Attributing Goals to Others: Children's and Adults' Explanations of Interpersonal Events

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Background

Inferring the causes of others' actions is an important cognitive activity in the social lives of both children and adults. Because goals and intentions organize and motivate actions, reasoning about the goals underlying others' actions is central to social understanding.

Interpersonal actions may be motivated by a variety of goals, including instrumental goals (altering the objective state of affairs in the external world) and psychological goals (altering the mental state of oneself or another person).

Psychological goals may focus on a person's thoughts or emotions; they may also be aimed at influencing either oneself , the direct recipient of the action, or a bystander who observes the action.

Previous Research

Two previous studies examined the types of goals that children and adults attribute to others when explaining interpersonal events in response to open-ended questions (Lovett & Pillow, 2010; Pillow, Lovett, & Hill, 2008). We found that prior to early adolescence, children's explanations mostly referred to instrumental or social goals. References to psychological goals were rare prior to early adolescence.

Current Study

Because open-ended questioning requires children to produce a verbal explanation, it may not be a sensitive measure of children's recognition of another person's goals. Therefore, we presented participants with a set of possible explanations for interpersonal events and asked them to rate them. Children may endorse psychological-goal explanations even though they do not spontaneously provide them.

Experiment 1

We examined (a) whether children and adults prefer to explain another persons' interpersonal behavior in terms of that person's mood or goals, and (b) what types of goals children and adults attribute to others.

Types of Goals: We distinguished among : instrumental, social, and psychological goals.

Instrumental goals are aimed at affecting the objective state of affairs in the external world, including both objects and overt actions by people (e.g., Steven gave Bill his cupcake so that Bill would have a dessert). Instrumental goals are relatively transparent because their intended outcomes are potentially observable concrete events and typically follow immediately after an action.

Social goals are aimed at influencing social interactions or relationships (e.g., Steven gave Bill his cupcake so that Bill would be his friend). Social goals may be less transparent because they involve influencing either another person's social behavior or the qualities of social relationships, which are more abstract and subjective.

Psychological goals are aimed at affecting the mental state of oneself or others (e.g., Steven gave Bill his cupcake so that Bill would be happy). Psychological goals often are relatively opaque because they are aimed at producing changes in mental states, which are not directly observable and are not necessarily manifested in overt actions.

Predictions

Younger children may attribute instrumental-goal explanations to others more readily than they attribute social or psychological goals. Thus, first grade children should rate instrumental goals higher than social or psychological goals.

Social and psychological goals may be more central to older children's and adults' understanding of social events. Therefore, they should rate social and psychological goals higher than instrumental goals.

Method

Participants

Twenty first graders, third graders, fifth graders, and adults participated.

Procedure

Stories: Participants heard four stories containing an interpersonal event. One character, the actor, behaved either positively (e.g., sharing a toy, helping another child) or negatively (e.g., excluding someone from a game, refusing an invitation) toward a second character, the recipient.

- **Positive Story:** Every day after lunch, someone has to stay inside and clean up. Today it was Zach's turn to stay inside and clean up. All the other children went outside to play. Zach started putting some books away. Andrew stayed in the room and helped Zach clean up.

- **Negative Story:** After school, Kaitlyn wanted to play soccer. She needed to find some more kids to play soccer. Then Kaitlyn saw Lauren. Kaitlyn said, "Lauren, come play soccer. You can be on my team." Lauren said, "No Kaitlyn, I'm going home. I don't want to play soccer today."

Explanations: Using a five-point Likert-type scale, participants rated the likelihood of four possible explanations for the target event:

- **Actor's Mood:** Actor was in a good mood or bad mood.
- **Instrumental Goal:** Actor's goal was to influence the physical environment.
- **Social Goal**: Actor's goal was to influence the actor's relationship with the recipient.
- **Psychological Goal:** Actor's goal was to influence the recipient's mental state.

Positive Story: For example, participants were first asked, "Why did Andrew help Zach clean up the room?" and then provided with four explanations to rate:

- **Actor's Mood:** Was it because Andrew was in a good mood? Show me how likely that is.

- **Instrumental Goal**: Was it because Andrew wanted the room to be neat and clean? Show me how likely that is.

- **Social Goal:** Was it because Andrew wanted to make friends with Zach? Show me how likely that is.

- **Psychological Goal:** Was it because Andrew wanted to make Zach feel good? Show me how likely that is.

Negative Story: Participants explained why Lauren declined Kaitlyn's invitation by rating four explanations:

- **Actor's Mood:** Was it because Lauren is in a bad mood? Show me how likely that is.

- **Instrumental Goal:** Was it because Lauren wants to go home and read a book? Show me how likely that is.

- **Social Goal:** Was it because Lauren doesn't want to be friends with Kaitlyn? Show me how likely that is.

- **Psychological Goal:** Was it because Lauren wants to make Kaitlyn feel bad? Show me how likely that is.

Results

Participants ratings were analyzed with an Age x Story Valence x Explanation Type (5 x 2 x 4) ANOVA, which yielded a significant three-way interaction, $F(9, 204) = 3.53$, $p < .001$, partial $\eta^2 = 0.14$, $MSE = 0.44$.

For each story type, one-way ANOVAs for each age group compared ratings for the 4 explanations:
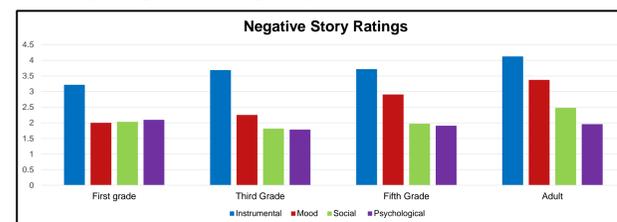
Positive Stories:

- First graders did not differentiate among the 4 explanation in their ratings.

- Third graders, fifth graders, and adults rated psychological-goal explanations as significantly more likely than instrumental-goal or actor-mood explanations.

- Fifth graders and adults rated social-goal explanations as significantly more likely than instrumental-goal or actor-mood explanations.

Positive Story Ratings
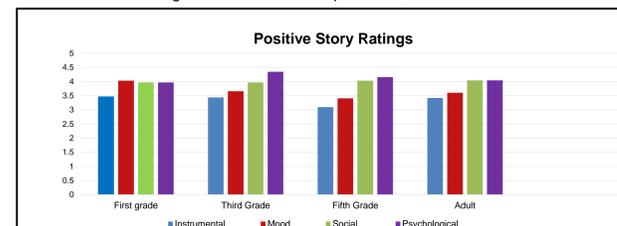
Ratings for Positive stories were mostly consistent with our predictions. Fifth graders and adults rated both social and psychological goals higher than instrumental goals. First graders did not rate instrumental goals higher than other goals, but instead rated all goals equally. Thus, older children and adults appeared to more clearly perceive positive interpersonal actions as motivated by prosocial goals, a pattern of attributions that should enhance the benevolence of prosocial acts.

Negative Stories:

- All age groups rated instrumental-goal explanations as significantly more likely than all other explanations.

- Fifth graders and adults rated actor's mood explanations as significantly more likely than psychological- or social-goal explanations.

Negative Story Ratings

Contrary to our predictions, for Negative Stories all age groups rated instrumental goals higher than other goals. Fifth graders and adults rated actor's mood explanations higher than psychological- or social-goal explanations. Participants did not perceive negative interpersonal actions as motivated by hostile intent, but instead attributed such actions as motivated by instrumental goals or as reflecting the actor's bad mood. This pattern of attributions should minimize the negative impact of unfriendly acts.

Experiment 2

In Experiment 2, we examined participants' evaluations of four types of goals: instrumental goals, and three types of psychological goals: direct affective goals, direct cognitive goals, and indirect cognitive goals.

- **Instrumental goals** are aimed at affecting the objective state of affairs in the external world, including both objects and overt actions by people.

- **Direct affective goals** are aimed at influencing the feelings of the recipient of an action.

- **Direct cognitive goals** are aimed at influencing the thoughts of the recipient of an action.

- **Indirect cognitive goals** are aimed at influencing the thoughts of a bystander who witnesses an action.

Because younger children may attribute instrumental goals to others more readily than psychological goals we expected first graders should rate instrumental goals higher than psychological goals.

Because psychological goals may be more central to older children's and adults' understanding of social events, older children and adults should rate affective and cognitive goals higher than instrumental goals.

Because indirect goals are relatively complex, first- and third-graders should rate direct affective and cognitive goals higher than indirect cognitive goals.

Method

Participants

Twenty first graders, third graders, fifth graders, and adults participated.

Procedure

Stories: Participants heard four stories containing an interpersonal event. One character, the actor, behaved either positively (e.g., sharing a toy, helping another child) or negatively (e.g., excluding someone from a game, refusing an invitation) toward a second character, the recipient, and a third character, the bystander, witnessed the act. The bystander was either a group of peers or a teacher.

- **Positive Story:** One day Emma was going to do a report about airplanes at school. She brought a model airplane that she had made to school. In the morning before school started, the wings fell off of Emma's airplane. Emma didn't know what to do. But Sarah picked up the wings and fixed the airplane. Then Emma told the class about airplanes and showed everyone the airplane she made.

- **Negative Story:** Sophie and Ella are friends. One day at school, the teacher asked the class to draw pictures of their summer vacations. When they were done, the teacher said, "That's really good, Sophie. You draw the best pictures I've ever seen." Later Sophie and Ella made castles with blocks. Sophie made a very big castle with lots of blocks. When it was done, Sophie went to get the teacher to show the teacher her castle. While Sophie was gone, Ella took a bunch of blocks away from Sophie's castle.

Explanations: Using a 5 point Likert-type scale, participants rated the likelihood of four possible explanations for the target event:

- **Instrumental Goal**
- **Direct Affective Goal**
- **Direct Cognitive Goal**
- **Indirect Cognitive Goal**

Positive Stories: For example, participants explained why Sarah fixed Emma's airplane by rating four explanations:

- **Instrumental Goal**: Was it because Sarah wanted to play with the airplane during recess? Show me how likely that is.

- **Direct Affective Goal**: Was it because Sarah wanted Emma to feel good? Show me how likely that is.

- **Direct Cognitive Goal**: Was it because Sarah wanted Emma to think the airplane was still fun to play with? Show me how likely that is.

- **Indirect Cognitive Goal**: Was it because Sarah wanted other kids in the class to think Emma is good at making airplanes? Show me how likely that is.

Negative Stories: For example, participants explained why Ella took a block from Sophie's castle by rating four explanations:

- **Instrumental Goal**: Was it because Ella wanted the blocks for herself so she could make her castle big? Show me how likely that is.

- **Direct Affective Goal**: Was it because Ella wanted to make Sophie feel bad? Show me how likely that is.

- **Direct Cognitive Goal**: Was it because Ella wanted Sophie to think Sophie's castle isn't any good? Show me how likely that is.

- **Indirect Cognitive Goal**: Was it because Ella wanted to make the teacher think that Sophie isn't very good at building things? Show me how likely that is.


Results

Participants ratings were analyzed with an Age x Story Valence x Explanation Type (5 x 2 x 4) ANOVA, which yielded a significant three-way interaction, $F(9, 204) = 2.29$, $p < .05$, partial $\eta^2 = 0.09$, $MSE = 0.55$.

For each story type, one-way ANOVAs for each age group compared ratings for the 4 explanations:

Positive Stories:

- First graders rated direct affective explanations significantly higher than instrumental explanations.

- Third graders, fifth grades, and adults rated direct affective explanations higher than all other explanations.

- Third graders, fifth graders, and adults rated both direct and indirect cognitive explanations higher than instrumental explanations.

- Adults rated indirect cognitive explanations higher than direct cognitive explanations.

Positive Story Ratings
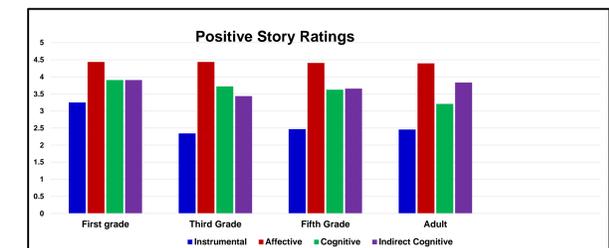
Contrary to our predictions, first graders did not rate instrumental explanations higher than other explanations. However, as expected, third- and fifth-grade children and adults rated direct affective, direct cognitive, and indirect cognitive explanations higher than instrumental explanations. Thus, the older participants appeared to view these actions as motivated by benevolent psychological goals.

Negative Stories:

- First graders did not differentiate among the 4 explanations.

- Third graders, fifth graders, and adults rated instrumental explanations significantly higher than all other explanations.

Negative Story Ratings
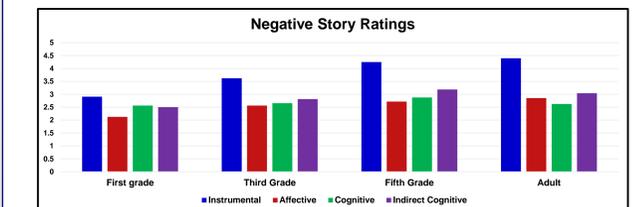
Contrary to our predictions, all age groups rated instrumental goals higher than other goals. Thus, participants did not perceive negative interpersonal actions as motivated by a hostile intent to cause psychological harm, but instead viewed negative actions as pragmatic rather than personal. This pattern of attributions should minimize the negative impact of unfriendly acts.

Conclusions

The results of these two experiments indicate that even early elementary school children recognize that interpersonal actions may be motivated by psychological goals. Thus, children are not limited to explaining actions in terms of their objective, instrumental outcomes.

Children appear to recognize a variety of possible motives, including directly influencing another person's mental state or indirectly influencing a bystander.

Moreover, both children and adults flexibly shift their explanations depending on the nature of the interpersonal event to be explained. Thus, a coherent view of social behavior appears to emerge during the elementary school years.

References

Lovett, S. B., & Pillow, B. H. (2010). Age-related changes in children's and adults' explanations of interpersonal actions. *Journal of Genetic Psychology, 171*, 139-167.

Pillow, B. H., Lovett, S. B., & Hill, V. (2008). Children's, adolescents', and adults' explanations of interpersonal actions. *Infant and Child Development, 17*, 471-489