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Factors Influencing Young Children's Use of Motives and Outcomes as Moral Criteria

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NELSON, SHARON A. *Factors Influencing Young Children's Use of Motives and Outcomes as Moral Criteria*. CHILD DEVELOPMENT, 1980, 51, 823-829. Young children's use of motives and outcomes as moral criteria was measured under 3 modes of story presentation (verbal only, verbal plus pictures with the motive merely implied, and verbal plus pictures with the motive portrayed explicitly). 4 stories combining positive and negative motives and outcomes were presented to the children in each of the 3 groups. Recall for the critical story information was also assessed. Results supported these hypotheses: (1) that children as young as 3 years of age can and do use motive information for making moral judgments when this information is explicit, salient, and available; (2) that when motive and outcome have opposite valences, children tend to recall the story so as to make them congruent. The results are discussed in terms of the influence of the young child's comprehension processes on recall and moral judgments.

Piaget (1932) found a developmental trend in the preferred basis of moral judgments made by 6-10-year-old children in response to hypothetical situations. In children under 9-10 years he found no clear preference for motives as the basis for judgments. After the age of 10 years, judgments were consistently based on motive. However, in the same work, he pointed out that young children's tendency to base their judgments more on consequence information need not imply that they are unaware of intentions. In fact, Piaget (1926, 1932) has observed that the concepts of intention and motive emerge at about the same time as the first "whys," that is, around the age of 3-4 years. The present research was undertaken to determine the conditions under which the moral judgments of 3-4-year-old children would reflect their consideration and use of motives as well as outcomes.

Recent investigators have been successful in demonstrating the use of motives in addition to outcomes in children as young as 6 years of age. This has been achieved by departing from Piaget's method. Whereas Piaget used forced-choice situations, recent investigations have presented single stories in which motives and outcomes are systematically varied

and have used quantitative response measures (e.g., Constanzo, Coie, Grumet, & Farnhill 1973). Some researchers have also stated the actor's motive explicitly (e.g., Bearison & Isaacs 1975). Some have increased the salience of the actor's motive by using videotaped situations (e.g., Chandler, Greenspan, & Barenboim 1973) or by reversing the order in which the motive and outcome information is presented (e.g., Feldman, Klosson, Parsons, Rholes, & Ruble 1976; Nummedal & Bass 1976).

Studies which have examined 3- and 4-year-olds' use of motives report conflicting findings. Lyons-Ruth (Note 1) found no evidence that these children differentiate between actors with good versus bad motives, but Keasey (1978) reports opposite findings. However, no outcome information was presented to children in the Lyons-Ruth study, and the study reported by Keasey did not vary the outcome. Thus, it is not known whether the type of outcome affects young children's understanding and use of motives as moral criteria.

The assumption underlying this research is that young children do regard both motive and outcome as relevant criteria for moral judgments. However, procedures employed thus far have not allowed young children to demon-

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strate their understanding and use of these criteria. Young children may believe that motives provide information important for making moral judgments, yet fail to interpret or remember accurately cues about the actor's motive. They may also believe that the relationship between motive and outcome is logical (i.e., one implies the other). Children may, therefore, consider the motive as they have understood it and not as it was presented. It was hypothesized that a mode of presentation which makes both motives and outcomes explicit and salient and which keeps them available at the time of judgment, would allow children as young as 3 years old to demonstrate their sensitivity to both these moral criteria.

In order to test the assumption, a series of pictures depicting the actor's motive, behavior, and outcome were developed to accompany verbally presented stories. To compensate for the greater pictorial explicitness of outcomes relative to motives, additional cartoon-like drawings were made to portray the actor's motive.

Study 1

Method

SUBJECTS

Subjects were 60 preschool children between the ages of 3 and 4 years (mean = 3-4) and 30 second-grade children between the ages of 6 and 8 years (mean = 7-4). Approximately half of the children in each grade level were females and half were males. These children, mostly white, were from a middle-class, urban area and participated with parental consent.

MATERIALS

Stories

Two levels of motive and two levels of outcome were combined factorially to make four versions of a story. In each story version a boy acting from a good or bad motive purposely threw a ball toward a friend, resulting in a good or bad outcome. This situation was chosen because "throwing a ball" was consistently regarded by children in pilot studies as a neutral act (see Lyons-Ruth, Note 1). Motive descriptions always preceded outcome descriptions, and the actor's overt behavior was the same in all versions. The motive and outcome levels were as follows.

Motive statements.—(1) Good motive: This boy was playing with a ball; his friend did not have anything to play with. He wanted

to throw the ball to his friend so they could play catch together with the ball. (2) Bad motive: This boy was playing with a ball; he was very mad at his friend that day. He wanted to throw the ball at his friend so he could hit him on purpose.

Outcome statements.—(1) Good outcome: The boy threw the ball. His friend caught the ball and was happy to play with it. (2) Bad outcome: The boy threw the ball. His friend did not catch the ball; the ball hit his friend on the head and made him cry.

Story example.—This boy was playing with a ball; his friend did not have anything to play with. He wanted to throw the ball so he and his friend could play catch together with the ball. He threw the ball. His friend did not catch the ball; the ball hit his friend on the head and made him cry.

Pictures

In order to alleviate memory constraints and to examine the effects of motive salience, two sets of black-and-white line drawings were constructed to accompany the information presented in each of the four stories described above. Each set contained a series of 25-cm × 23-cm drawings illustrating the motive, the behavior, and the outcome in each story. The two sets of drawings differ in the manner in which they convey the motive of the actor. In the first set, positive and negative motives are merely implied by the actor's facial expressions. In the second set, positive and negative motives are conveyed explicitly by connecting to the actor's head cartoon-like representations of the goal which he intends to achieve (see fig. 1).

RESPONSE SCALE

Children who judged the actor to be good were required to make judgments of goodness by pointing to one of three smiling faces whose diameter increased in size from 5.5 to 7.5 cm so that judgments could be represented from "a little bit good" to "very good." A similar series of frowning faces was used to represent the judgments from "a little bit bad" to "very bad." At the small end of each series there was a 4.5-cm-diameter neutral face representing the judgment "just okay," (a term used by the majority of children in the pilot work to convey the neutral judgment). By using this as a neutral endpoint common to both positive and negative ratings, the two scales were combined to form a seven-point scale for all judgments ranging from "very bad" (1) to "very good"

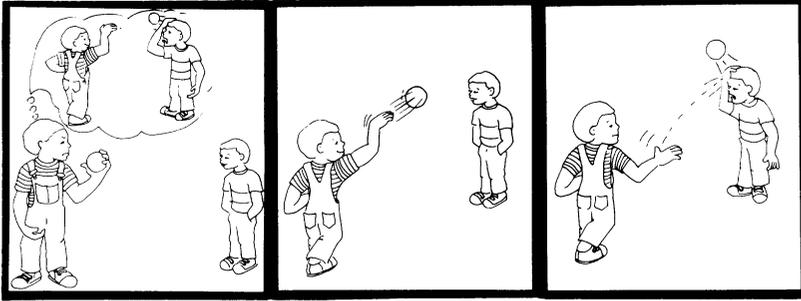


FIG. 1.—Example of drawings used to convey motive, action, and outcome in picture-motive explicit presentations of stories.

(7) with the “just okay” judgment as a midpoint.

PROCEDURE

Children of each age were randomly assigned to one of the three story-presentation conditions. There were 20 children per group at the 3-year-old level and 10 children per group at the 7-year-old level. Children in each group heard all four stories. Order of presentation to each child was randomly determined.

Children were interviewed individually by the experimenter. At the beginning of the test session, the children were familiarized with each point on the rating scale and then given two practice stories to define the “very good” and “very bad” endpoints of the scale. The very good story was about a little boy with a good motive and outcome; the very bad story was about a little boy with a bad motive and outcome. The children in the picture-motive explicit group were also given practice to familiarize them with the cartoon conventions used to illustrate the actor’s motive.

In the experimental session the children were told to listen very carefully to the stories because later they would have to tell them aloud. After each story, children were asked whether the little boy in the story was a good boy or a bad boy, or “just okay.” Then they were asked to indicate how good or how bad the little boy was by pointing to one of the faces. In both picture-presentation conditions, the drawings were introduced one by one at the appropriate points of the story as the experimenter read. They were placed side by side in front of the child, where they remained available for reference while the child made his judgment.

After the judgment was made, the drawings were removed and children were asked

to tell the story aloud exactly as they had heard it. If motive or outcome information was omitted in recounting the story, specific questions were asked to elicit the information: for example, “Why did the boy throw his ball?”; “What was the boy trying to do?”; “What happened after the boy threw his ball?”

Results

MORAL JUDGMENT

A 2 (age: 3- and 7-year-olds) \times 3 (mode of presentation: verbal only, picture-motive implicit, and picture-motive explicit) \times 2 (motive: good or bad) \times 2 (outcome: good or bad) repeated measures analysis of variance was performed on the judgment data. Age and story presentation were between subject variables, and motive and outcome were within subject variables. If children perceived the stories as they were designed to be perceived, their judgments for positive motives and outcomes should have been more positive than their judgments for negative motives and outcomes. Indeed, the mean ratings for the motive and outcome conditions were in the expected direction. The overall mean rating of the main character in the good-motive conditions was 5.35, and 2.27 in the bad-motive conditions. The main effect for motive was highly significant, $F(1,84) = 217.13$, $p < .0001$, accounting for over one-third of the total variance in the data (estimated $\omega^2 = .362$). The overall mean ratings for good and bad outcomes were 4.70 and 2.92, respectively, $F(1,84) = 116.98$, $p < .001$. The main effect for outcome accounted for considerably less variance (estimated $\omega^2 = .120$).

A significant motive \times outcome interaction was found, $F(1,84) = 4.83$, $p < .03$. Whenever there was a negative cue in the motive-outcome pair, especially a negative motive, the other cue had a diminished influence on

TABLE 1
 MEAN RATING OF ACTOR'S GOODNESS/BADNESS IN STUDY 1 AS A FUNCTION
 OF SUBJECTS' AGE, LEVEL OF MOTIVE, AND LEVEL OF OUTCOME

	3-Year-Olds (<i>N</i> = 60)		7-Year-Olds (<i>N</i> = 30)	
	Good Motive	Bad Motive	Good Motive	Bad Motive
Good outcome.....	6.55	2.27	6.20	3.46
Bad outcome.....	4.17	1.60	4.47	1.56

the judgment. An age \times motive \times outcome interaction, $F(1,84) = 3.54$, $p < .051$, was analyzed for age trends because the older children were expected to show greater use of both motive and outcome than the younger children. Indeed, the motive \times outcome interaction was significant for the 3-year-olds, $F(1,59) = 5.52$, $p < .03$, but not for the 7-year-olds, $F < 1$ (see table 1).

Of interest for present purposes was the question whether the mode of presentation affected children's use of motive and outcome information in making moral judgments of the main character. Contrary to expectations, only the influence of outcome varied significantly with the mode of presentation of story information (presentation \times outcome interaction, $F[2,84] = 4.60$, $p < .01$). A more detailed analysis was conducted using Scheffé's procedure for post hoc comparisons among means. When the motive information was explicitly pictured, good and bad outcomes had a greater effect on judgments than when it was implicitly pictured or not pictured at all, $p < .01$.

The increased effectiveness of outcome information across story presentation modes is due to the increased use of this information when the motive is bad (mode of presentation \times motive \times outcome interaction, $F[2,84] = 3.06$, $p < .05$). That is, whereas children show substantial use of outcome information in the good-motive stories under all modes of presentation, only in the picture presentations do they show use of information about outcomes when the motive is bad, $F(2,84) = 9.67$, $p < .01$. The form of this interaction can be seen in figure 2.

RECALL

To obtain an estimate of reliability in coding the accuracy of children's recall of motive and outcome information, a second observer independently coded responses for approximately one-third of the sample. Rater agreement was 97%. Recall frequencies were com-

pared with chance levels: only the motive recall frequencies for 3-year-olds in the verbal-only conditions did not depart significantly from binomial chance.

Errors made in recalling the valence of motive and outcome information were analyzed in a 2 (age) \times 3 (story presentation) \times 2 (motive) \times 2 (outcome) repeated measures analysis of variance. As expected, age emerged as a significant main effect. Three-year-old children made more errors in recalling motives and outcomes (mean = 0.408) than 7-year-old children (mean = 0.158), $F(1,84) = 12.43$, $p < .001$. Analyses of variance performed separately on motive errors and outcome errors indicated that, while there was no effect of story presentation on outcome recall errors, recall of motives was significantly affected, $F(2,84) = 5.38$, $p < .006$. As expected, fewer errors occurred in recalling motive valences in the picture presentations than in the verbal-only presentation.

It was hypothesized that the younger children might assume a necessary correspondence to exist between motive and outcome and that, when presented with stories in which this information was incongruent, they would tend to distort motives and outcomes so as to make them congruent. Because of discrepancies between the variances in some of the cells, assumptions appropriate to parametric analyses could not be made; therefore, nonparametric analyses were undertaken. Separate series of Wilcoxin matched pairs signed-ranks tests (Siegel 1956) were performed on the recall data from each age group. Comparison of motive and outcome errors indicated, as expected, that the 3-year-olds made relatively more errors recalling motive valences than outcome valences when this information was conflicting ($Z = 1.72$, $p = .05$) than when it was congruent ($Z = -.60$). The congruency or incongruency of valence information had no effect on the pattern of recall errors made by 7-year-olds.

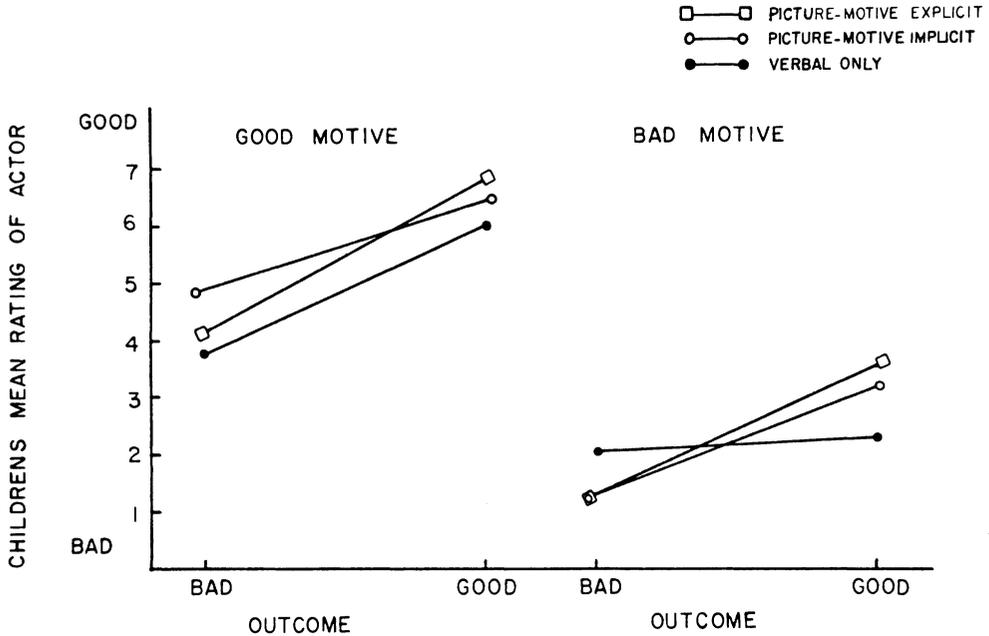


FIG. 2.—Mean rating of actor's goodness/badness in study 1 according to level of motive and outcome in each story presentation.

Discussion

The unexpected finding that, for 3-year-olds in the verbal-only presentation group, motive rather than outcome had the more potent effect on their judgment prompted a closer examination of judgment data from individual subjects. Inspection of these data suggests distinct patterns of judgment responses. The predominant pattern, shown by 40% of this sample, was to rate the actor negatively whenever there was at least one negative cue, regardless of its source. The second pattern, shown by 28.33% of the sample, was to ignore the outcome and to rate the actor according to the valence of the presented motives. The remaining children showed the following patterns: ratings that depended equally on the valence of motive and outcome (1.67%); ratings that varied only with the valence of the outcome (6.67%); positive ratings whenever at least one positive cue was presented (10%); and random responses (13.33%).

A very large percentage of the preschoolers seem to give more emphasis to the valence, especially negative valence, of the cue rather than to its source (motive or outcome). It has been reported that children develop the concept of bad before the concept of good (Hill & Hill 1977; McKechnie 1971; Piaget 1932; Rhine, Hill, & Wandruff 1967). In formulating

a moral judgment, children may be more alert to cues regarding badness of any kind. Since children commonly define good as the absence of bad (Hill & Hill 1977), positive judgments may tend to be made only when no negative cue is encountered. Thus it may be that the first negative cue—motive or outcome—encountered by the preschooler in the story situation will be sufficient to establish a negative judgment.

Study 2

In Study 1, when the 3-year-olds in the verbal-only condition rated the actors in the bad-motive stories, their judgments reflected the bad motive but not the outcome which followed. Is it possible that motive may have been utilized as a basis for judgment simply because it was always the first cue encountered? If preschoolers are really more concerned with negative valence than with the source of the cue, then reversing the order of presentation of motive and outcome within the stories should lead to judgments which disregard motives whenever bad outcomes are encountered. This is expected to be so, especially for the verbal presentations of the stories. Therefore, a second study was undertaken to investigate the possibility that the emphasis given to motive by the 3-year-olds in study 1

TABLE 2
MEAN RATING OF ACTOR'S GOODNESS/BADNESS IN STUDY 2 ACCORDING
TO PRESENTATION MODE, OUTCOME, AND MOTIVE

PRESENTATION	GOOD OUTCOME		BAD OUTCOME	
	Good Motive	Bad Motive	Good Motive	Bad Motive
Verbal only	6.11	3.56	2.67	1.78
Picture-motive implicit	7.00	2.11	2.33	1.11
Picture-motive explicit	7.00	3.56	4.22	1.11

reflects a confounding of information about the valence of the cues with the order of presentation of the source of the cues within the stories.

SUBJECTS AND PROCEDURE

Twenty-seven preschool boys and girls (mean age = 3-8) participated as subjects in the second study. Children were randomly assigned to one of the three presentation groups. The materials and the procedure were identical with those of study 1. In all stories and presentation modes, description of the outcome preceded description of the motive.

RESULTS AND DISCUSSION

Judgments

Moral judgment ratings were analyzed in a 3 (presentation mode) \times 2 (outcome) \times 2 (motive) repeated measures analysis of variance. Table 2 presents the mean judgments made by children in study 2. As in study 1, good outcomes were rated more positively (mean = 4.89) than bad outcomes (mean = 2.20); $F(1,24) = 102.06$, $p < .001$ (estimated $\omega^2 = .250$). Likewise, good motives were rated more positively (mean = 4.89) than bad motives (mean = 2.20); $F(1,24) = 144.50$, $p < .001$ (estimated $\omega^2 = .251$). Again, a significant motive \times outcome interaction was found, $F(1,24) = 6.88$, $p < .02$, indicating that, whenever either motive or outcome is negative, the other cue in the pair has diminished influence on the judgment. The presentation \times outcome interaction found in study 1 did not occur in these data. Rather, as predicted, a significant presentation \times motive interaction was found, $F(2,24) = 4.73$, $p < .02$. As hypothesized, judgments made in the verbal-presentation condition were less influenced by motive than those made in the picture conditions (see table 2).

Recall

Errors made in recalling the valence of presented motives and outcomes were analyzed

in a 3 (mode of presentation) \times 2 (outcome) \times 2 (motive) repeated measures analysis of variance. The analysis revealed only one significant effect: an outcome \times motive interaction, $F(2,24) = 6.68$, $p < .03$. Children made more errors recalling story information in good-motive stories when outcomes were bad (mean = 0.167) than when outcomes were good (mean = 0.074); in bad-motive stories, there were more errors made for good outcomes (mean = 0.130) than for bad outcomes (mean = 0.055).

The results of Wilcoxin tests performed on the recall data clarify the above finding. Recall errors were compared for stories with congruent versus incongruent motive-outcome pairings. More errors were made for incongruent pairings than for congruent pairings (32 errors vs. 14 errors), $Z = -2.57$, $p = .005$. Errors made in the incongruent stories consisted primarily of distorting the positive cue presented so as to make it congruent in valence to the accompanying negative cue.

General Discussion

The results from the present studies show that the modality in which story information is presented significantly affects young children's use of motives and outcomes in making evaluative judgments. When stories are presented verbally, information following negative cues has diminished impact on preschoolers' moral judgments. In contrast, when stories are presented accompanied by pictures, judgments are more likely to be influenced by both good and bad motives and by good and bad outcomes.

The 3-year-old children in these studies made judgments that consistently relied on one cue. In the verbal presentations, this cue was most likely to be the first negative cue encountered in the stories. In picture presentations, children's judgments can be described as reflecting any one of three cues: negative va-

lence, motive, or outcome. This finding is consistent with Piaget's (1932) observation that younger children made judgments relying either on motive or on outcome and that the same child might judge sometimes by outcome and sometimes by motive. Rather than viewing such a child's behavior as inconsistent, the present research suggests that it may reflect consistent application of a judgmental strategy influenced by the child's concepts of "good" and "bad."

It is noteworthy that in the second study, where outcome preceded motive in the stories, the effect of motive on moral judgments was not less than that of outcomes. This suggests that while cue valence does influence the preschooler's moral judgment, motive is influential in its own right as a source of relevant information. The finding that many children's judgments reflected the use of motive alone supports this notion.

The finding that the 3-year-olds tended to recall stories containing conflicting motive and outcome information so as to make these cues congruent is in line with the observations of previous researchers (e.g., Berndt & Berndt 1975; Piaget 1932) that young children assume some logical and necessary connection between motives and outcomes. They may assume, for example, that a bad outcome necessarily implies a bad motive and, therefore, encode the actor's motive as bad. Even when the story information is made explicit, children may infer that the actor's motive must have changed. It was not uncommon for children, when questioned about their judgments, to remark that the actor whose presented motive was incongruent with the effected outcome had "changed his mind" (i.e., changed the goal he sought to achieve). The fact that these children sought to justify their evaluations by the actor's motive as well as by the outcome indicates an awareness that the motivation for behavior should be considered.

In conclusion, the results of the present research suggest that making a moral judgment requires understanding of the evaluative concepts (i.e., "good," "bad") to be applied. Also required is comprehension of the motives or goals involved (e.g., "sharing," "helping," "hurting"). A child must also be able to recognize and interpret the interrelationship between actions, motives, goals, and outcomes in order to make evaluative judgments. The development of these competencies deserves further investigation if we are to advance our present

understanding of the beliefs children have about purposeful actions and social relationships.

Reference Note

1. Lyons-Ruth, K. Factors affecting the value judgments of preschool children. Paper presented at the biennial meeting of the Society for Research in Child Development, New Orleans, March 1977.

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