The outcomes of children's exposures to others' positive and negative emotions were examined developmentally. Twenty-four infants in three age cohorts (10, 15, and 20 months old) were studied for 9 months. Mothers reported the child's reactions to naturally occurring events in which emotions were expressed; in addition, each week mothers simulated one specified affect (e.g., crying, anger, laughter), and an investigator portrayed affect incidents. Mother-child interactions were rated. The youngest children showed evidence of discrimination between others' positive and negative emotions. Responses to affect were examined as a function of the person expressing affect and the kind of affect. Sympathetic behaviors were directed toward the distressed mother but not the distressed investigator. In the natural setting, crying most frequently evoked sympathetic behavior; angry interactions turned the child away. In the oldest cohort there was individual consistency in sympathy over time. Mothers showing more positive contact in nondistress situations had children who were more sympathetic in distress situations. Socially out-going children were also more likely to comfort others in distress. Reparation behaviors (reactions to distress created by the child) appeared and increased with age. Theories of early altruism are discussed. (Author/MB)
The Impact of the Affective Environment on Young Children

Carolyn Zahn-Waxler, Marian Radke-Yarrow, and Robert A. King

Laboratory of Developmental Psychology
National Institute of Mental Health

The Impact of the Affective Environment on Young Children
Carolyn Zahn-Waxler, Marian Radke-Yarrow, and Robert A. King

The moods and emotions of others are ubiquitous sources of stimulation in the young child's environment. Others' expressions of pleasure, anger, fear, love, and sorrow, whether or not directed toward the child, provide contexts of early learning and experience. Emotions are intrinsic aspects of many caregiver behaviors. Surprisingly, there is little evidence with regard to how others' emotions are experienced by young children and how others' emotions affect child behavior.

The focus of the present research is on development and environment as they influence very young children's responses to others' emotional expressions, principally in circumstances of distress. In part, the inquiry is directed to cognitive questions: What is the young child's awareness and understanding of others' affects? In part, the questions concern affect and behavior: What do others' emotions arouse in the child and how does the child interact with others in such affective encounters? In such engagements of child with others, one has the raw materials for inquiry into the emergence of the child's empathic capabilities and compassionate behaviors.

A sample of 24 children, in three age cohorts beginning at 10, 15, and 20 months of age, was studied for 9 months. The overlapping cohort design made possible longitudinal and cross-sectional examinations of development from 10 months to 2½ years. Mothers of the children were hired and trained prior to the study as co-investigators. Mothers reported on emotional events occurring in the natural environment. These events were situations in which pain, anger, joy, sorrow, or weariness were expressed by persons in the child's immediate surrounding. The reporting of the events were according to specified procedures. Mothers dictated an account of the event, the child's responses to the event; and the consequences, if any, of the child's reactions. Mothers also simulated seven specified emotions on a predetermined schedule, one affect each week.
The investigator visited the homes at 3-week intervals, at which time the reports were discussed and procedural questions clarified. The home visits were also the source of two sets of data: (1) mother and child behaviors were rated, and (2) the investigator simulated an affect. Both investigator and mother observed the child's responses to the simulation. Percent agreements based on comparisons of their accounts were in the 70's and 80's. Agreement on codings of mother's reports of child's responses to affect incidents ranged from 79% to 96%.

Children's reactions to others' emotions were coded in the following principal categories: (1) no response, (2) attends, (3) cries or fusses, (4) imitates, (5) laughs or smiles, (6) seeks caregiver, (7) intervenes negatively by hitting or censuring, and (8) intervenes positively by physical contact, giving objects, expressing sympathy or comfort. Qualitative differences within each category and the child's entire response sequence in the affect episodes were also assessed.

Our first search of the data concerns the kinds of maturational progressions in the child's responses. There is a strong developmental imprint in the data on the individual over the 9 months, and also in the data summarized by age groupings. The earliest response form is a distress cry or general agitation in the presence of another person's emotion. This response predominates between 10 and 16 months.

An example: At 14 months, S observed a crying 6-month-old baby; she watched, tears welled in her eyes; she began to cry; she looked to her mother. The cry is sometimes coupled, as in the example, with visual seeking or proximity seeking of a caregiver. Over the succeeding months, the distress cry wanes (a statistically significant decrease), and more controlled, interpersonal reactions directed to the victim appear (a significant increase). Positive initiations to the victim first appear at 12 to 16 months. These tend to be tentative physical contacts of petting or touching the victim, having elements of getting and giving...
comfort. The contacts develop into more differentiated interventions by the middle and end of the second year. In the protocol of the child cited above, four months later, some of the changes become apparent.

A neighbor's baby cries. S looked startled, her body stiffened. She approached and tried to give the baby cookies. She followed him around and began to whimper herself. She then tried to stroke his hair, but he pulled away. Later, she approached her mother, led her to the baby, and tried to put mother's hand on the baby's head. He calmed down a little, but S still looked worried. She continued to bring him toys and to pat his head and shoulders.

Other age changes in the second year showed decreases in laughter and smiling to distress events, increases in imitation of the other's emotion, and increases in negative behaviors directed toward the victim. It should be emphasized that the negative behaviors were of no where near the same magnitude as the positive interventions. (There were no apparent sex differences in any of the reactions to distress.

In these developmental transitions, one has indications of how the children are registering emotional events. Their processing is seen in their imitation, their overt and verbal inspection of the other's affect, their attribution of their own feelings to others, their own manifestations of affect, and their attempts to sort out the implications of their own behaviors for the state of other persons. Their verbal reactions take the form of labeling the emotions, questioning, remorse, sympathy, and condemnation.

In the present report, we would like to discuss two facets of processing. The first is children's imitation, either of the forms of intervention with the victim or of the emotional expressions of the victim. Giving a toy at 13 months or patting a child at 14 months, or saying "kiss the hurt," or "God bless you," at 20 months are imitations of the form of intervention and in many instances are reported by the
mother as specific reproductions of what he had observed her doing. Most often these are generalized imitations of prosocial actions. The interventions are most frequently delayed reproductions of someone's helping or comforting, they are usually not to identical distress circumstances, and they occur in unique and adaptive combinations.

Another kind of imitation suggestive of empathic affective arousal is the child's expression of O's emotion. Imitation is at first fragmentary (e.g., the sound of O's distress), but by 18 months it functions to provide the child with information about himself and his own feelings in relation to the emotions of others. For example:

The mother bumps her elbow, winces, says "ouch." The child screws up his face, rubs his own elbow, says "ow" and rubs the mother's elbow.

In imitations such as these, the child "tries on" the other's emotional experience, thus aiding his comprehension of O's emotion and facilitating sympathetic intervention. This is not an inevitable outcome: Imitation of O's affect at times turns inward and the child centers exclusively on himself, thereby precluding empathy for O and precluding intervention.

Another facet of processing may be examined in the child's responses in situations where he himself has caused O's emotions (as when he knocks over a peer, bites his mother, drops and breaks a sibling's toy). Reactions to child-caused events and the child-bystander events have a basic similarity in content and in developmental progression. In both, children's own distress cries decrease with age, and sympathetic interventions appear and increase. But there are also new and exaggerated responses which appear when the child has caused the distress. Children express heightened excitability and distress. And, with some frequency, they show ambivalence of intention, alternating aggressive and comforting responses to their victim. Further, on occasion, they manifest self-punitive behaviors. A child at
15 months, who has made his sibling cry, kisses her and then hits his own head.

Between 18 months and 2 years of age children get involved in behaviors of reparation or in expressions of remorse. For example, a child hurts a peer's head accidentally, says, "I hurt your hair; please don't cry," and then kisses the peer. Also, children express anxious concern about the consequences of their acts; namely, when Bobby bites his mother and she expresses pain, he repeats the bite than hugs her and says, "I love Mommy. Mommy love me?". In these data one sees the child's fluctuating awareness of the consequences of his own behaviors. As he struggles with the locus of the cause of emotion and as he attempts to repair the feelings of the other, there are, perhaps, the precursors of early conscience development.

The preceding descriptions have focused principally on the developmental process, and the evidence is there for maturationally determined responses. Yet stable individual differences characterize the children in ways that indicate continuity over the time span covered. For some, caring is frequent and spontaneous, while for others, intervention is difficult.

In the observations of child-adult interaction, controlling for age, children who frequently initiate communication with their mothers and those who are outgoing toward the investigator are the more altruistic children. The ability to interact easily with others under everyday circumstances appears to make prosocial intervention easier, too, than when one is more hesitant and shy. This assertive quality of children may underlie another association. Children who more frequently caused distress to others were also more likely to intervene with sympathy when they were bystanders of distress. (Significant correlations range from +.50 to +.80.) Intimate, causal encounters with distress provide feedback from which the child can learn about his impact on others' affective experience.

Individual differences in altruism may also have origins in maternal rearing patterns. This possibility was examined. Among the mother's techniques not related
to the child's altruism are her permissiveness, her play with the child, and her reinforcement of prosocial responses. Related to child altruism observed in other settings are her verbal communication with the child (approaching significance), her provision of contact comfort, and her sensitive attending to the child's emotional needs. These associations are present when maternal and child measures are taken in the same time period, and, more impressively, in time lag correlations (r's range from .52 to .75). Such associations are not present when assessments of child altruism temporally precede maternal assessments; that is, the direction of effect is from caretaker to child. To summarize, mother's modeling of and provision of emotional support in circumstances of distress leads to altruistic behaviors in children as young as 1 and 2 years.

The mother's expressions of distress when the child caused her to be distressed were also analyzed. Young children do hurt mothers in their biting, kicking, and hitting. How the mother conveys to the child the painful consequences of his behavior may be instructive. When mothers convey the message by dramatizing the painful consequences in grimaces, moans, and cries, such expressive modeling is positively associated with children's altruism in the earliest stages of development. At a later stage, mothers' verbal prohibitions and explanations regarding the consequences of hurting others are correlated with children's sympathetic behavior in other settings. Physical punishment for hurting is associated with negative, aggressive reactions by children when they witness another's distress. These sets of rearing methods remind one that the child receives mixed messages from mothers concerning the helping and hurting of others in distress.

The data reported here are based on the mother's observations of children's reactions to natural and simulated affective episodes. Had we used a laboratory setting, or reactions to an investigator's portrayal of emotion, a very different and more barren picture of changing developmental sensitivities would have emerged;
children's predominant response to the investigator, other than simply attending to
the event, was to imitate the affect. Reactions of concern, distress, and sympathetic
interventions were few in number. By training family members as observers just as
one would train outside observers, we are provided with an intimate look at life
circumstances which would otherwise be considered privileged and inaccessible.