

DOCUMENT RESUME

ED 358 933

PS 021 449

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 TITLE Scaffolding Young Children's Prosocial Responsiveness: Preschoolers' Responses to Adult Sadness, Anger, and Pain.
 PUB DATE Mar 93
 NOTE 46p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (60th, New Orleans, LA, March 25-28, 1993). For a related paper, see PS 021 448.
 PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)
 EDRS PRICE MF01/PC02 Plus Postage.
 DESCRIPTORS Anger; *Child Behavior; *Emotional Response; Pain; *Preschool Children; Preschool Education; *Prosocial Behavior
 IDENTIFIERS Adult Child Relationship; *Child Responsiveness; *Negative Emotions; Sadness; Scaffolding

ABSTRACT

Two studies investigated children's responsiveness to an adult's negative emotions (anger, sadness, and pain). The studies also evaluated effects of adult scaffolding (labeling and explaining negative emotions, and requesting help). In the first study, subjects were 55 preschool children between the ages of 33 and 56 months. During individual play sessions, the experimenter enacted two vignettes involving each of the three negative emotions. Children's reactions to the negative emotion, as well as their reactions after it was explained and after prosocial behavior was requested, were rated for level of prosocial response. In the second study, subjects were 58 preschool children between the ages of 39 and 66 months. Emotional displays were enacted, as in the first study. In addition, children were assigned to one of three conditions: the experimenter displayed the emotion; the experimenter displayed the emotion and explained how she felt; or the experimenter displayed the emotion, explained how she felt, and requested help from the child. Videotaped recordings of the interactions were rated for children's responsiveness to each emotion display. Analysis revealed that overall, subjects in both studies exhibited moderate levels of spontaneous prosocial response to negative emotion. Prosocial behavior increased after the emotion was explained. Children responded most prosocially to anger and least prosocially to pain.
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Scaffolding Young Children's Prosocial Responsiveness:
Preschoolers' Responses to Adult Sadness, Anger, and Pain

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Parts of this investigation constitute the second and third authors undergraduate honors theses, and were reported on at the 1988 Conference on Human Development, Charleston, SC, and at the 1993 Society for Research in Child Development Meetings, New Orleans, LA. Our thanks to Ted Gessner, James Maddux, and June Tangney for their helpful comments on earlier versions of this manuscript, and to Caroline Mitchell, Beth Pierson, and Tanya Yiasemides for their assistance in collecting data. Reprint requests can be directed to the first author at the Department of Psychology, George Mason University, 4400 University Drive, Fairfax, VA, 22030.

RUNNING HEAD: Contributions to Prosocial Behavior

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Abstract

Children's responsiveness to a female adult's negative emotions was investigated in two studies. During individual play sessions with 55 preschoolers (mean age = 48 mos), the experimenter enacted two vignettes involving each of three emotions: anger, sadness, and pain. The children's reactions to her negative emotion, as well as their reactions after it was explained, and after prosocial behavior was requested, were rated for level of prosocial response. Overall, prosocial behavior increased after the experimenter labeled and explained the emotion she felt. Children responded most prosocially to anger, and least prosocially to pain. Requesting help affected prosocial responsiveness only for sadness and anger. The results are discussed with reference to young children's need for information regarding certain adult emotional displays, and their need to feel competent to perform prosocial actions.

Scaffolding Young Children's Prosocial Responsiveness:
Preschoolers' Responses to Adult Sadness, Anger, and Pain

The facial and vocal messages imparted by others' emotional displays are very salient in the young child's world. Children's empathic responses to negative emotion cues can motivate them to respond in a prosocial manner (i.e., with direct benefit to the other; Batson, O'Quin, Fultz, Vanderplus, & Isen, 1983; Eisenberg, 1986; Eisenberg, Lundy, Shell, & Roth, 1985). Spontaneous prosocial responses to negative emotions begin very early in life; generally, even toddlers react to others' negative emotion with concerned attention and agitation. Children two years and older begin to respond to negative emotion with pragmatic, often prosocial, concern (Radke-Yarrow & Zahn-Waxler, 1984; Hoffman, 1982).

But young children may not spontaneously respond prosocially to others' negative emotion. They may need more information than merely the distressed person's overt emotional displays before they are motivated or able to help. Adults, in their teaching young children about social behavior, may provide such scaffolding (Hartup, 1989; Hodapp, Goldfield, & Boyatzer, 1984): They secure the child's attention, set the stage for prosocial responsiveness, provide the appropriate context for the

child's response, and analyze the tasks of social interaction into workable components.

The two studies presented here test two possible scaffolding determinants of prosocial responses to the negative emotion of a familiar adult: (1) labeling and explaining the adult's emotion; and (2) requesting a prosocial intervention. Young children's spontaneous reactions to three negative emotions were evaluated in order to have baseline data against which to evaluate the effectiveness of these possible facilitators of prosocial responsiveness.

Preschoolers can use information and explanations that call attention to the existence of negative emotion, clarify its nature, interpret their own affective reaction to it, and emphasize the needed response (Hoffman, 1984; Pearl, 1985). They are learning to make inferences about emotional viewpoints salient and different from their own, understand much about the causes and consequences of emotions, and use emotion language appropriately (Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986; Denham & Couchoud, 1990a, 1990b; Dunn, Bretherton, & Munn, 1987; Higgins, 1981; Michalson & Lewis, 1985). Young children are also increasingly capable of sympathy, which may motivate prosocial behavior (i.e., feeling not the same negative

emotion, but an emotion congruent with the distressed other's state and welfare; Eisenberg, 1986; Hoffman, 1976, 1982, 1984).

Both naturalistic and laboratory evidence point to the usefulness of explanations of negative emotion and their causes (e.g., causal attributions like "Johnny feels really sad because you hit him"). Parents who use affect-laden explanations of others' negative emotions have children who make more prosocial reparations (Zahn-Waxler, Radke-Yarrow, & King, 1979). Explicit cues describing negative emotions and their causes contribute to the performance of prosocial responses (Pearl, 1985).

Parents' requests that the child take action also may be very important (e.g., "Please tell Johnny that you are sorry"; see Eisenberg et al., 1985). Earlier evidence highlights the necessity to consider children's experience with negative emotion, as well as their feelings of competence and responsibility, when predicting their prosocial responsiveness (Pearl, 1985; Peterson, 1983). For example, inexperienced preschoolers may have few strategies which link another person's negative emotion with an appropriate prosocial reaction. They also need explicit cues that they are responsible and competent to provide help.

Our studies' first goal, then, was to evaluate the effects of adult scaffolding: labeling/explaining negative emotion, and requesting help on preschoolers' prosocial responding. Specifically, it was predicted that labeling the emotion would lead to higher levels of prosocial responsiveness, when compared to spontaneous prosocial behavior after the adult displayed negative emotion. It also was predicted that the experimenter's request for help would lead to an additive increase in prosocial responsiveness because it provides important contextual information and a demand for compliance (i.e., "This is a time where your help is needed. Do what you can. NOW.").¹

The second goal of this research was to explore preschoolers' prosocial reactions to different emotion displays. Because of the differential social messages conveyed by different emotions, children's overall level of prosocial responsiveness was expected to differ according to the emotion shown by the adult (Izard, 1991). Moreover, differing responsiveness also could be expected because young children's experience competence at helping, and perceived responsibility vary across negative emotions (Peterson, 1983). Three negative emotions which vary along these dimensions were chosen for these studies: anger, sadness, and pain.

Because the message conveyed by an adult's anger includes retaliation against the instigator of the blocked goal state (Izard, 1991), witnessing it may activate automatic "scripts" for prosocial responding (Eisenberg, 1986; cf. children's anger, see Denham 1986; Strayer & Schroeder, 1989); self protection bolsters children's competence to respond. Children also may have more direct experience with parental anger than with either parental sadness or pain. And they often feel responsible for parental anger (Covell & Abramovitch, 1987). Thus, when all hypothesized determinants are considered, responsiveness to anger should be high.

Response to sadness may be of intermediate level. First, the social message of adult sadness is nonvolatile: The sad adult is likely to disengage and withdraw, and may not call for as immediate a response as does the angry adult. Second, children have less direct experience with adult sadness (Denham & Grout, 1992), and consequently may feel less competent and see fewer obvious remedies for it. In contrast, however, adult sadness also may evoke children's feelings of responsibility and sympathy which motivate a degree of prosocial responsiveness. Thus, when all hypothesized determinants are considered, responsiveness to sadness should be relatively high, but less than to anger.

The message conveyed by pain is a powerful one which often solicits prosocial responsiveness. However, more compelling competing factors suggest that children will respond less prosocially to an adult's pain than to their anger or sadness. They would likely have very little experience intervening in adult pain, and would be unlikely to see themselves as either responsible or competent to "fix" it (Caplan & Hay, 1989). They also may see event of injury as threatening to themselves. Thus, when all hypothesized determinants are considered, responsiveness to pain should be intermediate to low.

The studies' third goal was to assess the potentially differing, interactive, effects of labeling emotions and requesting help across each of the three emotions displayed. It was predicted that labeling the emotion would facilitate prosocial response for each emotion, because of prepotence of explicit cues (Pearl, 1985). But, because of the contextual factors of inexperience, lack of responsibility, and incompetence, requesting help might not result in uniformly increased prosocial behavior following each emotion, particularly pain.

In the first study, these adult expressions of negative emotion were presented in a within-subjects design, with emotional displays, explanations, and

requests for help occurring as they might in real interactions (e.g., "Ugh <irritable grumble>! It makes me so mad when these napkins fall all over the floor. Jimmy, can you help me pick them up?"). These same experimental manipulations were presented in a between-subjects design in the second study; the display of negative emotions was either unaccompanied by any verbalization, accompanied by an explanation, or accompanied by an explanation and a request for help.

In the first study, sensitization to repeated or prolonged displays of negative emotion could explain preschoolers' prosocial responsiveness as plausibly as the scaffolding condition. The design modification in the second study was implemented to rule out this sensitization inherent in the first design. Videotaping the paradigm also eliminated the need for narrative recording.

In summary, the major predictions for both studies were as follows: (1) Preschoolers' prosocial responsiveness to an adult's negative emotion will be highest when the adult labels her negative emotions (i.e., sadness, anger, pain) or requests help; (2) Subjects will respond more prosocially to anger than to either sadness or pain; and (3) The effect of requesting help will differ across emotions.

Study One

Method

Subjects. Subjects for the first study were 55 preschool children enrolled in a university-affiliated preschool program (30 boys and 25 girls), ranging in age from 33 to 56 months, $M = 44.16$ mos, $SD = 6.04$ mos. There were two two-year-olds, 37 three-year-olds, and 16 four-year-olds. For subsequent analyses, younger and older groups of children were created by splitting them at the median for age (44 mos).

Families were homogeneous regarding parental education. Median levels of parental education were college degree and college degree plus some graduate school, for fathers and mothers respectively.

Manipulation. The experimenter, who was blind to all experimental hypotheses, was extensively trained prior to data collection. During piloting, she was trained to portray emotional displays of sadness, anger, and pain, by matching the displays described in several well-validated facial expression coding systems (see Ekman & Friesen, 1984; Izard & Dougherty, 1982; Malatesta & Izard, 1984). She was also trained in vocalizing sadness (a steady or falling pitch, with slow speed), anger (clipped, abrupt, expelled syllables with a growling quality), and pain (high pitch). Then she was given practice in portraying these facial displays

and vocalizations, with feedback. Last, an independent panel of three judges blindly rated her facial displays and vocalizations, separately, via photograph and audiotape; all judges were able to label each of the three displays accurately.

The experimenter also was trained during piloting to make shorthand narrative records of the subjects' behavioral and affective reactions to these emotional displays. Subsequent to this training, the experimenter and the first author made narrative records of 10 children. The narrative records made by the experimenter and the first author for these pilot subjects were quite similar; when rated by two independent raters, their reliabilities exceeded .90 in each case.

After this training, data collection began. The adult female experimenter spent over six hours freely interacting with the children in the preschool setting before beginning to work with them. After this familiarization, subjects left their preschool classroom with her for randomly scheduled play sessions. They were taken to a small room within the preschool, where they were exposed to the experimenter's standardized, scripted emotional displays of sadness, anger, and pain. These displays were interposed in a natural way within

the flow of an approximately 35-minute long play period. See Appendix 1 for the six vignettes, two per emotion, within which displays were embedded, and their order.

Because of the naturalistic nature of the procedure embedded within play, it was necessary for the experimenter to memorize the order of vignettes, and their accompanying emotional displays. Thus, although randomizing the order of the vignettes would be desirable, it was deemed impractical; an experimenter fumbling through the vignettes would not be believable. A fixed order of presentation of emotional displays therefore was used: sadness, anger, pain, anger, sadness, and pain. The fact that each emotion was presented for two sets of three conditions each (i.e., spontaneous, labelled, and help requested) partially obviates the emotion-order confound.

Within each of these six vignettes, there were three emotion displays; thus there were 18 total displays of the three emotions. The procedure was as follows. First, the experimenter displayed the emotion. The child's spontaneous reactions were recorded, in shorthand, by the experimenter. After 20 seconds (measured by a watch second hand), the experimenter again facially and verbally depicted the emotion, and labelled/explained how she felt; the reactions of the

child were again recorded. After another 20 seconds, the experimenter again verbally and facially depicted the emotion, and requested help, saying, "Will you help me?" The child's reactions were again recorded.

The shorthand narrative records of the children's behavioral and affective reactions for each of the six trials per emotion were rated for prosocial responsiveness by two independent raters, using a mutually exclusive 1- to 7- point scoring system, which ranged from active avoidance or non-cooperation to giving physical comfort or appropriate aid (see Appendix 2 for the entire coding system, and also Iannotti, 1985). Interrater reliabilities were calculated via Finn's \underline{r} (Whitehurst, 1984), a kappa-like index of non-chance reliability for ordinal rating scales. Interrater reliabilities, calculated via Finn's \underline{r} , were in the high .90s. For subsequent analyses, responsiveness ratings for each experimental condition were collapsed across vignettes; thus for each emotion there was one summed score for spontaneous emission of the emotion, one for labelling/ explaining the emotion, and one for requesting help.

Results

Oneway ANOVAs showed that there were no gender effects on any ratings of prosocial responses to

negative emotion; this variable was not included as a grouping variable in subsequent analyses. Thus an Age (2) X Emotion (3) X Scaffolding (3) repeated measures ANOVA was next performed on the data; only twoway interactions were interpreted for both studies because of cell size. Cell and marginal means for emotions and Scaffolding are shown in Table 1. The effect of Age was nonsignificant, $F(1, 53) = 0.00$.

Insert Table 1 about here

The effect of Scaffolding was significant, $F(2, 106) = 38.19$, $p < .0001$. Planned mean comparisons for repeated measures (Keppel, 1973) indicated that labeling the emotion resulted in increased prosocial responsiveness above the spontaneous response baseline, and that requesting help resulted in an additive increase, $F_s(1, 53) = 65.20$ and 12.82 , $p < .0001$ and $.001$, respectively.

The effect of Emotion also was significant, $F(2, 106) = 40.63$, $p < .0001$. Planned mean comparisons showed that anger elicited a higher mean level of prosocial responsiveness than either sadness or pain, $F(1, 53) = 38.57$ and 82.81 , respectively, $p < .0001$. Sadness was responded to at a higher level than pain, $F(1, 53) = 11.19$, $p < .01$.

The ANOVA also revealed a Scaffolding X Emotion interaction, $F(4, 212) = 9.92, p < .001$. Simple main effects analyses for repeated measures (Keppel, 1973) indicated that the effect of Scaffolding was more significant for displays of sadness and anger, $F_s(2, 106) = 24.65$ and 50.73 , respectively, $p < .0001$, but not for pain, $F = 2.15$. Followup contrasts showed that prosocial responsiveness increased across all three conditions for sadness and anger, $F_s(1, 53) = 51.36$ and 58.99 for change between spontaneous and labelled presentations, $p_s < .0001$, and $F_s(1, 53) = 4.92$ and 32.21 for change between labelled and requested presentations, for sadness and anger, respectively, $p_s < .05$ and $.0001$ (see Figure 1).

Insert Figure 1 about here

Study Two

Method

Subjects. Subjects for the second study were 58 preschool children enrolled in one preschool and three daycare centers (28 boys and 30 girls), ranging in age from 39 to 66 months, $M = 50.84$ mos, $SD = 7.18$ mos. There were 21 three-year-olds, 27 four-year-olds and 10 five-year-olds. For subsequent analyses, younger and older groups were formed by splitting age at its median, 50 months. These subjects thus were six months older,

on average, than those of Study One, $t(111) = 13.80, p < .0001$.

Parents' educational levels were somewhat more heterogeneous than those in Study One. Median level of maternal education was some college education, whereas median level of paternal education was a college degree. Study Two mothers' education was lower on average than Study One's mothers, $X^2(N = 113, df = 1) = 6.78, p < .01$.

Manipulation. Both training and the procedure for interposing standardized, scripted emotional displays within play were identical to that in Study One, with the exception that the interactions were videotaped (obviating the need for narrative records). In addition, children were randomly assigned to one of three conditions: (1) the experimenter displayed the emotion ($N = 13$); (2) the experimenter displayed the emotion, and labelled/explained how she felt ($N = 24$); or (3) the experimenter displayed the emotion, labelled/explained how she felt, and requested help, saying, "Will you help me?" ($N = 21$). Thus, children were exposed to only six total displays of the three emotions, rather than 18.

The videotaped records were rated for children's responsiveness to each emotion display, using the 1- to

7- point scoring system. Fifteen subjects were rated by two raters. For sadness and anger average Finn's r were .99 and .94, respectively; Finn's r for pain was .76. For subsequent analyses, scores for each emotion were summed across vignettes; thus there was one score for sadness, one for anger, and one for pain.

Understanding of Emotion

As a possible explanation for interstudy variation, children in both studies were administered a puppet measure of understanding of equivocal emotion situations (i.e., those which could conceivably elicit different emotions, such as happiness or fear at approaching a swimming pool; see Denham & Couchoud, 1990a, 1990b, 1991 for details). Children viewed puppets' enactment of 12 randomly ordered emotion-laden vignettes, accompanied by the puppeteer's standard facial and vocal expressions of emotions. They were asked to respond to the question, "How does the puppet feel?" by affixing a flannel face with the appropriate emotional expression on the puppet (from a choice of happy, sad, angry, and afraid). The emotion shown by the puppet/experimenter in each vignette was determined by information given by the subjects' mothers, who had picked the most likely emotional reactions that their child would show in each equivocal situation. The same-sex puppet depicted the

emotion which the subject's mother had not picked (e.g., if the mother indicated that the child would be happy to come to preschool, the puppet acted sad).

Children received two points for a correct answer, and one point for correctly specifying only the emotion's positivity or negativity (e.g., choosing a sad rather than the correct angry face). Emotional situation identification scores are summed across emotions. Cronbach's alpha for this score was .82.

Results

Oneway ANOVAs again showed that there were no gender effects on any ratings of prosocial responses to negative emotion; this variable was not included as a grouping variable in subsequent analyses. Thus an Age (2) X Emotion (3) X Scaffolding (3) mixed model ANOVA was next performed on the data. Cell and marginal means for Emotions and levels of Scaffolding are shown in Table 1. The effect of Age was nonsignificant, $F(1, 52) = 0.28$.

The effect of Scaffolding was marginally significant, $F(2, 52) = 2.81, p < .07$. Planned mean comparisons for between subjects designs (Keppel, 1973) indicated that labeling the emotion and requesting help resulted in marginally higher ratings of responsiveness, $F_s(1, 52) = 2.89$ and $2.72, p_s < .10$. The effect of Emotion was

significant, $F(2, 104) = 26.53, p < .0001$. Planned mean comparisons for repeated measures showed that children in Study Two were more prosocially responsive to either sadness or anger than to pain, $F(1, 52) = 41.67$ and $40.87, p < .001$. Responsiveness to anger and sadness were roughly equivalent, $F = 0.06$.

The ANOVA also revealed an Age X Scaffolding interaction, $F(4, 104) = 4.13, p < .05$. Simple main effects analyses (Keppel, 1973) indicated that the effect of Scaffolding was significant for younger, but not for older, children, $F_s(2, 52) = 40.05$ and $2.56, p < .0001$ and ns, respectively. Followup contrasts showed that younger children who witnessed the labelled presentation of the emotions were more responsive than those who saw the spontaneous presentation, $F(1, 52) = 26.67$. Younger children who were asked to help were more responsive than those who saw the labelled presentation, $F(1, 52) = 74.28, p_s < .05$ (see Figure 2).

There was also an Age X Emotion interaction, $F(4, 104) = 4.07, p < .05$. Simple main effects analyses (Keppel, 1973) indicated that there was an age effect for anger only, $F(1, 52) = 4.99, p < .05$ (see Figure 3); older children responded more prosocially to anger.

Insert Figures 2 and 3 about here

Study Two was undertaken to rule out emotional sensitization within the repeated measures paradigm as an explanation for the Scaffolding effect. In both studies, Scaffolding (i.e., none vs. labelled/explained vs. labelled/explained and requested) influenced prosocial responsiveness. Although the Scaffolding effect was only marginal in Study Two, it was moderated by age: Younger subjects, who were closer ages of Study One children than the older children in Study Two, used the information inherent in labelling the emotion and requesting help, similar to the children in Study One.

What overall difference between studies is age indexing? One obvious possibility is that the children in Study Two, being older, were more adept at understanding emotion, and thus needed less adult scaffolding of the situation. In fact, Study Two children scored higher on emotion understanding than those in Study One, $F(1, 111) = 5.11, p < .05$ ($M_1 = 17.94$ vs. $M_2 = 22.00$; see also Denham & Couchoud, 1991).

Discussion

This study tested two possible scaffolding determinants of prosocial responses to negative emotion, labelling and explaining emotions and requesting help. Overall, subjects exhibited moderate levels of spontaneous prosocial response to the negative emotion

of others, commensurate with other reports (e.g., Radke-Yarrow, Zahn-Waxler, & Chapman, 1983). For example, children said "I'll build it for you," and did so, after the adult evidenced anger at building a block tower, offered the sad adult a block or a verbal strategy to alleviate sadness (e.g., "turn the page"), and suggested getting a bandage or rubbed the adult's "wound" when she stuck herself with a pin.

Findings regarding the effectiveness of both labeling/explaining negative emotion and requesting help are generally consistent with the application of scaffolding theory to social development (Hartup, 1989; Hodapp, Goldfield, & Boyatzer, 1984). Scaffolding via explanation and direction aids in maximizing preschoolers' prosocial responsiveness. That is, the expressed emotion gets the child's attention. The explanation/labeling of the emotion further sets the stage with the inclusion of crucial information which may give the child a better idea of how to respond (e.g., "She's sad; I don't like to feel sad; maybe I can help her").

The first social scaffolding component augmented children's responsiveness: They showed increasingly prosocial responses to negative emotion after the adult labeled her emotions. This finding supports the notion

that labelling the negative emotion could facilitate sympathy, and thus motivate prosocial responses to the adult's negative emotion (Eisenberg, 1986). Firmer conclusions on this point await more fine-grained analyses of children's emotional expressiveness during these play sessions.

The second social scaffolding component also enhanced children's responsiveness: They showed increasingly prosocial responses to negative emotion after the adult requested help. Increased personal attribution for the motivation of prosocial behavior (i.e., Am I capable of helping? Am I responsible?) are a plausible explanation for these increased prosocial ratings after requests for help (Eisenberg, 1986). In fact, feeling responsible, even a bit guilty, has been previously related to prosocial responses to an adult's negative emotion (Chapman, Zahn-Waxler, Cooperman, and Iannotti, 1987). Another explanation is that a request for help also gives the child an even more explicit demand for action: "This is a situation where your help is needed and expected" (Eisenberg et al., 1984).

Children also exhibited differential responsiveness to the three negative emotions displayed by the adults. Across the two studies, children responded most prosocially to anger, a highly interpersonal emotion

which often occurs with aggression (Averill, 1983). Anger is highly salient and distressing in children's family lives (Cummings, 1987; Cummings, Iannotti, & Zahn-Waxler, 1985; Cummings, Zahn-Waxler, & Radke-Yarrow, 1981, 1984). Children pay close attention to the anger of adults in their environment, and may be more familiar with it than adult sadness or pain. Parents and teachers feel free to express anger around children, but may mask their sadness or pain when children are present (Cummings, 1987; Cummings et al., 1984; Denham & Grout, 1992).

It would be adaptive for preschoolers to feel their own negative emotion in the face of such anger (Bretherton et al., 1986). Children, especially the older preschoolers in Study Two, may have more automatic prosocial routines to assuage an adult's anger compared to either sadness or pain, because of its ubiquity and dysregulating effect. In contrast, devising responses to sadness and pain appeared to be more difficult. For example, children sometimes simply ignored sadness, and sometimes resorted to egocentric responses to pain (e.g., saying, in a puzzled way, "I didn't bump mine," "Don't stick me!").

Although empathic prosocial motivation to help has been emphasized here, children's response to adult

negative emotion could instead be egoistic (Eisenberg, 1986; Piliavin, Dovidio, Gaertner, & Clark, 1981). Children's arousal caused by an adult's negative emotion may be reduced quickly, effectively, and with least cost by helping when the adult requests it. This explanation is consistent with research indicating that young children cite adults' authority and the possibility of punishment as reasons for complying to their requests for help (Eisenberg, Pasternack, Cameron, & Tryon, 1984; Eisenberg et al., 1985). Moreover, when interacting with an adult, children have few means of escape; assisting may be the best way to alleviate any arousal and/or danger (Batson, 1987).

In order to disentangle the affective bases of prosocial responsiveness, future research should relate children's facial/gestural reactions to their prosocial or nonprosocial responses to both children and adults (see Eisenberg, McCreath, & Ahn, 1988). For example, children's prosocial response to adult anger may be related to their own self-focused apprehension and anxiety, whereas their concern and sympathy may predict prosocial responsiveness to adult sadness. Alternatively, children who respond prosocially may show sympathy and concern towards other children's negative emotions, but a apprehension in response to those of adults.

In Study One, requesting help did not increase prosocial responses equally effectively across emotions. Requesting help did not promote prosocial behavior after pain was displayed. The subjects' responses to pain suggest that they did not feel responsible to help a non-family member ("I always help my Mom, I don't help anyone else", "No, you hafta fix it"), or that they were not competent to help ("I don't have any medicine", "I don't think I can", or simply "I can't help you").

When confronted with adult pain, children appeared to need clarification of their responsibility, and also reassurance of their own competence and safety, as well as quite specific action strategies about what to do (Pearl, 1985). Further research into this topic should equate level of effort required for helping across emotions, although the differential complexity and cost of prosocial responding may be part of the nature of different negative emotions.

Two important caveats should be highlighted in interpreting the current studies and in planning future research. First, children participating in Study Two were on average both older and more knowledgeable about emotions than those in Study One. Differences between the two studies' findings should be construed with this vital difference in mind. Continued investigations

would benefit from observation of more subjects who could be profitably divided into more than merely "younger" and "older" groups, using emotion knowledge as a covariate in analyses. Followup of the suggestive importance of emotion knowledge for response to negative emotion should continue (Denham & Couchoud, 1991).

Second, every attempt was made to render the play sessions and embedded emotion displays as natural as possible (following an earlier tradition; see Iannotti, 1985), and few children gave evidence of disbelieving the procedure. Nonetheless, it would be desirable to observe in-home instances of the scaffolding conditions and negative emotions, perhaps with both parents and siblings.

In conclusion, two studies confirmed the importance of adult scaffolding on preschoolers' demonstration of prosocial responsiveness to negative emotions, and of delineated responsiveness to varying negative emotions. Examination of responses to adult negative emotion, rather than another child's, provided an analogue to the important early socialization of prosocial behavior within the parent-child relationship. The inclusion of discrete negative emotions other than distress also broadened the investigation of children's prosocial responsiveness.

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Footnotes

1

The rated behaviors made in response to these three design components were not considered to be independent (because these same elements would, of course, likely be non-independent in real-life situations where parents discussed their negative emotions with their children and asked for help), but, rather, were tested for differences in mean incremental level of prosocial responsiveness.

2

In the service of believability, the experimenter repeated the emotion display, but not its specific eliciting conditions (e.g., sticking herself with a pin, dropping crayons).

3

Preliminary analyses with vignette as a factor were done with data from both Studies One and Two. There was no main effect of vignette in either study. In Study One, children were more responsive after the second sadness vignette, $F(1, 53) = 14.40, p < .01$; in Study Two, children were less responsive after the second pain vignette, $F(1, 52) = 11.49, p < .01$. The variable patterning of infrequent vignette effects led us to sum across vignettes.

4

The total time for the three trials for each vignette averaged approximately 80 seconds in Study One, including the three separable displays of emotion and the children's responses. Vignettes with facial, vocal, and behavioral displays of emotion, scaffolding, and children's coded responses averaged almost this long in Study Two (approximately 65 seconds).

Table 1

Cell Means and Standard Deviations

	Spontaneous	Labelled	Requested	Marginal Mean
Emotion				
<u>STUDY ONE</u>				
Sadness a	7.58 (2.44)	9.58 (3.04)	10.62 (3.56)	9.03
Anger	9.42 (3.10)	11.14 (3.10)	13.24 (1.92)	11.27
Pain	7.40 (2.19)	8.22 (2.88)	8.18 (4.68)	7.80
Marginal Mean	8.13	9.65	10.68	
<u>STUDY TWO</u>				
Sadness	10.67 (2.37)	11.33 (2.39)	11.85 (3.00)	11.21
Anger	10.71 (2.88)	10.42 (2.60)	12.46 (2.03)	10.98
Pain	8.24 (2.02)	8.88 (1.75)	9.15 (2.94)	8.71
Marginal Mean	9.87	10.21	11.15	

a Scores are sums for two trials rated from one

to seven. Standard deviations are in parentheses.

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Appendix 1

1. Sadness: Play with blocks. Give the child many more and then act sad (be sure you look and sound sad as given in AFFEX, rather than annoyed).
2. Anger: As you play, have difficulty with your block structure. Act frustrated and angry (brows down, frustrated tone of voice).
3. Pain: Stub toe getting crayons out. Look like that really hurts, hold foot, moan a little.
4. Anger: Get crayons out and work on drawing a picture. Act angry when you drop several of your crayons.
5. Sad: Look at book about feelings. Simulate sadness at picture of boy who is lonely because his friend is gone.
6. Pain: Show pain as you stick yourself with pin on "Good Helper" badge you are affixing on the child.

Appendix 2

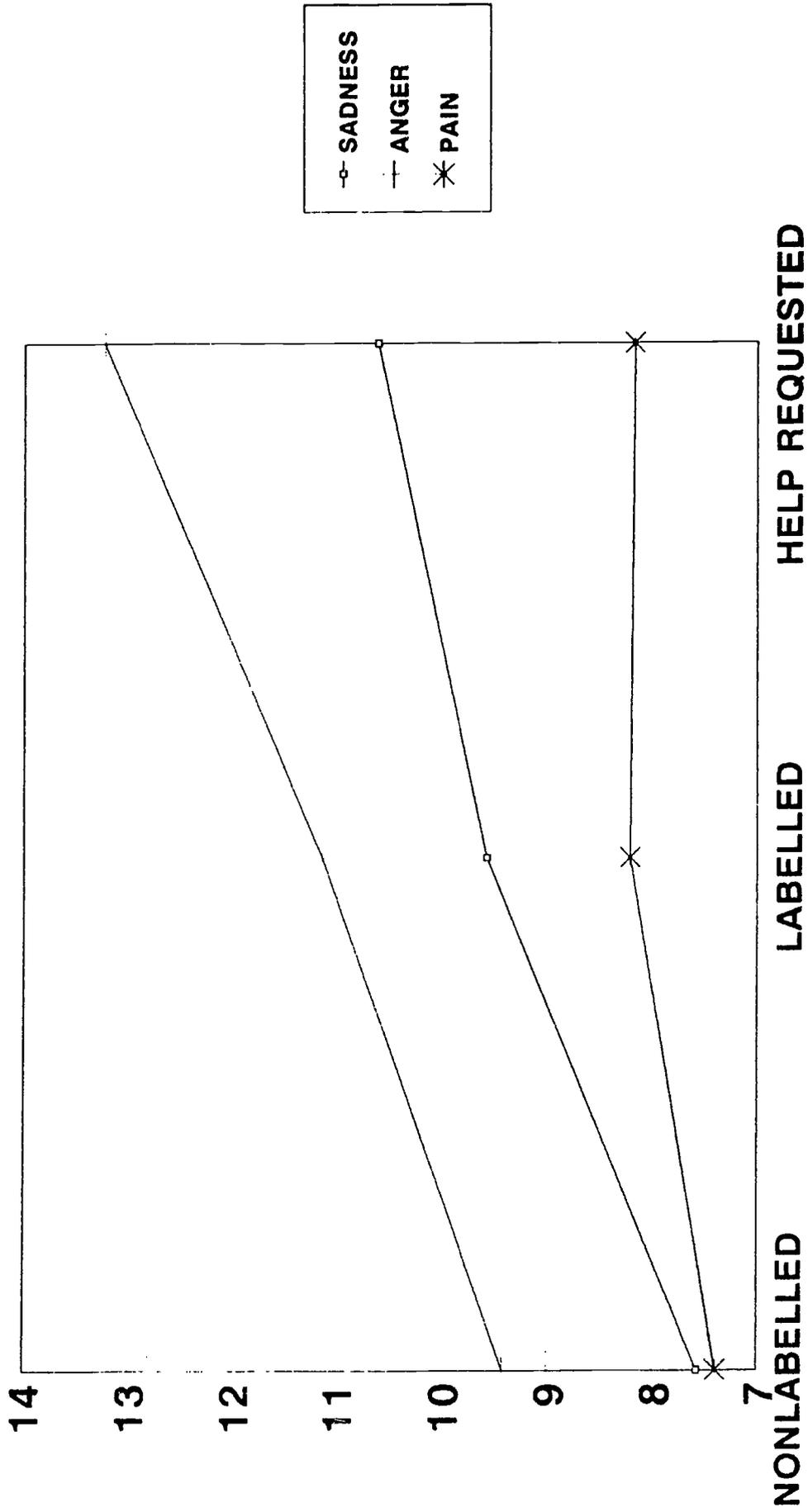
Scoring Key

<u>Score</u>	<u>Description of Response to Distress</u>
1	Physically turns away, verbally refuses to help, or shakes head no.
2	Ignores the situation
3	Looks or laughs
4	Acknowledges that something is wrong, but indicates unwillingness or inability to determine appropriate helping behavior: <ul style="list-style-type: none"> A. "What?" (or how, why, or oh) B. Identifies the problem, but offers no help ("You're sad"). C. Nods yes to a request for help, but does nothing.
5	Offers solutions which are not totally appropriate. <ul style="list-style-type: none"> A. Tells examiner to fix the situation themselves or denies the examiner's emotion (e.g., "Don't be sad," "You're not sad"). B. Offers a solution which does not solve the problem in question, such as building a tower when the examiner had actually dropped a crayon.
6	Offers an appropriate solution verbally, but does not assist: "Rub it", "Try again", "Turn the page".
7	Subject gives the examiner physical comfort or appropriate aid.

Figure Caption

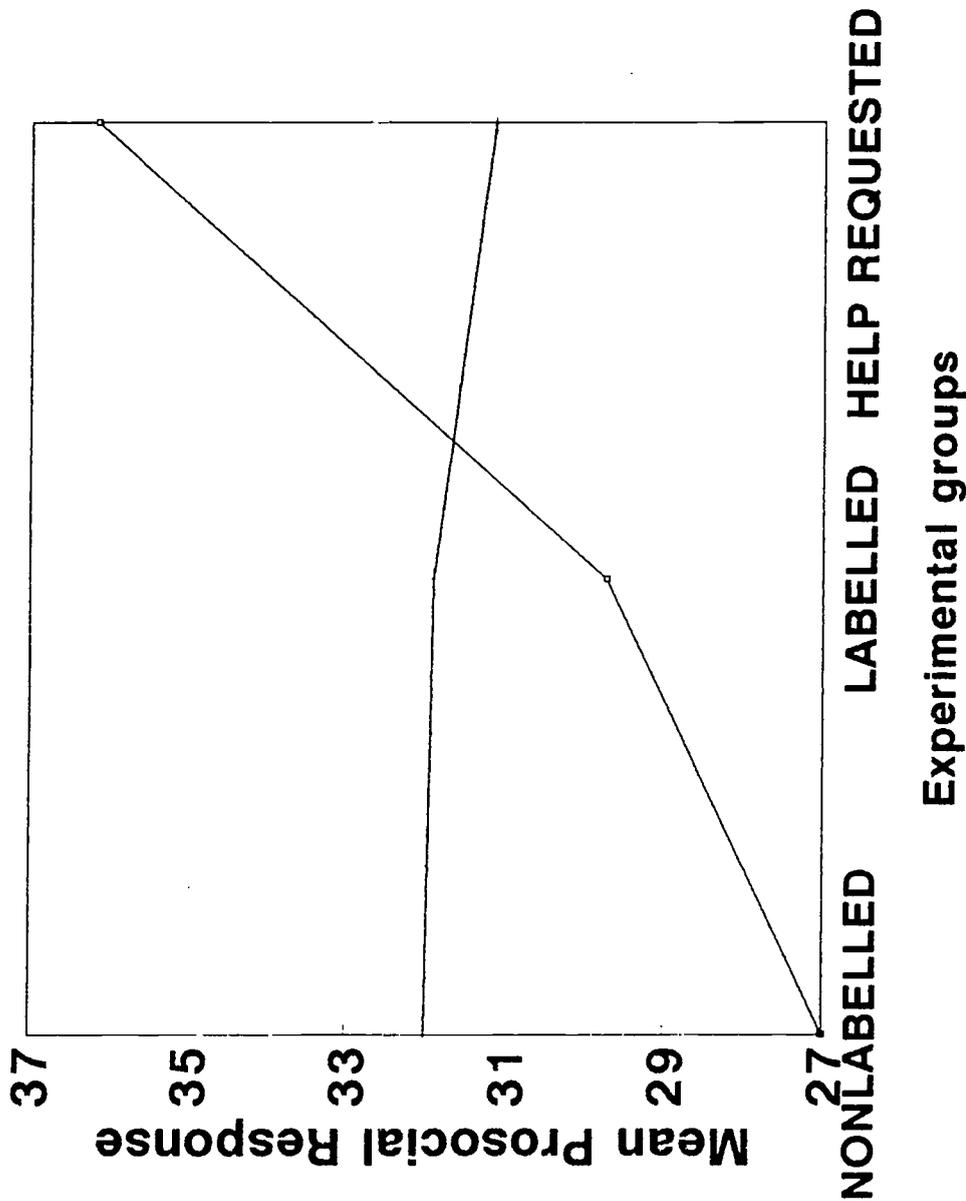
1. Scaffolding X Emotion interaction, Study One.
2. Age X Scaffolding interaction, Study Two.
3. Age X Emotion interaction, Study Two.

SCAFFOLDING BY EMOTION INTERACTION, STUDY ONE



Mean responsiveness across two trials, maximum score 14.

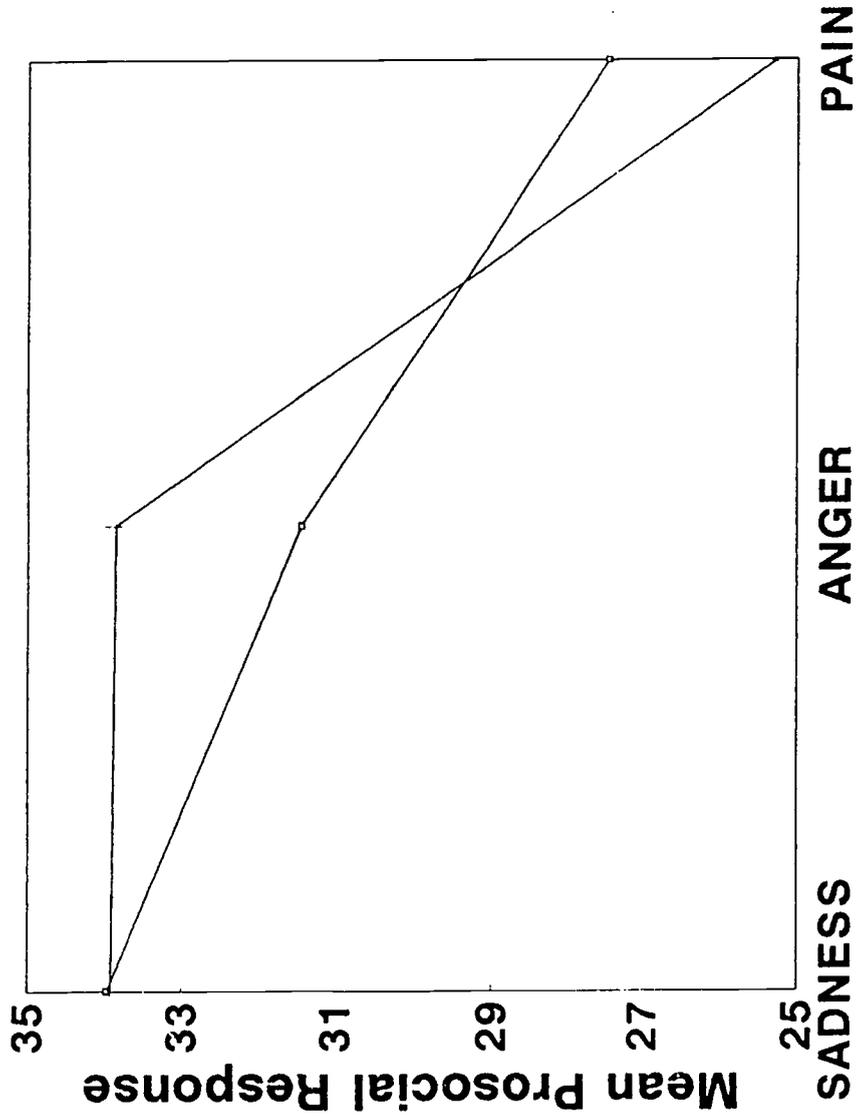
AGE BY SCAFFOLDING INTERACTION



Younger and Older Groups
Series 1
Series 2

Mean behavioral responsiveness across adult's emotions, maximum score 42.

AGE BY EMOTION INTERACTION



Younger and Older Groups

--- Series 1

— Series 2

Adult Emotions

Mean responsiveness across conditions, maximum score 42.