Social Cognition and Children’s Aggressive Behavior

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DODGE, KENNETH A. Social Cognition and Children’s Aggressive Behavior. CHILD DEVELOPMENT, 1980, 51, 162–170. Aggressive and nonaggressive boys from grades 2, 4, and 6 were exposed to a frustrating negative outcome which was instigated by an unknown peer who had acted with either a hostile intent, a benign intent, or an ambiguous intent. Videotaped behavioral responses constituted the dependent measures. Contrary to a hypothesis, aggressive boys did not display any failure to integrate intent cues into their behavioral reactions to the negative consequences, nor were there any significant main or interaction effects for age of subject. All groups responded with more aggression in the hostile condition than in the benign condition. Aggressive and nonaggressive subjects differed only in the ambiguous condition. Here aggressive subjects responded as if the peer had acted with a hostile intent. Nonaggressive subjects responded as if the peer had acted with a benign intent. The hypothesis that aggressive children respond to ambiguous-intention-negative-consequence situations with aggression because they infer a hostile intention was supported by a follow-up study using hypothetical episodes as stimuli. Results of this second study reflect the increased significance of the social reputation of the aggressive child with increasing age. The total pattern of results suggests a picture of the aggressive child being caught up in a spiraling cycle of reputation and behavior.

The application of concepts from the literature on the development of social cognition to the problem of inappropriate and persistent aggression among certain children provides the basis for two connected studies constituting this investigation. These studies deal specifically with children’s defensive aggression, that is, aggression which is a hostile and assertive response to perceived threat or intentional frustration. Defensive aggression is differentiated from instrumental aggression, which is injurious behavior intended to gain an independent reward and which may be altered by the appropriate manipulation of reward and punishment (Hartup 1974; Rule 1974).

The moral-judgment literature is abundant with studies demonstrating the importance of social cognitions in inhibiting defensive aggression. When a person perceives that a peer is intentionally causing a negative outcome, that person’s modal response is aggression. When a person perceives that a peer is intentionally causing a negative outcome, that person’s modal response is aggression. When a person perceives that a peer is intentionally causing a negative outcome, that person’s modal response is aggression. This finding holds for adults (Burnstein & Worchel 1962; Pastore 1952) and for children (Mallick & McCandless 1966; Rule, Nesdale, & McAra 1974; Shantz & Voydanoff 1973). Since a child’s ability to differentiate the intentions of others and his ability to integrate that intention information into his own behavior are milestones which are thought to be developmentally acquired (Flavell 1977; Heider 1958; Piaget 1965), it has been hypothesized that variations in defensive aggressive behavior in children may be related to variations in cognitive development (Feshbach 1970; Hartup 1974). That is, the 10-year-old child who persistently responds with aggression to a nonintentional negative outcome may be doing so because of a cue-utilization deficiency related to a lag in his ability to integrate intention information into his behavior.

An alternate explanation of persistent aggressive responding to nonintentional negative outcomes by a certain child is that this child is not deficient in cue utilization, but rather engages in cue distortion. This hypothesis is

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that the child makes a distortion in the perception of intention which is related to his expectation about the intentions of others. If a child strongly expects that a peer will behave with hostile intent, then he may be likely to perceive the peer’s behavior as hostile, particularly when the behavior produces a negative outcome. This perception may justify the child’s retaliatory aggressive behavior from his own point of view.

This process of making an inaccurate attribution in the direction of one’s expectations has been identified as a “complementary apperceptive projection” by Murray (1933). He suggested that the likelihood of one making a misperception of this kind increases with the ambiguity of the stimulus. Translated to the inappropriately aggressive child, it may be hypothesized that, given a negative outcome, this child will be most likely to mistakenly attribute a hostile intention to a peer (and consequently, to retaliate aggressively) when the peer’s behavior seems ambiguously intended.

As a test of these hypotheses, in the first study of the present investigation, known aggressive and nonaggressive children in three grades were presented with a negative outcome which was the consequence of the behavior of a peer who had acted with hostile intent, benign intent (accidental behavior), or ambiguous intent. The child’s behavioral responses were recorded by a video camera and constituted the dependent measure.

Study 1
Method
Selection of subjects.—Samples of 15 aggressive and 15 nonaggressive boys in each of grades 2, 4, and 6 (90 boys in all) of a semi-rural lower-middle-class school were selected on the joint bases of peer nominations and teacher assessments. Subjects selected by this method have been found to differ in their actual aggressive behavior, both in the classroom and on the playground (Dodge and Coie, Note 1). Informed consent for all phases of participation, including consent to videotape children, was obtained from parents of all participating children. Through a sociometric interview and with the aid of grade-level rosters, the 326 children in these grades were asked to nominate three peers who fit a particular behavioral description. Two of the descriptions were about consistent aggressive behavior (“This child starts fights,” and “This child upsets everything when he gets in a group”). Also, children were asked to nominate three peers whom they liked most and three peers whom they liked least. Scores for each nomination category were computed for each child by summing the numbers of nominations received from all peers. Teachers were asked to privately assess each of their students by rating, on a scale of 1 to 9, each child’s behavior in the areas of social relations, initiation of fights, and total involvement in fights.

In order to be selected as “aggressive,” a boy had to be placed above the median of his teacher’s ratings on each of the aggression questions and below the median on the favorability of social relations question. From this pool, the 15 boys in each grade whose peer nomination scores for aggression were highest, and whose cooperation and liking scores were low, were selected as the aggressive sample. Only males were selected since the total pool of aggressive children was predominantly male. The “nonaggressive” sample of boys was matched to the aggressive sample by race. One-third of the sample was black, paralleling the overall racial composition of the school. The nonaggressive sample was similarly selected on the basis of teacher ratings and peer nominations, but for prosocial and nonaggressive behavior.

Overview of experimental design.—Subjects were exposed to a frustrating negative outcome during the course of a puzzle-assembling task in which a prize could be won. A negative outcome (destruction of the subject’s puzzle) was instigated by an unseen peer who, through simulated “live” audio information, was heard to be acting with a hostile intent, with a benign intent, or ambiguously. Assignment to condition was random. The boy was then given an opportunity to retaliate by destroying the unseen peer’s puzzle. His verbal and behavioral responses were recorded by a video camera and constituted the dependent measure in a 3 x 2 x 3 (grade level of subject x status of subject x experimental condition) factorial experiment.

Procedure.—Each boy was escorted into a research trailer which was divided into two rooms and was told by the white female experimenter that he could win a prize by performing well in a puzzle-assembling task. He was told that another boy, in the adjoining room, would also be working at this task, even though they were not competing against each other. By means of a contrived demonstration,
the boy was led to believe that a microphone and speaker system had been connected between the two rooms, which allowed the two boys to communicate openly with each other. The "other boy" was actually a tape-recording of scripts read by a 9-year-old boy. The tape player was operated by a technician in the other room. The experimenter then went on to explain the task to the child. He could win one of three prizes of differing value, or no prize, depending on how many pieces of his puzzle were assembled at the end of the task. The boy would have a limited amount of time and was to work as rapidly as possible on the 50-piece jigsaw puzzle, which was large and simple enough that all children could assemble at least some pieces. Boys unfamiliar with the task were given time to practice.

The experimenter then began timing the boy’s efforts. When the boy had assembled 13 puzzle pieces, she announced that they would stop for a break. She told the subject she wanted the boys to look at each other’s puzzles, so she left the room with his partially completed puzzle, which was in a wooden tray. A few seconds later the tape player was turned on, and the subject was led to believe he heard the experimenter talk to the other boy. She told the other boy to look at the puzzle while she left the room. The subject then heard one of three recordings by the fictitious other boy.

In the hostile condition, the other boy made the following statement, in a hostile voice: “Gee, it looks like he’s got a lot done. Well, I don’t like it. I don’t want him to win that dumb prize, so there, I’ll mess it up.” [Crashing sounds are heard.] There . . . that’ll do it.” In the benign condition, the other boy stated, in a friendly voice: “Gee it looks like he’s got a lot done. I think I’ll help him put some more pieces together. Hey, there’s one. I’ll put it here. [Crashing sounds are heard.] Oh, no, hey, I didn’t mean to drop it. I didn’t mean it.” In the ambiguous condition, the other boy made only the following statement, in a nondescriptive voice: “Gee it looks like he’s got a lot done.” [After a long pause, crashing sounds are heard.]

Following this sequence, the experimenter was heard to return to the room and collect the two puzzles. Moments later, she returned to the subject’s room with both puzzles. The subject’s puzzle had been disassembled, and the other boy’s puzzle was partially completed. She told the subject to look over the two puzzles while she was gone, and then she left the room. At all stages of the experiment, the experimenter remained blind to the status of the child and to the experimental condition.

Following the experimenter’s departure, a video recorder filmed the subject’s behavior through a one-way mirror and recorded his voice for the next 3 min. Subjects were not made aware of the taping. The subject’s behavior during this period constituted the dependent measure. Following this period, the experimenter returned to the room and told the child that the task was over. The experimenter awarded him the best prize for his positive performance on the task, thereby reinforcing the child for his performance and not the outcome, and escorted him back to the classroom. He was asked not to tell other children about the task.

While cognizant of ethical considerations, the experimenter did not inform the child that his behavior had been videotaped, or that the task had been “rigged.” This information was withheld so that children would not be tempted to “divulge the trick” to peers and because it was felt that the information would only confuse the children. Both parents and school personnel had given fully informed consent for this procedure.

As an informal check on the credibility of the manipulation, the experimenter questioned the child about the procedure as she escorted him back to the classroom. No children appeared to disbelieve the reality of the procedure. Teachers acted as a check on the experimenter’s request that each child not tell other children about the procedure. By anecdotal accounts of teachers, all children appeared to honor this request.

Observer coding and reliability.—Two observers independently coded the occurrences of each child’s behavior in seven categories, which were derived after observation of the range in behaviors displayed: (A) disassembled one or more pieces of the other’s puzzle, (B) expressed verbal hostility, (C) showed indirect hostility (such as hitting the wall, pounding the table, or making a fist), (D) assembled one’s own puzzle, (E) attempted a neutral communication with the other child, (F) made a positive verbal statement, and (G) helped assemble the other’s puzzle. The percentage of times in which both coders agreed whether or not a particular category of behavior occurred was calculated as the measure of observer reliability. The median agreement for the seven categories was 97%, with a range of 94%-100%.
In addition, an a priori single measure which assessed the affective valence of the child's behavior was derived from the seven observer categories. If the observer had recorded an occurrence of any of the aggressive categories (A, B, or C), the child received a score of 3. A child received a score of 2 if no valenced behavior was recorded, and a score of 1 if he had demonstrated positive behavior (categories F or G), in absence of aggressive behavior. Cases in which the two observers disagreed on this coding were resolved by a joint review, so that 100% agreement was reached for this measure.

Results and Discussion

The occurrence rates for the seven categories of behavior were analyzed by a multivariate analysis of variance and are displayed in table 1. A significant multivariate effect for experimental condition was found, $F(14,132) = 4.55$, $p < .0001$. Univariate analyses revealed that the hostile condition elicited more disassembling of the other's puzzle, $F(2,72) = 10.64$, $p < .0001$, and more verbal hostility, $F(2,72) = 10.78$, $p < .0001$, than either of the other conditions. The benign condition elicited the greatest occurrence of helping behavior, $F(2,72) = 11.44$, $p < .0001$, and the ambiguous condition elicited the greatest occurrence of positive verbal behavior, $F(2,72) = 10.29$, $p < .0002$.

A significant multivariate main effect for subject status was also found, $F(7,66) = 3.68$, $p < .0002$. Univariate analyses revealed that aggressive boys, relative to nonaggressive boys, were more likely to display verbal hostility, $F(1,72) = 4.26$, $p < .05$, indirect hostility, $F(1,72) = 8.70$, $p < .01$, neutral communications with the peer, $F(1,72) = 15.13$, $p < .001$, and helping behavior, $F(1,72) = 2.78$, $p < .07$. An interaction of subject status with experimental condition for helping behavior, $F(1,72) = 2.78$, $p < .07$, showed that the aggressive boys helped the peer more than did the nonaggressive boys only in the benign condition.

These data show that all groups of children reacted to the hostile condition with aggression and to the benign condition with relative restraint from aggression. The aggressive group of boys were more likely than their nonaggressive peers to display aggression, as one might predict. Interestingly, they were also more likely to help the peer, but only when the situation called for it, as in the benign condition. The latter finding suggests that the boys in the aggressive group were not blindly aggressive, but were highly discriminating and were reacting to the interpersonal stimuli to a greater extent than were nonaggressive boys. The "increased reactivity" of aggressive boys is a finding which is distinct from a hypothesis of "increased activity" in these children and which could be explored further in other studies.

Analysis of the variance in the derived aggression score revealed a main effect for experimental condition, $F(2,72) = 14.64$, $p < .00001$. Post hoc examination of the mean scores by Newman-Keuls tests revealed that the hostile condition ($M = 2.6$) elicited significantly ($p < .05$) higher aggression scores than did the benign condition ($M = 1.75$). The mean score in the ambiguous condition ($M = 1.9$) fell in between the two extreme scores.

Neither a main effect of grade level nor an interaction of grade level with experimental condition was found for the aggression score, indicating that in all three grades chil-

**TABLE 1**

| PERCENTAGES OF SUBJECTS IN EACH CONDITION DISPLAYING VARIOUS BEHAVIORS, 
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<td><strong>BEHAVIOR CATEGORY</strong></td>
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*Note:* $A = $ disassemble puzzle, $B = $ verbal hostility, $C = $ indirect hostility, $D = $ assemble own puzzle, $E = $ neutral communication with peer, $F = $ positive verbal behavior, $G = $ help assemble peer's puzzle.
Aggressive boys received a higher mean aggression score than did nonaggressive boys, \( F(1,72) = 6.56, p < .02 \). However, a marginally significant interaction of subject status with experimental condition was also found, \( F(2,72) = 2.64, p < .08 \). Newman-Keuls analysis of mean scores revealed that, in the hostile condition, aggressive boys \((M = 2.7)\) and nonaggressive boys \((M = 2.5)\) received similar high scores. In the benign condition, aggressive boys \((M = 1.8)\) and nonaggressive boys \((M = 1.7)\) received similar low scores, which were significantly lower than their scores in the hostile condition \((p < .05)\). In the ambiguous condition, however, aggressive boys \((M = 2.3)\) received a significantly higher mean aggression score than did nonaggressive boys \((M = 1.5)\) \((p < .05)\). In fact, the aggressive boys' mean score in the ambiguous condition was significantly higher than their score in the benign condition \((p < .05)\) and was not significantly different from that in the hostile condition. The nonaggressive boys' mean score in the ambiguous condition was significantly lower than their score in the hostile condition \((p < .05)\) and was not significantly different from their score in the benign condition.

The present data show that, when a peer's intention is stated clearly, aggressive boys alter their retaliatory behavior according to that intention as appropriately as do nonaggressive boys. These data do not support the cue-utilization-deficiency hypothesis. When the intention of the peer remains ambiguous, aggressive and nonaggressive boys diverge in their behavioral reactions. Aggressive boys react as if the peer had acted with hostile intent, that is, with aggression, while nonaggressive boys behave as if the peer had acted benignly, that is, by refraining from aggression. These data support the cue-distortion hypothesis that aggressive and nonaggressive boys differ in their perceptions of the intentions of peers in ambiguous circumstances. However, in this study, only behavioral reactions of the subjects were measured. The attributions made by the boys must be inferred. In order to more directly assess specifically the attributions of these children in negative outcome ambiguous circumstances, a second study was run. This study employed an interview methodology in which children were asked to respond to hypothetical events. They were asked to attribute reasons for a negative outcome which was hypothetically inflicted upon them by a peer. Also, they were asked to state their probable behavioral response. According to the cue-distortion hypothesis, aggressive boys would be more likely than nonaggressive boys to attribute a hostile intention to the peer and would therefore be more likely to state that they would respond aggressively to the peer.

It may be suggested that characteristics of the specific peer who caused the negative outcome in this second study could additionally affect the attributions of these children. A study by Zadney and Gerard (1974) has shown that predetermined attributes of a person could affect others' interpretations of his behavior. It may be hypothesized that if a peer is known to be aggressive, then children will be more likely to attribute hostile intentions to him in an ambiguous situation than if the peer is known to be nonaggressive. To test this hypothesis, the status of the actors in the second study was manipulated by using the names of actual known aggressive and nonaggressive boys as actors.

Study 2

Method

Subjects.—The same children who served in study 1 also served in study 2. The two studies were administered at separate times, in random order, by independent experimenters, so that the children did not associate the two studies.

Procedure.—This study was conducted as an interview in which each child was brought to a private room and assured of the confidentiality of his responses, which were tape recorded. The child was asked a series of four questions about each of four peers. In each series, the interviewer told subjects one of two hypothetical stories in which a peer was in-
volved in a negative outcome for the child. In one story, the child was to imagine that he was sitting at a lunch table. As the peer (identified by name) approached the table, a carton of milk on the peer’s tray spilled all over the child’s back. In the other story, the child was to imagine that he was on the playground playing catch with a ball. When the peer got the ball, he threw it, and it hit the child in the back, hurting him. Each of the two stories was worded so that the intention of the peer was left ambiguous. The child’s task was to describe how the incident might have happened. His responses were probed in a non-leading direction until the child responded about the intentionality of the peer. Subsequently, he was asked how he would respond behaviorally and two additional questions about the peer.

Selection of peer targets.—The four peers who were targets of each series of questions were selected because they had been identified by the subject as aggressive or non-aggressive during the course of the above-mentioned peer nomination interviews which were conducted 6 weeks prior to the experimental interview by independent administrators. Two aggressive peer targets were chosen from the subject’s nominations for the “starts fights” and “disrupts group” categories. Two nonaggressive peer targets were chosen from the subject’s nominations to the “cooperates in a group” category. When subjects had made more than two nominations for a category the nominated peers who also happened to be subjects in the study were selected as targets for the stories. No peer name was used as a target figure in a category opposite to the category in which he was a subject. In other words, no aggressive subject served as a non-aggressive target, and vice versa.

Experimental design and dependent measures.—The study followed a $2 \times 3 \times (2 \times 2)$ factorial design in which subject status (aggressive vs. nonaggressive) and grade level (2, 4, or 6) were between-subject factors and target status (aggressive vs. nonaggressive) and story content (lunch vs. playground) were within-subject factors. Subjects were interviewed in random order. Target status and story content were factorially combined into four conditions and were presented to subjects in an order which was counterbalanced across all subjects. The first dependent measure was the subject’s attribution about the intention of the peer target and was scored as 1 if intentional and 2 if accidental. The second dependent measure was the subject’s stated behavioral response, which was scored as 1 if aggressive retaliation and as 2 if no aggressive retaliation. In the third question, the subject was asked what he thought the peer target would do next after the negative outcome, and his response was scored as 1 if he said the peer would continue to aggress, 2 if he said the peer would do nothing, and 3 if he said the peer would act benevolently. In the fourth question, the subject was asked if he would trust the peer by allowing himself to be placed in a position to let the act be repeated. His response was scored as 1 if he said yes he would trust the peer, and 2 if he said no he would not trust the peer. Since all interviews were tape recorded, an independent coder was able to check the reliability of the interviewer’s coding of responses. This coder listened to 20 tapes and agreed with the interviewer in over 95% of the cases. Thus, the interviewer’s coding was used for all subjects.

Results and Discussion

Since parametric analysis have been empirically justified with dichotomous data (Lunney 1970), the children’s responses to each question were analyzed by a repeated-measures analysis of variance. Mean scores of subjects’ responses to the four questions are displayed in table 2. As the results of the first study would have one predict, aggressive subjects attributed a hostile intention to the peer 50% more often than did nonaggressive subjects $F(1,84) = 3.00, p < .09$. Aggressive subjects also predicted that the target would continue to behave aggressively more often than did nonaggressive subjects, $F(1,84) = 4.28, p < .05$, and they said that they would not trust the target in the future more often than did nonaggressive subjects, $F(1,84) = 5.08, p < .03$.

These findings support the major hypothesis. In a hypothetical, negative-outcome, ambiguous circumstance, aggressive boys are more likely than nonaggressive boys to attribute a hostile intention to the peer instigator of the behavior. They also expect continued hostility from the peer and will not trust him. It is worth noting that when subjects attributed a hostile intention to the peer, they also said they would retaliate aggressively in 60% of the cases. When they attributed a benign intention to the peer, they retaliated in only 26% of the cases. This difference is significant by $\chi^2$ analysis, $\chi^2(1) = 40.18, p < .0001$. Apparently, even in this ambiguous circumstance the
subject’s attributions about the intention of the peer is highly predictive of his stated response.

The status of the peer target who instigated the behavior had an even more sizable effect on subjects’ attributions and stated behavior than did the status of the subject. As Table 2 shows, aggressive targets were attributed a hostile intention five times more often than were nonaggressive targets, $F(1, 84) = 46.51, p < .0001$. This effect held true at all grade levels (all t tests were significant at the .05 level), although the disparity between attributions for aggressive and nonaggressive targets was greater among sixth graders and fourth graders than among second graders, as revealed by a significant interaction of grade with target status, $F(2, 84) = 4.15, p < .02$. In other words, being labeled as aggressive has an increasingly negative effect on children’s attributions about a peer as he gets older.

The status of the peer target also had a significant effect on subjects’ hypothetical reactions to the negative outcome in the story. Subjects proposed aggressive retaliation more often against aggressive targets than against nonaggressive targets, $F(1, 84) = 19.37, p < .0001$. Subjects predicted that aggressive targets would be more likely to continue behaving in aggressive ways than would nonaggressive targets, $F(1, 84) = 36.60, p < .0001$. Subjects also refused to trust aggressive targets more often than nonaggressive targets, $F(1, 84) = 37.95, p < .0001$. These data amply demonstrate the importance of a peer’s reputation in the determination of a child’s attributions about the peer’s behavior and in that child’s behavior toward the peer. Specifically, children who are known to be aggressive are more likely than others to be attributed hostile intentions, to be the objects of aggressive retaliation, and to be expected to continue to aggress. Also, they are less likely to be trusted by their peers than are their nonaggressive counterparts.

**General Discussion**

The two studies reported provide complementary data concerning the attributions and behavior of aggressive and nonaggressive boys. In the first study, it was found that both aggressive and nonaggressive boys in each of three grades could differentiate their retaliatory behavior in a negative-outcome situation according to the clearly stated intention of the peer instigator of the outcome. This finding does not support the hypothesis that aggressive boys lack the ability to integrate intention cues into their behavior. Only when the peer’s intentions were ambiguous in producing a negative outcome did aggressive and nonaggressive boys’ responses differ. The aggressive boys reacted with aggression, as if the peer had acted with a hostile intent, while the nonaggressive boys reacted with restraint from aggression, as if the peer had acted benignly.

This difference in the behavior of aggressive and nonaggressive boys in the ambiguous circumstance may have broad implications about the naturally occurring interpersonal behavior of these children. First, aggression in the ambiguous circumstance may bring negative reactions from peers who believe that aggression is not warranted in that situation. Lesser (1959) reported that warranted aggression (such as that elicited by the present hostile condition) was actually positively correlated to popularity among children of this age range while unwarranted aggression was linked to social rejection. Aggressive responding in the ambiguous circumstance, if considered un-

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**TABLE 2**

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warranted by peers, may bring about social rejection. Second, it is reasonable to assume that since many naturally occurring peer interactions are filled with ambiguous, or multi-intentioned circumstances the present ambiguous experimental condition approximates many of the actual situations in which boys find themselves. It is in these situations that aggressive boys are more likely than others to aggress against peers.

Data from the second study show that aggressive and nonaggressive boys differ in their attributions about a peer who ambiguously instigates a negative outcome. Aggressive boys are relatively more likely to attribute a hostile intention to the peer, to expect continued aggression from the peer, and to mistrust the peer. In addition, the second study demonstrates the overwhelming importance of a child's reputation in determining attributions made about his behavior and in determining how others will behave toward him. Children known to be aggressive were more often than others attributed hostile intentions in ambiguous circumstances. They were more often the objects of aggression. Peers expected continued aggression from them and refused to trust them. Unfortunately for these children, the data suggest that the negative consequences associated with this label may actually increase over time, even when differences in the attributions and behavior of aggressive and nonaggressive children have not changed.

Based on the present data, a cyclical relationship between attributions and aggressive behavior may be proposed. Given a negative outcome in the context of unclear intentions, an aggressive child may be likely to attribute a hostile intention to a peer who is responsible for this negative event. This attribution may confirm his general image of peers as hostile and may increase the likelihood of his interpreting future behavior by the peer as hostile. Consequently, he may retaliate against the peer with what he feels is justified aggression. Subsequently, the peer, who has become the recipient of a negative outcome, may attribute a hostile intention to the aggressive child. This attribution confirms the peer's view of the child as being inappropriately aggressive in general and increases the peer's likelihood of interpreting future behavior by the aggressive child as being hostile. Consequently, the peer may aggress against the aggressive child, which could start the cycle over again.

Given a series of negative outcomes, which is inevitable, the cycle could turn into a self-perpetuating spiral of increased hostile attributions, aggressive behavior, and social rejection. Indeed, data from the second study showed that the effects of being labeled as aggressive increased with age. Older children suffered more negative consequences of their label than did younger children. Certainly, this label becomes known to the child himself and may serve to incite and justify his continued aggressive behavior as he grows up.

Supportive evidence for the proposed cyclical process has been found in studies in related behavioral areas. Snyder, Tanke, and Berscheid (1977) showed that, in a dyadic interaction, when person A was led to expect (by the experimenter) that person B would be friendly, then A unwittingly behaved toward the naive B in such a way as to cause B to actually become friendly. An implication of this study is that B's behavior will actually confirm A's expectation and cause him to respond accordingly, thus perpetuating the cycle. The durability of the expectations that could be built by such a process was demonstrated in a longitudinal study by Campbell and Yarrow (1961) in which it was inferred that changes in a child's behavior did not always change his social label.

The present investigation has shown that attributions and behavior may interact in a way that could perpetuate their relationship. For children who are developing aggressive styles of social interaction, this relationship could make behavioral change for them very difficult. The present data do not explain how children initially become aggressive, but do suggest a way in which defensive aggressive behavior is maintained and strengthened.

Reference Note


References

Campbell, J. D., & Yarrow, M. R. Perceptual and


