

Order Effects on Children's Moral and Achievement Judgments

JACQUELYNNE E. PARSONS
Smith College

DIANE N. RUBLE, ELLEN CHERESKIN KLOSSON,
NINA S. FELDMAN, AND WILLIAM S. RHOLES
Princeton University

Throughout the literature on the development of moral judgments and in a more recent extension of this literature to achievement judgments (Weiner & Peter, 1973), it has been reported that preschoolers base their judgments more on outcome than on intent. However, outcome has generally been the second, and thus the most recent, cue in the stimulus statements. Studies using both free-recall and information-processing paradigms have reported that younger children recall and weight the most recent cues more than earlier occurring cues (Cole, Frankel, & Sharp, 1971; Kun, Parsons, & Ruble, 1974). Consequently, the results reported in studies of moral and achievement judgments may reflect the order of stimulus presentation rather than the younger children's propensity to focus on concrete rather than subjective cues.

Twenty-four white children, 12 male and 12 female, from a Long Beach City school kindergarten class served as subjects. Each child was presented with 24 stories varying on the actor's intent, the outcome of the actor's behavior, and the competitiveness of the situation (half the stories depicting noncompetitive or moral dilemmas and half depicting competitive or achievement dilemmas). Each story was accompanied by a pictorial representation of the actor's intent and the outcome. Half the children received a story booklet in which the outcome information followed the intent information (Order 1), and the remaining 12 subjects received booklets in which the outcome cue preceded the intent cue (Order 2). The children were asked to evaluate the actor by administering rewards or punishments in each of the 24 stories on an 11-point graphic scale: -6 = maximum punishment, 0 = no reward or punishment, +6 = maximum reward. In summary, there were three within-subject variables: intent (three levels), outcome (two levels), competitiveness (two levels), and one between-subject variable: order of cues (two levels).

A mixed-design analysis of variance revealed three significant interactions involving the order-of-cues factor: Order of Cues \times Outcome, $F(1, 18) = 10.945, p < .01$; Order of Cues \times Competitiveness \times Intent, $F(2, 36) = 5.84, p < .01$; Order of Cues \times Intent \times Outcome, $F(2, 36) = 3.74, p < .05$.

With regard to the Order of Cues \times Outcome interaction, the rewards for positive outcomes decreased when outcome was the first ($M = .79$) rather than the second ($M = 2.67$) cue. The punishment for negative outcomes was not affected by the order-of-stimulus-cue presentation (Order 1 $M = -2.42$, Order 2 $M = -2.74$). Thus, order had an effect, but only on the evaluative judgments associated with positive outcome. Possibly, this Order of Cues \times Outcome interaction reflects a differential developmental timetable for the decreasing importance of the outcome cues. Costanzo, Coie, Grumet, and Farnill (1973) and Parsons (1974) found that the reliance on positive outcome cues for allocating rewards decreased earlier, developmentally, than the reliance on negative outcome cues for allocating punishment. If the evaluative importance of positive outcomes declines at an earlier age than the evaluative importance of negative outcome, then one would expect the effects of situational cues to emerge first for positive outcomes.

The means associated with the significant Order of Cues \times Competitiveness \times Intent interaction are shown in Table 1. The means

Table 1: Mean Evaluations as a Function of Cue Order, Competitiveness, and Actor's Intent

Order	Intent		
	Positive	Neutral	Negative
Competitive stories			
1	.56	.50	.02
2	1.50	-.94	-1.54
Noncompetitive stories			
1	2.06	-.32	-1.88
2	.96	-1.44	-3.19

Requests for reprints should be sent to Jacquelynne E. Parsons, Clark Science Center, Smith College, Northampton, Massachusetts 01060.

suggest that order affected the use of intent primarily in the competitive stories.

In competitive situations, positive intent was rewarded more and negative intent was punished more when the intent cue followed rather than preceded the outcome cue. In noncompetitive situations, the importance of intent had already emerged by kindergarten: Competitiveness \times Intent, $F(2, 18) = 16.43, p < .01$. These data and data reported by Parsons (1974) support the hypothesis that the increase in the evaluative importance of intent depends on several factors in addition to age. Specifically, the present study indicates that the competitiveness of the situation, the valence of the outcome, and the order of the stimulus cues all affect the salience of the intent cue.

The significant Order of Cues \times Outcome and Order of Cues \times Competitiveness \times Intent interactions indicate that the order of stimulus cues does alter the evaluations associated with both outcome and intent. However, the important comparison to be made is between the relative importance of intent and outcome for each of the orders. If the relative importance of outcome reported in the literature on the development of moral and achievement judgments is an artifact of the stimulus cue order used in those studies, then intent should become the more important evaluative cue when the order of the stimulus cues is reversed. The relative importance of outcome was clear for Order 1. Variations in the valence of the outcome produced more extreme evaluations than did variations in the valence of intent (M evaluations for positive and negative intent stories = +1.31 and -.93, respectively; M evaluations for positive and negative outcome stories = +2.67 and -2.74, respectively). Under Order 2, the relative importance of outcome was eliminated (M evaluation for positive and negative intent stories = +1.23 and -2.36, respectively; M evaluations for positive and negative outcome stories = +.79 and -2.42, respectively). But changing the order did not reverse the relative importance of intent and outcome. Variations in outcome and intent produced equally extreme evaluative responses.

As discussed earlier, the drop in the rewards for positive outcomes was primarily responsible for the decrease in the relative importance of outcome. Inspection of Table 1 suggests that the increase in punishment given for negative intentions in Order 2 was responsible for the increase

in the relative importance of intent. These two findings suggest that Order 2 relative to Order 1 elicited less reward for positive outcomes when they were accompanied by negative intentions (M evaluations associated with positive outcome, negative intent stories for Order 1 and Order 2 = +1.79 and -1.33, respectively). The significant Order of Cues \times Intent \times Outcome interaction and a Newman-Keuls comparison of means support this interpretation. Of all the relevant comparisons, only these two means were significantly different from each other ($p < .05$).

In conclusion, reversing the order of stimulus cues did decrease the relative importance of outcome. However, since altering the order did not reverse the relative importance of outcome and intent, the significance of the order factor does not indicate that the children's judgments are totally determined by the most recent cue. Instead, the children's judgments were influenced by a variety of factors, order being just one. Furthermore, these data suggest that evaluative judgments of children at this age in this population cannot be characterized as simplistic or as dependent on one cue alone. Since several factors influence the relative importance of outcome and intent at this age, it is likely that the children have the cognitive maturity necessary to use both intent and outcome information, but vary their weighting in response to a variety of other contextual cues.

REFERENCES

- Cole, M., Frankel, F., & Sharp, D. Development of free recall learning in children. *Developmental Psychology*, 1971, 4, 109-123.
- Costanzo, P. R., Coie, J. D., Grumet, J. F., & Farnill, D. A reexamination of the effects of intent and consequences on children's moral judgments. *Child Development*, 1973, 44, 154-161.
- Kun, A., Parsons, J. E., & Ruble, D. N. Development of integration processes using ability and effort information to predict outcome. *Developmental Psychology*, 1974, 10, 721-732.
- Parsons, J. E. *Causal attribution and the role of situational cues in the development of children's evaluative judgments*. Unpublished doctoral dissertation, University of California, Los Angeles, 1974.
- Weiner, B., & Peter, N. A cognitive-developmental analysis of achievement and moral judgments. *Developmental Psychology*, 1973, 9, 290-309.

(Received December 26, 1975)