral interactions, defined as the presence of a prosocial response to a peer's display of one of four categories of emotion -- happy, sad, angry and hurt. Examples of prosocial responses were comforting, help-giving, and reinforcing comments. The interactional demand of each episode was scored by noting whether a response was requested by the first child (such as soliciting help when hurt) or whether the response occurred spontaneously without a direct prompt to act. Inter-observer reliabilities between two observers for the emotional states displayed and for the responses coded were both .89, based on % agreement on observed episodes.

At the end of the eight week period an experiment in donating (adapted from Rushton & Weiner, 1975) was administered. The children were given 10 pennies in the morning. Later that day the group was told about a little girl whose family was very poor. The children were told that if they had any money they wanted to give to help this child they could leave as much as they wanted in a special box. They were reminded that they
didn't have to give anything if they didn't want to. The box was left in a room where the children could donate privately. The score for each child was the sum of pennies donated, if any.

Results

I'd like to report the results to you first in terms of the observational data on naturally occurring empathy, which I think are most important in themselves, and then I'll turn to the intercorrelations among the various measures of empathy.

Observational Results: The observational data are summarized in Table 1. The criterion for an empathic interaction required an observable emotional display to occur first. This does not happen as frequently as one might think in a group of children. Of the 30 hours of observation time, 423 such opportunities for empathic responses occurred. Thirty nine percent of these emotional displays were responded to with empathic behaviors. Most emotional displays did not involve a deliberate request for a response (column 3), and most responses were spontaneous rather than solicited (column 6). Spontaneous responses were most frequent across all categories with the exception of displays of anger, which received a higher percent of empathic responses when these were solicited. Table 1 also shows the distribution of emotion categories displayed by these children. The most frequent emotions displayed were happy and sad, accounting for 64% of all observations (34% and 30% respectively). We see in column 2 that children were most responsive to happy displays (50%). They most often responded spontaneously with reciprocal smiles or laughs. Empathic responses to
anger occurred least often. The most frequent of these responses were attempts to calm the child. Sad displays were most often responded to with an offer to share something or to give up an object. Displays of hurt seldom occurred, and were responded mostly with questions showing concern, such as "Are you O.K."

Let me know turn to the intercorrelations among the various measures. Correlational Results:

Relations among the various measures of empathy were assessed using Kendall's tau, and these results are shown in Table 2. To explain the headings, "Emp. Given" refers to instances in which children were agents showing empathic behaviors. "Emp. Rec'd" refers to instances in which children were recipients of empathic behaviors. "Spontaneous Emp". refers to empathic behaviors in which the preceding emotional display did not contain a direct request for involvement; and "Prompt" refers to those empathic behaviors preceded by emotional displays in which there was a direct request.

Naturalistically observed empathy correlated with role-taking in the following way. Incidents of empathy spontaneously given to peers correlated significantly with affective role-taking; whereas, empathy received upon requests correlated significantly with perceptual role-taking (and also with donations given in the experimental situation). Donating behavior, in the experimental situation correlated significantly only with the perceptual, and not the affective role-taking measure.
Discussion

In discussing these results there are a few comments I'd like to make concerning the issue of construct validity and the preferential weighing of different sources of information. Since the major interest of this work was to investigate naturally occurring behaviors that might be empathically motivated let me turn to the observational analysis first.

The overall percent of empathy responses by preschoolers to an emotional display by their peers was 39%. While this is not a record-breaking percentage, it does indicate to me that your children are aware that others feel differently from them, and that they can also do something about sharing the other's feelings. I don't know on a behavioral level how sophisticated this awareness needs to be. But the behavioral index of 39% empathic responses for these children is, after all, only a performance baseline. It may set the lower limit as an index of the child's empathic awareness.

These naturally occurring behaviors seem to provide the most direct route for validating the construct of empathy. There were few cases in which deliberate prompts were used by children to solicit another's response. Most often the children responded spontaneously to emotional cues displayed.

The correlational results do not show us a unified picture of empathy. The two role-taking measures did not correlate, and there is no evidence in this study to suggest that they measure similar skills.

Empathy observed in the naturalistic setting could not be explained in terms of measured role-taking skills, given the relatively small
proportion of variance accounted for by these tasks. The pattern of correlations suggests, though, that responding empathically is related somewhat more to affective role-taking skills, and receiving empathy when requested is rated more to perceptual role-taking skills. In addition, only the perceptual role-taking skills correlated significantly with donating in the experimental situation. Perhaps person - or situation - perception is involved in selecting what to do to elicit empathy in a particular situation as well as the target child to direct this to. An interesting question is whether it is the role-taking skills that get translated into the natural setting, or whether the reverse is true.

As a final point, empathy in the natural setting does not seem to be based on reciprocal reinforcement in any obvious way. Children who received empathy from others did not necessarily give it to their peers. However, those who received empathy when they requested it did tend to donate pennies in the experiment that requested it.

In conclusion I think we are dealing with a construct—empathy—whose role-taking properties as we can now measure them do not explain the empathic behaviors that we can nevertheless attribute to young children. And it is these kinds of observed behaviors that I think provide the most valuable tools in helping to establish a response criterion for empathy in its various aspects.
References


Table 1.

Frequency of Antecedent Emotion Categories and Frequency & Percent Empathic Responses in Each Category

<table>
<thead>
<tr>
<th>Antecedent Category</th>
<th>Emotion</th>
<th>Freq.</th>
<th>%Spontaneous vs. Requests</th>
<th>Empathic Responses</th>
<th>Freq.</th>
<th>% Total Opportunities</th>
<th>%Spontaneous vs. Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAPPY</td>
<td>144</td>
<td></td>
<td>57%</td>
<td></td>
<td>72</td>
<td>50%</td>
<td>62%</td>
</tr>
<tr>
<td>SAD</td>
<td>127</td>
<td></td>
<td>84%</td>
<td></td>
<td>51</td>
<td>40%</td>
<td>86%</td>
</tr>
<tr>
<td>ANGRY</td>
<td>95</td>
<td></td>
<td>64%</td>
<td></td>
<td>23</td>
<td>24%</td>
<td>43%</td>
</tr>
<tr>
<td>HURT</td>
<td>57</td>
<td></td>
<td>93%</td>
<td></td>
<td>17</td>
<td>30%</td>
<td>100%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>423</td>
<td></td>
<td>72%</td>
<td></td>
<td>163</td>
<td>39%</td>
<td>71%</td>
</tr>
</tbody>
</table>
### Kendall's Rank-order Correlations Among Measures of Empathy

<table>
<thead>
<tr>
<th>EMP-Given:</th>
<th>EMP-Received:</th>
<th>PRT</th>
<th>ART</th>
<th>EXP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Spon. Prompt.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMP-Given:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.00</td>
<td>0.79**</td>
<td>0.73**</td>
<td></td>
</tr>
<tr>
<td>Spon.</td>
<td></td>
<td>0.22</td>
<td>0.31</td>
<td>0.26</td>
</tr>
<tr>
<td>Prompt.</td>
<td></td>
<td>0.11</td>
<td>0.13</td>
<td>0.07</td>
</tr>
<tr>
<td>EMP-Received:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>0.28</td>
<td>0.30</td>
<td>0.24</td>
</tr>
<tr>
<td>Spon.</td>
<td></td>
<td>0.28</td>
<td>0.30</td>
<td>0.24</td>
</tr>
<tr>
<td>Prompt.</td>
<td></td>
<td>0.40</td>
<td>0.10</td>
<td>0.46</td>
</tr>
<tr>
<td>PRT</td>
<td></td>
<td>0.38</td>
<td>0.42*</td>
<td>0.45</td>
</tr>
<tr>
<td>ART</td>
<td></td>
<td>0.38</td>
<td>0.38</td>
<td>0.52</td>
</tr>
<tr>
<td>EXP</td>
<td></td>
<td>0.45</td>
<td>0.45</td>
<td>0.46</td>
</tr>
</tbody>
</table>

*P < .05, **P < .01.

**EMP**: Empathy behaviors given to and received from peers based on observations of spontaneous vs. prompted opportunities

**PRT**: Perceptual role-taking task

**ART**: Affective role-taking task

**EXP**: Experiment in donating pennies
The relationship between empathic role-taking abilities and empathic behaviours observed in both naturalistic and experimental settings was examined in 14 children between the ages of 53-65 months. Children were observed at the McGill Daycare Centre twice a week for eight weeks, totalling approximately 30 hrs. Event sampling was used to record the frequency and duration of empathic behavioural interactions, defined as the presence (or absence) of a prosocial response to a peer's display of one of four categories of emotion (e.g. comforting responses, participation, etc. in response to peer's observed emotional state of happy, sad, angry, or afraid). Inter-judge reliabilities for emotional state displayed and response of peer were both .89. Midway through the observation period role-taking tasks were individually administered. These included measures of perceptual-cognitive (Flavell et al., 1968) and affective (Urberg & Docherty, 1975) role-taking skills. At the end of the eight week period an experimental task (adapted from Rushton & Wiener, 1973) was administered in which children could privately donate from 0 to 10 pennies to an unknown child.

Results provide information (1) describing the frequency and duration of various kinds of emotional behaviours and the responses to them in a naturalistic setting, and (2) intercorrelating the various cognitive, naturalistic, and experimental measures of empathy. Frequencies for the four emotional behaviours and the percent of both spontaneous and elicited responses to them are reported. For example, "happy" emotional displays were highest in frequency and received the highest percent responses from peers.

Intercorrelations (Kendall's rho) among the measures of empathy showed significant positive correlations between affective role-taking skills and the extent to which empathic responses are given, and between perceptual role-taking skills and the extent to which empathic responses are received. The experimental task did not correlate significantly with either of the behavioural measures.