# Attributing Psychological Goals to Others: Children's and Adults' Explanations of Interpersonal Events Suzanne B. Lovett and Bradford H. Pillow



### Background

Inferring the causes of others' interpersonal actions is an important cognitive activity in the social lives of both children and adults. Theory-of-mind research focuses heavily on children's belief-desire explanations of social behavior (e.g., Miller & Aloise-Young, 2017; Wellman, 2014) while paying relatively scant attention to children's consideration of other types of explanations. Although beliefs and desires help explain others' actions, goals and intentions must also be considered as they strongly organize and motivate actions.

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

Furthermore, 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 an individuals who observed the action or its aftermath.

### Previous Research

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

### Aims

Our primary aim was to investigate children's and adults' evaluations of psychological goals as explanations of interpersonal events.

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 each one. Children may endorse psychological-goal explanations in their ratings even though they do not spontaneously provide them in response to open-ended questions.

### Overview

We presented children and adults with brief stories describing interpersonal events. After each story we presented six explanation options, including (a) the actor's mood, (b) a social goal, (c) a direct psychological goal aimed at influencing the recipient's emotion, and three indirect psychological goals aimed at influencing (d) the actor's own emotion, (e) the bystander's thoughts about the actor, or (f) the bystander's thoughts about the recipient. We expected that a preference for indirect psychological-goal explanations would increase with age.

### Method

### **Participants**

Sixteen first graders, 17 third graders, 16 fifth graders, 14 seventh graders, and 23 adults served as participants.

### Procedure

Stories: Participants heard eight 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, while either peers or a teacher observed the exchange or its aftermath.

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

- Actor's Mood: Actor was in a good mood or bad mood.
- Social Goal: Actor's goal was to influence the actor's relationship with the recipient.
- **Direct Psychological Goal (Recipient Emotion)**: Actor's goal was to influence the recipient's emotions.
- Indirect Psychological Goal (Actor Emotion): Actor's goal was to influence the actor's own emotions.
- Indirect Psychological Goal (Bystander Thought About Actor): Actor's goal was to influence the bystander's thoughts about the actor.
- Indirect Psychological Goal (Bystander Thought About Recipient): Actor's goal was to influence the bystander's thoughts about the recipient.

### Sample Stories and Explanations:

### • Teacher as Bystander, Positive Story

One day the teacher told Andrew's class that a new boy named Zach would be joining the class that day. The teacher asked the class to try to make Zach feel welcome. In the afternoon, the class was inside and the teacher was at his desk watching the children. Andrew was using a computer to draw and Zach was reading a book. Andrew asked Zach if he wanted to have a turn using the computer to draw.

Participants were asked, "Why did Andrew ask Zach if he wanted to have a turn using the computer to draw?" They were then asked to show how likely each of six explanations were:

- Actor's Mood: Was it because Andrew was in a good mood?
- Social Goal: Was it because Andrew wanted to make friends with Zach?
- **Recipient Emotion:** Was it because Andrew wanted to make Zach feel good?
- Actor Emotion: Was it because Andrew wanted to make himself feel good?
- Bystander Thought about Actor: Was it because Andrew wanted the teacher to think he is friendly?
- Bystander Thought about Recipient: Was it because Andrew wanted the teacher to think Zach is friendly?

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### • Peers as Bystanders, Negative Story

Sarah and Emma were playing baseball with a bunch of kids after school. Sarah and Emma were on the same team. Near the end of the game, Emma dropped the ball and their team lost the game. Some of the other kids got mad about Emma dropping the ball. The next day, the kids were getting ready to play baseball again. Sarah was the leader so she got to choose who would be on her team. Sarah didn't choose Emma.

Participants were asked, "Why didn't Sarah choose Emma to be on her team?" They were then asked to show how likely each of six explanations were:

- Actor's Mood: Was it because Sarah was in a bad mood?
- **Social Goal:** Was it because Sarah didn't want to be friends with Emma?
- Recipient Emotion: Was it because Sarah wanted to make Emma feel bad?
- Actor Emotion: Was it because Sarah wanted to make herself feel good?
- Bystander Thought about Actor: Was it because Sarah wanted the kids on her team to think she is good at baseball?
- Bystander Thought about Recipient: Was it because Sarah wanted the kids on her team to think Emma isn't good at baseball?

### Results

A 2 x 5 x 2 x 6 (Bystander x Age x Story Valence x Explanation) ANOVA, with Bystander, Story Valence, and Explanation as repeated measures, yielded significant main effects of Story Valence, F(1, 81) = 114.77, p < .001, partial  $\eta^2 = 0.59$ , MSE = 3.39, and Explanation, F(5, 405) = 19.48, p < .001, partial  $\eta^2 = 0.19$ , MSE = 0.79, a significant Age x Story Valence interaction, F(4, 81) = 3.00, p = .023, partial  $\eta^2 = 0.13$ , MSE = 3.39, a significant Age x Explanation interaction,  $F(20, 405) = 2.57, p < .001, partial \eta^2 = 0.11, MSE = 0.40, and a significant Story Valence x Explanation interaction, F(5, P) and P an$ 405) = 112.40, p < .001, partial  $\eta^2 = 0.58$ , MSE = 0.75. There were no Type of Bystander effects.

### Age x Story Valence Interaction

• For all age groups except seventh graders, participants gave significantly higher explanation ratings for positivevalence than negative-valence stories.

### Age x Explanation Interaction

- First graders rated recipient-emotion significantly higher than bystander-thought-about-recipient explanations.
- Third graders rated recipient-emotion significantly higher than actor-emotion, bystander-thought-about-actor, and bystander-thought-about-recipient explanations.
- Fifth graders rated recipient-emotion significantly higher than actor-emotion and bystander-thought-about-recipient explanations.
- Seventh graders rated recipient-emotion significantly higher than actor mood and bystander-thought-about-recipient explanations, and they also rated bystander-thought-about-actor significantly higher than bystander-thought-aboutrecipient explanations.
- Adults rated recipient-emotion, actor-emotion, and bystander-thought-about-actor explanations significantly higher than actor mood, bystander-thought-about-recipient, and social explanations.



Thus, direct psychological goals, the actor wanting to affect the recipient's emotional state, were rated as the most likely explanation for the actor's behavior.

**Indirect psychological goals**, the actor wanting to affect the thoughts of the bystander(s) or his/her own emotions, were rated differentially by younger and older participants.

- The actor wanting to influence the actor's own emotional state was rated as an unlikely explanation by third- and fifthgraders but as a relatively likely explanation by adults.
- The actor wanting to affect the bystanders' thoughts about the actor was rated as relatively unlikely by third graders (and fifth graders to a marginal extent) but as likely by seventh graders and adults.
- The actor wanting to affect the bystanders' thoughts about the recipient was rated as the least likely explanation by all age groups.

A non-goal explanation, the actor's mood, was rated as an unlikely explanation for the actor's behavior by seventh graders and adults.

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### **Story Valence x Explanation Interaction Positive-Valence Stories:**

- Recipient-emotion explanations received significantly higher ratings than all but social explanations.
- Social-goal explanations received significantly higher ratings than the remaining four explanations.
- Actor-mood explanations were rated significantly higher than the remaining three goal explanations.
- The two bystander-thought explanations were rated significantly lower than most other explanations.
- The actor-emotion explanations were only rated significantly higher than bystander-thought-about-recipient explanation.

own emotions, were generally viewed as unlikely explanations.

### **Negative-Valence Stories:**

- Bystander-thought-about-actor explanations were rated significantly higher than all other explanations.
- Actor-emotion explanations were rated significantly higher than the remaining explanations.
- Bystander-thought-about recipient, actor-mood, and recipient-emotion were rated higher than social explanations.

A social goal, ending a friendship, was generally viewed as unlikely explanation.



Consistent with our predictions, all age groups endorsed direct psychological goals when asked to rate possible explanations for an interpersonal event. Thus, even in early elementary school, children recognize that interpersonal actions may be motivated by psychological goals. Thus, children are not limited to explaining actions simply in terms of the actor being in a good or bad mood.

Indirect psychological goals, goals aimed at affecting the thoughts of bystanders or the actor's own emotional state, were increasingly endorsed with increasing age. In general, they were more commonly endorsed by seventh graders and adults.

Explanation endorsement, however, was affected by the situational context in which the behavior occurred. Prosocial goals (direct psychological or social goals) motivated prosocial behaviors. But indirect psychological goals were more likely to be endorsed for a negative interpersonal exchange. Impression management or attempts to influence the actor's own emotions motived unfriendly acts rather than a hostile intent to cause psychological harm to the recipient. This pattern of attributions should minimize the negative impact of unfriendly acts.

In summary, both children and adults flexibly shift their explanations depending on the nature of the interpersonal event to be explained, and clearly understand that interpersonal behaviors are motivated by an actor's intentions.

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.

Miller, P. H., & Aloise-Young, P. A. (2017). Revisiting young children's understanding of the psychological causes of behavior. Child Development, 89, 1441-1461

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.

Wellman, H. M. (2014). *Making minds: How theory of mind develops.* New York: Oxford University Press.



- Thus, a direct psychological goal, enhancing the recipient's emotional state, or a social goal, facilitating a friendship, were generally viewed as the mostly likely aims of a positive interpersonal interaction.
- **Indirect psychological goals**, the actor wanting to promote positive thoughts in the bystander(s) or enhance his/her
- Thus, two indirect psychological goals, enhancing the bystanders' perception of the actor or enhancing the actor's own emotional state, were generally viewed as the mostly likely aims of a negative interpersonal interaction.

### Conclusions

### References

Poster available at: bradfordpillow.weebly.com