

# Reasoning About the Disclosure of Success and Failure to Friends Among Children in the United States and China

Gail D. Heyman  
University of California, San Diego

Genyue Fu  
Zhejiang Normal University

Kang Lee  
University of Toronto

Children's reasoning about individuals' willingness to disclose their successes and failures was investigated among 194 6- to 11-year-olds in the United States and China. In Study 1, participants showed a valence-matching effect, in which they predicted that individuals would be more likely to disclose their performance to an audience of friends if the friends' level of achievement was similar rather than dissimilar. This effect was weaker among children from China, who were more likely to justify their responses with reference to the implications for learning together or improving future performance. Results of Study 2 suggest that for children from the United States, the disclosure of successful performance to a friend who has performed poorly is seen as implicitly conveying the message "I'm better than you," whereas for children from China the message is "I can help you to do better." Results are interpreted with reference to cultural values and expectations about helping others to learn.

*Keywords:* self-disclosure, cross-cultural differences, peers, academic achievement, social cognition

When adults disclose information about themselves, it can provide an opportunity to gain understanding and support from others and to foster interpersonal connections (DePaulo & Kashy, 1998). Among children, disclosure can also foster interpersonal connections by allowing them to learn about themselves and others (see Howe, Aquan-Assee, Bukowski, Lehoux, & Rinaldi, 2001). However, disclosure also carries risks because it can lead to negative judgments (Derlega, Durham, Gockel, & Sholis, 1981). Consequently, children must learn to weigh the risks and benefits of disclosure. The present research focuses on one context in which children are likely to face such a challenge: when deciding whether to disclose information about one's performance to friends. A child who discloses negative performance information might receive support and encouragement, but also risks being judged as incompetent. A child who discloses positive performance information may gain social status, but also risks causing resentment and being judged as a show-off (Bennett & Yeeles, 1990; see also Banerjee,

2000, regarding the development of modesty norms). Thus, children's reasoning about the disclosure of performance information can provide an important perspective on the way they balance the fundamental psychological goals of demonstrating competence (Covington, 2000) and forming connections with others (Baumeister & Leary, 1995; Deci & Ryan, 1991).

Children's reasoning about the disclosure of performance information has implications beyond the fulfillment of basic psychological needs. The discourse that surrounds social events (Harris, 2002; Miller, Fung, & Mintz, 2002; Sperber, 1996) is an important source of information for children as they develop beliefs about themselves and others that they will later use to form expectations, interpret events, and generate responses (Dweck, 1999; Gopnik & Wellman, 1994; Wellman & Gelman, 1992). Information that peers provide about their own competence may be especially influential as children strive to determine which activities they are good at and which skills they may be capable of mastering in the future (see Altermatt, Pomerantz, Ruble, Frey, & Greulich, 2002).

A better understanding of children's reasoning about self-disclosure should also lead to insights into children's understanding of others as producers of potentially distorted or fabricated information rather than as objective reporters. Previous research has given considerable attention to how children seek out and evaluate information from others (Koenig & Harris, 2005; Mills & Keil, 2005; see Baldwin & Moses, 1996), but far less attention has been directed toward the ways in which children reason about the valence of the information and its personal and interpersonal implications.

In the present research, we focused on the way children 6 to 11 years of age reason about the communication of performance information between friends. We examined whether children's expectations might differ regarding the disclosure of positive ver-

---

Gail D. Heyman, Department of Psychology, University of California, San Diego; Genyue Fu, School of Education, Zhejiang Normal University, Zhejiang, China; Kang Lee, Institute of Child Study, University of Toronto, Toronto, Ontario, Canada.

This research was supported by National Institute of Child Health and Human Development Grant R01 HD048962. We thank Lorenzo Benedicty, Michelle Bernabe, Alicia Coggins, and Nicole Paglione for their assistance with data collection; Ye Xu and Jennie Kim for assistance with coding; and Brian Compton, Christine Harris, and Erin Mounts for comments on the manuscript.

Correspondence concerning this article should be addressed to Gail D. Heyman, Department of Psychology, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0109. E-mail: gheyman@ucsd.edu

sus negative performance outcomes and whether they would expect speakers to modify their decisions about disclosure on the basis of the intended audience's performance. This type of reasoning might be related to how children plan the details of their own self-presentation and may have implications for peer relations (Banerjee, 2000, 2002). For example, Banerjee (2002) found that among elementary school children, the tendency to take characteristics of the audience into account when making judgments about self-presentational choices is associated with receiving a greater proportion of reciprocated playmate nominations.

Although motivation within academic contexts was our primary focus, we also included scenarios that involved athletic contexts to examine the extent to which children's reasoning about performance would be domain specific. We chose the athletic domain as a basis for comparison because as in the academic domain, there can be outcomes that are easily identifiable as positive or negative about which an audience of friends could plausibly be unaware. In addition, the two domains were chosen because their outcomes are likely to be attributed to the performer's behavior or skill rather than to luck (but see Olson, Banaji, Dweck, & Spelke, 2006, for evidence that even outcomes attributed to luck can have important interpersonal implications).

A major goal of the present work was to examine how children's reasoning about the self-disclosure of performance information relates to the cultural context in which they are developing. Toward this end, the research was conducted in both the United States and China. This contrast is of particular interest because there are likely to be different norms and expectations relating to the disclosure of performance information. For example, in Chinese culture there is a strong emphasis on self-improvement, group solidarity, and humility, and by as early as 3 years of age, children who grow up in China focus more on the social aspects of the self than do European American children (Wang, 2006). Consequently, this cross-cultural comparison could potentially provide information about the extent to which the development of children's reasoning in this domain is sensitive to specific cultural inputs versus more universal developmental processes.

Previous research has pointed to specific predictions about likely patterns of response among children from the United States. One such prediction is that children would expect individuals to be more willing to disclose positive than negative outcomes so as to appear competent, as is consistent with evidence that people generally strive to present themselves in a favorable light (Kunda, 1990; Sedikides, 1993). Another prediction is that children would tend to engage in valence matching, in which they expect a higher degree of disclosure when there is a match between the performance of the speaker and audience than when there is a mismatch. We made this prediction on the basis of evidence that adolescents are more willing to disclose performance information to peers who have experienced similar levels of achievement (Quatman & Swanson, 2002) and our expectation that children in our targeted age range would have some awareness that sharing information under mismatch conditions can carry high social costs because the party who suffers by comparison to the other is likely to experience negative affect (see Brickman & Bulman, 1977; Duval & Wicklund, 1972). In addition, we thought that participants might have some awareness of potential social benefits of disclosure when the performances of the speaker and audience are similar. For example, disclosing one's negative performance to others who

have also performed poorly can be reassuring (Bosson, Johnson, Niederhoffer, & Swann, 2006; Brickman & Bulman, 1977).

We also expected age-related differences in children's responses, in light of evidence of developmental change across the elementary school years in the way children from the United States and United Kingdom think and act with reference to social comparison and self-presentational processes (Aloise-Young, 1993; Banerjee, 2000; Banerjee & Yuill, 1999; Bennett & Yeeles, 1990; Frey & Ruble, 1985; Gee & Heyman, 2007; Heyman, Fu, & Lee, 2007; Heyman & Legare, 2005). In particular, we predicted that the belief that others will be more likely to reveal performance information when it is positive would be diminished among older children, who are more likely than younger children to understand that revealing positive information can have social costs and revealing negative information can have social benefits (see Banerjee, 2000; Bennett & Yeeles, 1990).

It is far less obvious how the reasoning of children from China might compare with that of children from the United States. Previous research has supported at least two contrasting predictions. One is that children from China would be less likely to expect others to reveal positive information about themselves, particularly when interacting with poorly performing peers, because of the greater negative social consequences of appearing immodest. Modesty norms, which discourage making conspicuously positive statements about oneself (Banerjee, 2000), tend to be stronger in China than in North America (Lee, Cameron, Xu, Fu, & Board, 1997). East Asian children and adults are encouraged to be "unsung heroes" and are discouraged from acknowledging prosocial deeds and personal achievements. Kitayama, Markus, Matsumoto, and Norasakkunkit (1997) suggested that in Eastern societies, personal achievements and good deeds are opportunities for self-criticism rather than self-enhancement. Lying to minimize or deny one's good deeds and personal achievements is therefore considered laudable (see Fu, Lee, Cameron, & Xu, 2001). This contrasts with norms in North America, in which acknowledging one's personal achievements and good deeds is frequently seen as a legitimate way to pursue the goal of developing a positive self-image (Heine, 2001; Miller, Wang, Sandel, & Cho, 2002).

An alternative prediction is that children from China would show weaker valence-matching effects than children from the United States. This prediction is derived from research showing cross-cultural differences in children's beliefs about learning and achievement, including their purpose and consequences (Li, 2003; Li & Wang, 2004). Li and Wang (2004) argued that Chinese culture differs from that of the United States because "based on Confucian values, Chinese culture focuses more on social and moral purposes of self-perfection through learning, contribution to society, and social respect brought about by achievement" (p. 13). As a result, children who grow up in China may learn to value the importance of developing their skills through diligence and persistence (Li, 2005; Li & Wang, 2004; Stevenson & Lee, 1996) and may also focus on the potential prosocial implications of their achievements. If this is the case, it raises the possibility that children who grow up in China feel a moral obligation to help others learn, so that when friends differ in their performance outcomes there is an implicit understanding that the stronger performers are obligated to help the weaker performers to improve. Consequently, for children from China, the disclosure of one's performance to an audience of friends who have performed dis-

similarly may be less of a concern than it is for children from the United States because when the speaker has performed poorly, disclosure may be viewed as an implicit request for help, and when the speaker has performed well, disclosure may be viewed as an implicit offer of help.

### Study 1

Study 1 examined children's expectations about the disclosure of performance information to friends among children ages 6 to 11 from the United States and China. Participants were presented with a series of scenarios concerning the disclosure of academic and athletic performance information. Each of the scenarios described the performance of a speaker and an audience. For the present purposes, the *speaker* is a child who is in a position to decide whether to disclose performance information to the *audience*, which consists of a group of the speaker's friends. The outcome valence for the speaker (positive or negative) and for the audience (positive or negative) was manipulated across scenarios. Following the presentation of each scenario, participants were asked to predict whether the speaker would choose to disclose his or her performance outcome to the audience.

### Method

**Participants.** Participants were 120 elementary school students, with half (31 boys and 29 girls) recruited from a southwestern coastal city in the United States, and half (32 boys and 28 girls) from an eastern coastal city in China. Within each country, half of the participants were in a younger group of 6- to 8-year-olds ( $M = 7$  years, 1 month; range = 6 years, 0 months, to 8 years, 0 months), and half were in an older group of 9- to 11-year-olds ( $M = 11$  years, 2 months; range = 9 years, 0 months, to 11 years, 11 months). The U.S. sample was approximately 71% European American, 21% Hispanic American, and 8% Asian American. The Chinese sample was 100% Han Chinese. Participants in each country attended schools whose students were from diverse economic backgrounds.

**Procedure.** Participants were tested individually by trained interviewers who were unaware of the study hypotheses. The participants were presented with a series of eight scenarios, each of which described a speaker who has an opportunity to disclose information about his or her performance to an audience of friends. The eight scenarios were a factorial combination of achievement domain (academic or athletic), outcome valence for the speaker (positive or negative), and outcome valence for the audience (positive or negative). In the academic domain, all positive outcomes were described as "very good" test scores, and all negative outcomes were described as "very bad" test scores. In the athletic domain, all positive outcomes were described as scoring several goals in a soccer game, and all negative outcomes were described as playing badly in a soccer game. Following each scenario, participants were asked to predict whether the speaker would choose to disclose the performance information if the audience did not know about it already. Participants were then asked to explain their answers, as a preliminary way of identifying the types of issues that are salient to children as they consider whether disclosure is likely. The following is an example of a scenario in the academic domain in which the outcome valence is positive for both the speaker and the audience.

I know a kid. He just got a very good score on a test. He knows that several of his friends just got very good scores also. Do you think he will tell his friends that he got a very good score on the test if they don't know his score? Why?

The eight scenarios appeared in a random order that was determined separately for each participant, under the constraint that the scenarios associated with each achievement domain appeared consecutively. Participants heard the speakers in the eight scenarios described as all male or as all female, with the gender of the speakers determined randomly for each participant. Responses indicating that the speaker would disclose the performance outcome were coded as 1, and responses indicating that the speaker would not disclose the performance outcome were coded as 0, to create an expectation score for each scenario.

The scenarios were translated into Chinese for the Chinese participants. To verify that the translation process did not introduce changes in meaning, we asked a translator who had not seen the original English versions to translate each of the Chinese versions back into English. We found that the back-translated versions of the stimuli did not differ in meaning from the original English versions.

### Results and Discussion

**Expectation scores.** Preliminary analyses revealed no significant gender or achievement domain effects, so the data for these factors were combined for all subsequent analyses. Mean expectation scores are presented in Table 1. We conducted an analysis of variance (ANOVA) on the composite scores with age group (young or old) and country (United States or China) as between-subjects variables and speaker outcome (positive or negative) and audience outcome (positive or negative) as within-subjects variables.

Results revealed a significant main effect of speaker outcome, reflecting the expectation that speakers would be more willing to disclose positive outcomes,  $F(1, 116) = 15.44, p < .01, \eta^2 = 0.12$ . This effect was significantly stronger for the younger children, as confirmed by a two-way interaction between speaker outcome and age,  $F(1, 116) = 5.33, p < .05, \eta^2 = 0.04$ . As can be seen in Table 1, the strongest age-related differences appeared in the condition in which the speaker and the audience both performed poorly. In this condition, the older children within each country were more likely to expect disclosure than were the younger children.

There was also a valence-matching effect, as evidenced by a two-way interaction between speaker outcome and audience outcome, reflecting an expectation that speakers will be more willing to disclose their performance outcome to an audience that has performed similarly,  $F(1, 116) = 58.66, p < .01, \eta^2 = 0.34$ .

Finally, there was a three-way interaction among country, speaker outcome, and audience outcome, reflecting a tendency for children from the United States to be more sensitive than children from China to mismatches in the valence of the outcomes for the speaker and the audience,  $F(1, 116) = 18.79, p < .01, \eta^2 = 0.14$ . Simple effects tests indicated that there were significant differences between countries when speaker outcome and audience outcome were both positive (children from the United States were more likely to expect disclosure;  $p < .05$ ) and when there was a mismatch between speaker outcome and audience outcome (child-

Table 1  
*Mean Expectation Scores From Study 1*

Group	Speaker +		Speaker -	
	Audience +	Audience -	Audience +	Audience -
United States				
Younger children				
Academic	.87 (.35)	.47 (.51)	.23 (.43)	.43 (.50)
Athletic	.80 (.41)	.40 (.50)	.37 (.49)	.73 (.45)
<i>M</i>	.83 (.30)	.43 (.43)	.30 (.36)	.58 (.35)
Older children				
Academic	.90 (.31)	.37 (.49)	.27 (.45)	.70 (.47)
Athletic	.90 (.31)	.33 (.48)	.30 (.47)	.77 (.43)
<i>M</i>	.90 (.24)	.35 (.44)	.28 (.43)	.73 (.31)
China				
Younger children				
Academic	.77 (.43)	.70 (.47)	.30 (.47)	.47 (.51)
Athletic	.70 (.47)	.57 (.50)	.57 (.50)	.50 (.51)
<i>M</i>	.73 (.39)	.63 (.41)	.43 (.37)	.48 (.46)
Older children				
Academic	.70 (.47)	.67 (.48)	.57 (.50)	.80 (.41)
Athletic	.70 (.47)	.53 (.51)	.53 (.51)	.73 (.45)
<i>M</i>	.70 (.41)	.60 (.40)	.55 (.36)	.77 (.34)

*Note.* Plus and minus signs indicate the valence (positive or negative, respectively) of the information about the speaker and the audience. Possible scores ranged from 0 to 1, with higher scores indicating a stronger expectation that the speaker will disclose the information about his or her performance. Standard deviations are shown in parentheses.

dren from China were more likely to expect disclosure;  $p < .01$  for each type of mismatching scenario). There was no significant difference between countries when speaker outcome and audience outcome were both negative.

These weaker valence-matching effects among children from China suggest that disclosure to friends whose performance is dissimilar may be less threatening for children from China because they expect stronger performers to help weaker performers or because they are more optimistic about the effectiveness of increased effort as a means of improving one's performance (Hau & Salili, 1994; Li, 2005; Stevenson & Lee, 1996). For example, children from China may view the disclosure of positive performance to a poorly performing friend as an offer of help rather than as an attempt to show off and may expect that the disclosure of an academic difficulty will result in receiving the extra help needed to become more successful.

Although cultural differences in modesty norms cannot explain children's expectations in the valence-mismatch conditions, they may help to explain why children from China were less likely to expect strong performers to disclose their performance to other strong performers than were children from the United States. If members of an audience who have performed well are not seen as needing help, then the disclosure of one's positive performance might not be interpreted as an implicit offer of help. In this case, it may be less socially acceptable for Chinese children to talk about their strengths, which would be consistent with modesty norms.

*Children's explanations of their responses.* Children's responses were coded into five categories by two independent coders, including a primary coder who is bilingual in Chinese and English and has extensive experience with both cultures and with the coding of cross-cultural data. Example responses from each

category are presented below, with the participant's country indicated in parentheses.

Responses that referred to emotions or concerns about the judgments of others were coded as *emotions*, as in the following examples. She would feel embarrassed. (United States) They will say, "You are so bad— ha ha ha ha ha." (United States) She might humiliate herself. (China) He will laugh at people who did poorly to make people idolize him. (China)

Responses that made reference to improving performance or learning together were coded as *future performance*.

He wants to help other friends get the test right. (United States)

They would tell each other to study a little better next time. (United States)

You can have a discussion and continue improving your grades. (China)

He will tell them frankly and ask for help. (China)

Responses that referred only to the performance of the speaker or the audience were coded as *performance description*.

Her friends did well. (United States)

They're both equal and they both did the same. (United States)

It seems others didn't do as well as he did. (China)

They were all bad too. (China)

Responses that referred to the goal of maintaining positive interactions and successful relationships were coded as *relationships*.

So they can be friends. (United States)

Just to be regular—to fit in. (United States)

It will influence the relationship between friends. (China)

All will welcome him. (China)

Responses that referred to the issue of privacy were coded as *privacy*.

They'll keep it a secret. (United States)

It's none of their business to know what her grades are. (United States)

Don't talk about your weaknesses. (China)

It doesn't matter if it is told to others. (China)

Kappas for each category ranged from 0.91 to 1.0 and were computed using each participant's responses to each question as the unit of analysis. The proportion of codable explanations that fell into each coding category is shown in Table 2, collapsed across the two achievement domains for each country, age group, and combination of Speaker Outcome  $\times$  Audience Outcome. We did not conduct statistical analyses on these data because they were

collected for exploratory purposes and because many cells contained very few data points.

Of key theoretical interest was the extent to which participants made references to future performance. Within each age group, explanations that referred to future performance were more common among Chinese children, as can be seen in Table 2. For younger children from the United States, an average of 6.9% of responses fell into this category as compared with 26.3% of responses of younger children from China. For older children, these percentages were 11.5% and 36.7%, respectively. This pattern of results suggests that for children from China, the possibility that the disclosure of performance information will lead to improved performance is more salient than it is for children from the United States. This possibility was investigated more systematically in Study 2.

## Study 2

In Study 1, the participants from China were more likely than those from the United States to expect that speakers would disclose a performance outcome that mismatched in valence with the performance of the audience. We hypothesized that this difference occurred because the participants from China were less likely to view the mismatching-valence situation as problematic and more likely to see it as an opportunity to improve their own performance or to help others improve. As is consistent with this possibility, open-ended responses from Study 1 suggest that children from China gave greater consideration to the goal of improving future performance. A major goal of Study 2 was to investigate this issue

Table 2  
Coding Results From Study 1

Coding category	Speaker +		Speaker-		<i>M</i>
	Audience +	Audience -	Audience +	Audience -	
Future performance					
United States, younger	.091	.074	.000	.111	0.069
United States, older	.063	.117	.140	.140	0.115
China, younger	.184	.277	.265	.326	0.263
China, older	.151	.333	.422	.560	0.367
Performance description					
United States, younger	.309	.093	.056	.259	0.179
United States, older	.302	.100	.018	.298	0.180
China, younger	.368	.149	.147	.233	0.224
China, older	.264	.146	.044	.200	0.164
Emotions					
United States, younger	.255	.556	.537	.185	0.383
United States, older	.254	.617	.667	.228	0.442
China, younger	.211	.255	.500	.256	0.306
China, older	.113	.188	.400	.120	0.205
Relationships					
United States, younger	.036	.074	.074	.037	0.055
United States, older	.143	.133	.035	.070	0.095
China, younger	.158	.064	.059	.047	0.082
China, older	.321	.250	.022	.020	0.153
Privacy					
United States, younger	.273	.185	.185	.259	0.226
United States, older	.206	.017	.070	.123	0.104
China, younger	.079	.255	.029	.047	0.103
China, older	.113	.042	.000	.040	0.049

Note. Plus and minus signs indicate the valence (positive or negative, respectively) of the information about the speaker and the audience.

more fully by examining whether children from China are more likely than children from the United States to interpret disclosure of superior performance to a friend as an implicit offer of help and to interpret the disclosure of inferior performance as an implicit request for help. We asked 10- to 11-year-old participants from the United States and China to reason about situations in which characters disclosed their performance outcomes to friends in a mismatching-valence context. Following each scenario, we asked participants to choose between two forced-choice interpretations, one consistent with expectations that the high achiever will help the low achiever and the other consistent with a negative interpersonal interaction (i.e., that the high achiever is showing off). Although the two response options do not constitute an exhaustive set of possible interpretations of the situation, we offered only these options because they were consistent with the predominant explanations offered by participants in Study 1 (i.e., the future performance and emotions categories) and because we thought it was the most effective way to investigate the questions of primary theoretical interest.

We included participants ages 10 and 11 only because the new measures involved more sophisticated wording and response scales, which might not be appropriate for some early elementary school children. We also restricted the sample from the United States to include European American participants only. In Study 1, we imposed no such restriction because we were primarily interested in the cultural values that are promoted by widespread public representations (see Sperber, 1996), such as those from television and public schooling, and it seemed reasonable to assume that examining country effects rather than ethnicity effects would best capture the phenomena of interest. However, because many of the studies that have formed the theoretical basis for the present work used samples from the United States that were exclusively European American, restricting the sample in this way should help to ensure that the results are interpretable with reference to the earlier body of research.

Study 2 was also designed to build on the findings of Study 1 by investigating children's beliefs about the appropriateness of disclosure in relation to the speaker's goal. Two types of scenarios were included: one in which the goal of improving the performance of the weaker performer was made salient, and another in which the goal of protecting the feelings of the weaker performer was made salient. Because the results of Study 1 had provided little evidence of differences across the two achievement domains, the scenarios in Study 2 concerned the academic domain only.

We included a measure to test the hypothesis that children from China are more likely than children from the United States to expect that individuals who perform poorly will receive help from their peers. If this is the case, it could help to explain why children from China might be more likely than children from the United States to view disclosure by a stronger performer to a weaker performer as an implicit offer of help and disclosure by a weaker performer to a stronger performer as an implicit request for help.

## Method

*Participants.* Participants were 74 elementary school students ages 10 and 11 ( $M = 10$  years, 7 months; range = 11 years, 0 months to 12 years, 0 months), with 36 children (19 boys and 17 girls) recruited from a southwestern coastal city in the United

States and 38 children (19 boys and 19 girls) recruited from an eastern coastal city in China. The U.S. sample was 100% European American and attended schools whose students were from middle-class backgrounds. Participants from China attended schools whose students were from diverse economic backgrounds.

*Procedure.* In individualized interviews, participants were presented with a series of scenarios and questions. In a set of implication scenarios, which were presented first, participants were told of a speaker who discloses his or her successful performance to a poorly performing friend. The gender of the speaker was manipulated as a between-subjects factor. The examples that appear below present questions as they were asked of female characters. Participants were asked whether the friend would "be motivated to study harder" or "look down on herself" and whether the friend would feel that the speaker is "trying to help her do better" or "showing off." Participants were also told of a speaker who discloses his or her poor performance to a friend who has performed successfully. Participants were asked whether the friend would "look down on [the speaker]" or "try to motivate [the speaker] to study harder" and whether the friend would feel that the speaker is "is looking down on herself" or is "looking to get help."

In a set of goal scenarios, participants were asked a series of questions that involved recommending (on a 5-point scale ranging from 1 = *definitely no* to 5 = *definitely yes*) whether a speaker should disclose his or her own performance information to a friend whose performance was dissimilar. For each participant, the characters were the same gender as the characters in the implication scenarios. Participants were first told about a child protagonist who performs well on a test and has a friend who performs poorly. Participants were asked whether the protagonist should reveal his or her own score to the friend if the friend is looking down on himself or herself. Next, participants were asked whether the same protagonist should reveal the score if the friend is concerned about how to improve his or her scores. Participants were also told about a child protagonist who performs poorly on a test and has a friend who performs well. They were asked whether the protagonist should reveal his or her own score to the friend if the protagonist is looking down on himself or herself. Next, participants were asked whether the same protagonist should reveal the score if the protagonist is concerned about how to improve his or her scores.

Finally, participants were asked about their own school experiences. On one question participants were asked, "How much do kids who perform poorly on tests get help learning from other kids?" On another question they were asked, "Compared to other kids at your school, how well do you usually do on tests?" Participants responded to each question using a 5-point scale.

## Results and Discussion

*Implication scenarios.* Children's responses to the implication scenarios showed significant cross-cultural differences. In response to the scenario in which the speaker outperformed the audience, 76% of participants from China, but only 50% of participants from the United States, predicted that the disclosure would motivate the poorer performer to study harder,  $\chi^2(1, N = 74) = 5.24, p < .05$ . More strikingly, only 14% of participants from the United States, as compared with 68% of participants from China, assumed that the audience would view the disclosure as an

attempt to help rather than to show off,  $\chi^2(1, N = 74) = 27.58$ ,  $p < .001$ . In response to the scenario in which the speaker performed worse than the audience, there was no cross-cultural difference: About 90% of participants from each country predicted that the audience would try to motivate the speaker to study harder. However, when participants were asked how the friend would interpret the interaction, only 58% of participants in the United States, as compared with 92% of the participants from China, inferred that the audience would assume that the speaker is seeking help. Overall, these differences suggest that participants from the two countries interpreted disclosure in the valence-mismatch contexts differently, with participants from China more likely to view the disclosure as motivated by a desire to improve the performance of the student who is having difficulty.

*Goal scenarios.* A summary of children's recommendations in response to the goal scenarios is presented in Table 3. We conducted preliminary analyses to determine whether there were any effects of the gender of the characters in the scenarios or of the gender of the participants. Results showed no significant effects of participant gender, but did reveal significant effects on the basis of the characters' gender. Consequently, we excluded participant gender from subsequent analyses, but we included character gender.

Table 3  
Mean Self-Disclosure Recommendation Scores for Goal Scenarios From Study 2

Group	Speaker +, Audience -		Speaker -, Audience +	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Goal is protecting feelings				
United States				
Male characters	1.74	0.81	2.47	1.02
Female characters	2.18	0.64	3.35	1.06
Total	1.94	0.75	2.89	1.12
China				
Male characters	2.68	1.53	3.37	1.54
Female characters	2.16	1.57	3.89	1.29
Total	2.42	1.55	3.63	1.42
Total				
Male characters	2.21	1.30	2.92	1.36
Female characters	2.17	1.21	3.64	1.20
Total	2.19	1.25	3.27	1.33
Goal is improving performance				
United States				
Male characters	2.89	1.33	3.68	1.00
Female characters	3.35	1.00	4.35	0.79
Total	3.11	1.19	4.00	0.96
China				
Male characters	4.42	0.69	4.42	1.26
Female characters	4.26	1.05	4.79	0.42
Total	4.34	0.88	4.61	0.95
Total				
Male characters	3.66	1.30	4.05	1.18
Female characters	3.83	1.11	4.58	0.65
Total	3.74	1.21	4.31	0.99

*Note.* Plus and minus signs indicate the valence (positive or negative, respectively) of the information about the speaker and the audience. Possible scores range from 1 to 5, with higher scores indicating a stronger recommendation that the speaker should disclose the information about his or her performance.

We conducted two ANOVAs on the self-disclosure recommendation scores, one for the scenarios in which the speaker performed well and a second for the scenarios in which the speaker performed poorly. In each ANOVA, we included motivation (improved performance or avoiding negative emotions) as a within-subject variable and country (United States or China) and character gender (male or female) as between-subjects variables.

In response to the scenario in which the speaker performed well, there were main effects of motivation, with children more likely to recommend disclosure when the goal was to improve performance for the weaker performer as compared with protecting his or her feelings ( $M = 3.35$  vs.  $2.54$ ),  $F(1, 70) = 69.82$ ,  $p < .001$ ,  $\eta^2 = 1.0$ , and country, with participants from China recommending disclosure to a greater extent ( $M = 3.35$  vs.  $2.54$ ),  $F(1, 70) = 19.77$ ,  $p < .001$ ,  $\eta^2 = 0.99$ . There were also two significant interactions: Motivation  $\times$  Country,  $F(1, 70) = 4.16$ ,  $p < .05$ ,  $\eta^2 = 0.52$ , because of a larger between-country difference when the goal of improving performance rather than the goal of avoiding negative emotion was made salient and Country  $\times$  Character Gender,  $F(1, 70) = 4.36$ ,  $p < .05$ ,  $\eta^2 = 0.06$ , because of disclosure being recommended to a greater extent for girls than for boys in the United States and for boys than for girls in China.

In response to the scenario in which the speaker performed poorly, there were again main effects of motivation, with children recommending disclosure to a greater extent when the goal was to improve performance for the weaker performer ( $M = 4.31$  vs.  $3.27$ ),  $F(1, 70) = 42.99$ ,  $p < .001$ ,  $\eta^2 = 1.0$ , and country, with participants from China recommending disclosure to a greater extent ( $M = 4.12$  vs.  $3.47$ ),  $F(1, 70) = 10.61$ ,  $p < .01$ ,  $\eta^2 = 0.90$ . There was also an effect of character gender, with disclosure recommended to a greater extent for girls ( $M = 4.10$  vs.  $3.49$ ),  $F(1, 70) = 9.30$ ,  $p < .01$ ,  $\eta^2 = 0.85$ . There were no significant interactions.

Overall, the results of the goal scenarios confirm the primary results of Study 1 and suggest that disclosure to a friend with a dissimilar level of performance is viewed more negatively among children from the United States than among children from China. The results also suggest that the likelihood that children will endorse disclosure is related to whether the goal is to help the weaker performer to improve or to avoid negative emotions on the part of the weaker performer. Finally, the results suggest that children sometimes take gender information into consideration when determining whether disclosure is appropriate. This was evident when participants were asked about an individual who performs poorly and discloses to a friend who performs successfully: In both the United States and China, such disclosure was seen as more acceptable when made by girls than by boys. This finding is consistent with Maccoby's (1988) argument that "speech serves more egoistic functions among boys and more socially binding functions among girls" (p. 758).

*School experiences.* We hypothesized that children from China would interpret disclosure differently than would children from the United States because of a greater assumption among children who grow up in China that strong performers would help weaker performers. As a first step toward examining this possibility, participants were asked whether poorly performing children are likely to receive help from their peers. Participants from the United States responded that children who perform poorly on tests get help from peers "sometimes" ( $M = 3.0$ ), whereas children

from China characterized it as occurring “most of the time” ( $M = 4.1$ ), a difference that was confirmed by an ANOVA with country (United States or China) as a between-subjects variable,  $F(1, 72) = 24.93, p < .001, \eta^2 = 0.26$ .

There were no significant correlations between children’s perceptions of their own performance and their reasoning about the appropriateness of disclosure among children from the United States. However, among children from China there were two significant correlations: Children who rated themselves highly on academic performance rated the disclosure of positive performance to poorly performing peers more negatively when the goal was concern with the peer’s feelings ( $r = -.33, p < .05$ ) and rated the disclosure of negative performance to strongly performing peers more positively when the goal was to help the poorly performing peer to improve ( $r = .37, p < .05$ ). These correlations may result from the stronger performers being more aware that the disclosure of their performance might cause their peers to experience feelings of inadequacy and that stronger performers can serve as good resources for students who are having difficulties. However, our ability to draw firm conclusions about this question is limited, given that we were not able to collect any data to verify the accuracy of the self-reported performance assessments.

### General Discussion

In the present research, elementary school children were asked to reason about situations in which speakers disclosed information about their successful or unsuccessful performance to an audience of friends. One important finding concerned the presence of valence-matching effects, in which participants expect that speakers will be more likely to disclose performance outcomes that match the performance outcomes of their audience in valence. In Study 1, participants from China showed a weaker valence-matching effect than did participants from the United States. In addition, in explaining their judgments, the participants from China placed greater emphasis on how disclosure might affect the future performance of the speaker or the audience. For example, many Chinese children argued that disclosure could improve motivation (e.g., “It will encourage her friends to study harder”) or lead to useful discussions (e.g., “They will work together to find the cause and learn the lesson”).

Study 2 more closely investigated 10- and 11-year-old children’s reasoning about disclosure when performance outcomes mismatch in valence. Children from China considered disclosure in these contexts to be more appropriate than did children from the United States. This finding confirms the results of Study 1, in which the Chinese participants also viewed disclosure in the mismatching-valence context more favorably than did the participants from the United States. Study 2 also verified a finding from children’s open-ended responses from Study 1 that suggested children from China are more likely to consider disclosure in relation to the poorer performer’s potential for improvement than are children from the United States. Most striking was that the majority of participants from the United States (86%) inferred that a speaker who disclosed a positive performance to a poorly performing audience was showing off, whereas the majority of participants from China (68%) inferred that the speaker was trying to help. However, it is important to note that just because participants from China did not tend to interpret disclosure of one’s positive

performance to negative-performing peers as showing off, it does not rule out the possibility that speakers in China sometimes engage in this behavior for the purpose of calling attention to their own success. It may be that children growing up in China learn that disclosure in such contexts is likely to be interpreted as an offer of help, so it becomes an opportunity to show off without being perceived as immodest. Children from China may consider calling attention to their successes to be less justified in other contexts, as in Study 1, when participants from China were less likely than participants from the United States to expect strong performers to disclose their success to other strong performers. This interpretation suggests that apparent cross-cultural differences in modesty may be based on differences in the extent to which particular ways of drawing attention to one’s success are seen as socially acceptable.

Study 2 also demonstrated a link between the speaker’s motivation for self-disclosure and the way in which self-disclosure is evaluated. Participants from both countries considered disclosure to be more appropriate when the intent to motivate a poor performer to perform better, as opposed to protecting his or her feelings, was made salient. This result is consistent with the possibility that the weaker valence-matching effects seen among children from China in Study 2 are due, at least in part, to a greater tendency to perceive the disclosure of performance information as holding potential benefits for the speaker or the audience.

Results of Study 2 suggest that Chinese children’s reasoning about disclosure can be seen as an example of a broader tendency toward social responsibility and striving for improvement that is characteristic of Confucian values (see Li, 2003). This was evident when the participants from China rated poorly performing children as more likely to receive help from peers than did participants from the United States.

The present research points to some of the challenges many children face as they strive to meet both academic and social goals and suggests that the conflict between these goals that is often faced by children growing up in the United States is not inevitable. Covington (2000) provided an overview of these conflicts and their consequences for learning and for development more broadly, as individuals struggle to attain a sense of worth in a society in which “individuals are widely considered to be only as worthy as their ability to achieve” (p. 181). He emphasized that prosocial goals are associated with academic success (Wentzel, 2005) and that learning goals are associated with self-regulated learning (see Dweck, 1999). Unfortunately, for many children from North America, including a large number of minority students, the pursuit of academic achievement comes into conflict with the goal of fostering social connections (Covington, 2000). In addition, because of the strong desire to appear competent and to avoid feelings of incompetence, children may engage in a range of self-protective strategies that interfere with learning goals (Covington, 2000; Dweck, 1999). For example, a child may withdraw effort from academic pursuits, so that a lack of effort will become a plausible explanation for any failures that might occur. The present research suggests that these types of conflicts may not be as salient for children from China, despite the presence of strong pressures for academic success (see Stevenson & Lee, 1996). Although individuals from both countries appear to be capable of viewing more successful peers as potential threats or as sources of help and inspiration (see Brickman & Bulman, 1977), the per-

ceived link between achievement and social responsibility (see Li, 2005) may cause the latter interpretation to be more salient for children from China.

What implications might the present research have for educators and other individuals who work to foster learning and prosocial dynamics in children? Clearly, the orientation toward improvement and helping others that was seen among participants from China is part of a broader cultural context, and it is difficult to determine how these ideas might translate to a different context, such as the United States. Nevertheless, the findings suggest that it would be fruitful for educators to strive to create environments in which children can more openly pursue achievement in ways that are consistent with prosocial goals. Another practical implication of these findings concerns children who are prone to self-doubt. When children hold negative assessments of their competence, it is associated with a range of negative consequences, including feelings of hopelessness and anxiety and a decrease in learning (Covington, 2000). There is evidence that for a substantial number of such children, such negative assessments are unrealistic (see Phillips, 1987). These students may benefit from discussions about how to critically evaluate the types of information that have led them to such conclusions, such as why they might be likely to hear about the successes of others more often than the failures.

Although the key findings in the present work involve cross-cultural comparisons between the United States and China, there were also some findings worth highlighting that were common across the two countries. First, although the valence-matching effects in Study 1 were stronger in the United States, they were seen in both countries. The presence of valence-matching effects among the younger children is consistent with evidence that even early elementary school children sometimes make use of information about the audience when predicting what people are likely to say about themselves (Banerjee, 2002). Also notable was a significant age effect in Study 1, such that within each country the tendency to expect others to reveal more positive than negative information was weaker among older children. The clearest difference was that older children were more likely to expect that poor performance would be disclosed to an audience that had also performed poorly, which suggests that over the elementary years, children come to understand that revealing negative information about the self does not always lead to negative social evaluations and that they may develop a greater understanding of the value of a sympathetic audience when disclosing such information. More generally, the finding adds to a growing body of evidence that during the elementary school years, children begin to appreciate the ways in which disclosure of one's performance can influence others and understand that disclosure to different audiences can lead to differing social consequences (Aloise-Young, 1993; Banerjee, 2000; Banerjee & Yuill, 1999; Bennett & Yeeles, 1990; Gee & Heyman, 2007; Heyman et al., 2007; Heyman & Legare, 2005).

Although participants in Study 1 showed similar patterns of reasoning across the academic and athletic domains, there may still be important domain differences in the way children reason about disclosure. To look more closely at this question, it will be necessary to examine domains such as peer likability, close relationships, and physical appearance (Harter, Whitesell, & Junkin, 1998). Methodological considerations are also important, such as whether participants are asked to reason about themselves or others. In the present research, participants may have used a

general framework that they would apply to any domain that speakers and audiences care about. For example, it would not be surprising if participants from China considered the academic domain to be more important than the athletic domain, but reasoned on the basis of the assumption that characters in the athletic stories were highly invested in that domain. This interpretation suggests there may be significant domain differences when children are reasoning about their own acts of disclosure versus those of others. It also suggests that there may be individual differences in reasoning about one's own acts of disclosure that depend on children's degree of investment in the domain.

There are also some limitations that should be considered when interpreting the more central findings concerning how children from the two countries reason about disclosure. First, it is important to note that the samples included in the present research limit the generalizability of the conclusions that can be drawn. All Chinese participants were Han Chinese, who make up 92% of the Chinese population, and were from families living in an eastern metropolitan city. It is not known how the present results would extend to members of the more than 50 other ethnic groups in China or to other, less developed regions within the country. Among children from the United States, there may be important differences in reasoning about disclosure that relate to ethnicity, given that many aspects of a child's ethnic identity have implications for psychological processes (Garcia Coll et al., 1996).

Although we have interpreted the cross-cultural differences in children's reasoning about disclosure with reference to differing cultural norms and expectations about helping others to learn, there are likely to be a number of other differences between the samples, such as differences in economic status, that could potentially help to account for these findings (see Matsumoto & Yoo, 2006). Similarly, the present findings do not establish any direct causal link between differences in beliefs between the two countries and the differences in children's reasoning about disclosure. It will be important for this question to be explored in future research. For example, one approach could be to prime different beliefs about helping others to learn and examine the effect on children's reasoning about disclosure (see Matsumoto & Yoo, 2006).

Further research will be needed to understand the scope of the present findings. We focused on children's reasoning concerning relations between friends, and it will be important for future studies to examine their reasoning about other types of relationships. Another important factor is the level of trust between the speaker and the audience (see Harris, 2007). Trust is known to play a role in children's willingness to disclose to siblings (Howe et al., 2001) and parents (Smetana, Metzger, Gettman, & Campione-Barr, 2006). In addition, further research is needed to examine children's specific beliefs about the interpersonal dynamics of disclosure processes. Findings from Heyman et al. (2007) suggested that children from both China and the United States make a strong distinction between hiding information and active deception. It will also be useful to examine the role of prior disclosure by the audience and whether children see disclosure as more appropriate when it is a response to a request for information rather than being volunteered by the speaker.

Finally, although the use of a scenario-based methodology in the present research offers many advantages, including strong experimental control, it is not clear that findings will necessarily generalize to the way children reason about real-life events, and

further research will be needed to address this issue in light of evidence that children's social-cognitive reasoning may not always translate into behavior (Pomerantz, Ruble, Frey, & Greulich, 1995; Robinson, Champion, & Mitchell, 1999). Nevertheless, the present findings lay the foundation for future research on relations between conceptual understanding and behavior in this domain.

### Conclusion

The present research suggests that the social context in which children develop affects their judgments, with Chinese participants more likely than their counterparts from the United States to reason about the disclosure of performance information with reference to its implications for the improvement of skills. For example, children from China were more likely than children from the United States to interpret the disclosure of positive performance to a poorly performing peer as an implicit offer of help rather than as an attempt to show off. These findings suggest that for elementary-school-age children, self-disclosure can serve more than one function (as does social comparison; see Ruble & Frey, 1991) and that children's social experiences shape the way they reason about the disclosure of information about the self.

### References

- Aloise-Young, P. A. (1993). The development of self-presentation: Self-promotion in 6- to 10-year-old children. *Social Cognition, 11*, 201–222.
- Altermatt, E. R., Pomerantz, E. M., Ruble, D. N., Frey, K. S., & Greulich, F. K. (2002). Predicting changes in children's self-perceptions of academic competence: A naturalistic examination of evaluative discourse among classmates. *Developmental Psychology, 38*, 903–917.
- Baldwin, D. A., & Moses, L. J. (1996). The ontogeny of social information gathering. *Child Development, 67*, 1915–1939.
- Banerjee, R. (2000). The development of an understanding of modesty. *British Journal of Developmental Psychology, 18*, 499–517.
- Banerjee, R. (2002). Audience effects on self-presentation in childhood. *Social Development, 11*, 487–507.
- Banerjee, R., & Yuill, N. (1999). Children's explanations for self-presentational behaviour. *European Journal of Social Psychology, 29*, 105–111.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497–529.
- Bennett, M., & Yeeles, C. (1990). Children's understanding of showing off. *Journal of Social Psychology, 130*, 591–596.
- Bosson, J. K., Johnson, A. B., Niederhoffer, K., & Swann, W. B. (2006). Interpersonal chemistry through negativity: Bonding by sharing negative attitudes about others. *Personal Relationships, 13*, 135–150.
- Brickman, P., & Bulman, R. (1977). Pleasure and pain in social comparison. In R. L. Miller & J. M. Suls (Eds.), *Social comparison processes: Theoretical and empirical perspectives*. Washington, DC: Hemisphere.
- Covington, M. V. (2000). Goal theory, motivation, and school achievement: An integrative review. *Annual Review of Psychology, 51*, 171–200.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska Symposium on Motivation: Vol. 38. Perspectives on motivation* (pp. 237–288). Lincoln: University of Nebraska Press.
- DePaulo, B. M., & Kashy, D. A. (1998). Everyday lies in close and casual relationships. *Journal of Personality and Social Psychology, 74*, 63–79.
- Derlega, V. J., Durham, B., Gockel, B., & Sholis, D. (1981). Sex differences in self-disclosure: Effects of topic content, friendship, and partner's sex. *Sex Roles, 7*, 433–447.
- Duval, S., & Wicklund, R. (1972). *A theory of objective self awareness*. Oxford, England: Academic Press.
- Dweck, C. S. (1999). *Self-theories: Their role in motivation, personality, and development*. Philadelphia: Psychology Press/Taylor & Francis.
- Frey, K. S., & Ruble, D. N. (1985). What children say when the teacher is not around: Conflicting goals in social comparison and performance assessment in the classroom. *Journal of Personality and Social Psychology, 48*, 550–562.
- Fu, G., Lee, K., Cameron, C. A., & Xu, F. (2001). Chinese and Canadian adults' categorization and evaluation of lie- and truth-telling about pro- and anti-social behaviors. *Journal of Cross Cultural Psychology, 32*, 740–747.
- Garcia Coll, C., Lamberty, G., Jenkins, R., McAdoo, H. P., Crnic, K., Wasik, B. H., & Vasquez Garcia, H. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development, 67*, 1891–1914.
- Gee, C. L., & Heyman, G. D. (2007). Children's evaluation of other people's self-descriptions. *Social Development, 16*, 800–818.
- Gopnik, A., & Wellman, H. M. (1994). The theory theory. In L. Hirschfeld & S. Gelman (Eds.), *Mapping the mind: Domain specificity in cognition and culture* (pp. 257–293). Cambridge, England: Cambridge University Press.
- Harris, P. L. (2002). What do children learn from testimony? In P. Caruthers, S. Stich, & M. Siegal (Eds.), *The cognitive basis of science* (pp. 316–334). New York: Cambridge University Press.
- Harris, P. L. (2007). Trust. *Developmental Science, 10*, 135–138.
- Harter, S., Whitesell, N. R., & Junkin, L. J. (1998). Similarities and differences in domain-specific and global self-evaluations of learning-disabled, behaviorally disordered, and normally achieving adolescents. *American Educational Research Journal, 35*, 653–680.
- Hau, K. T., & Salili, F. (1994). Prediction of academic performance among Chinese students: Effort can compensate for lack of ability. *Organizational Behavior and Human Decision Processes, 65*, 83–94.
- Heine, S. J. (2001). Self as cultural product: An examination of East Asian and North American selves. *Journal of Personality, 69*, 881–906.
- Heyman, G. D., Fu, G., & Lee, K. (2007). Evaluating claims people make about themselves: The development of skepticism. *Child Development, 78*, 367–375.
- Heyman, G. D., & Legare, C. H. (2005). Children's evaluation of sources of information about traits. *Developmental Psychology, 41*, 636–647.
- Howe, N., Aquan-Assee, J., Bukowski, W. M., Lehoux, P. M., & Rinaldi, C. M. (2001). Siblings as confidants: Emotional understanding, relationship warmth, and sibling self-disclosure. *Social Development, 10*, 439–454.
- Kitayama, S., Markus, H., Matsumoto, H., & Norasakkunkit, V. (1997). Individual and collective processes in the construction of the self: Self-enhancement in the United States and self-criticism in Japan. *Journal of Personality and Social Psychology, 72*, 1245–1267.
- Koenig, M. A., & Harris, P. L. (2005). Preschoolers mistrust ignorant and inaccurate speakers. *Child Development, 76*, 1261–1277.
- Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin, 108*, 480–498.
- Lee, K., Cameron, C. A., Xu, F., Fu, G., & Board, J. (1997). Chinese and Canadian children's evaluations of lying and truth telling: Similarities and differences in the context of pro- and antisocial behaviors. *Child Development, 68*, 924–934.
- Li, J. (2003). The core of Confucian learning. *American Psychologist, 58*, 146–147.
- Li, J. (2005). Mind or virtue: Western and Chinese beliefs about learning. *Current Directions in Psychological Science, 14*, 190–194.
- Li, J., & Wang, Q. (2004). Perceptions of achievement and achieving peers in U.S. and Chinese kindergartners. *Social Development, 13*, 413–436.
- Maccoby, E. E. (1988). Gender as a social category. *Developmental Psychology, 24*, 755–765.

- Matsumoto, D., & Yoo, S. H. (2006). Toward a new generation of cross-cultural research. *Perspectives on Psychological Science, 1*, 234–250.
- Miller, P. J., Fung, H., & Mintz, J. (2002). Self-construction through narrative practices: A Chinese and American comparison of early socialization. *Ethos, 24*, 237–280.
- Miller, P. J., Wang, S., Sandel, T., & Cho, G. E. (2002). Self-esteem as folk theory: A comparison of European American and Taiwanese mothers' beliefs. *Parenting: Science & Practice, 2*, 209–239.
- Mills, C. M., & Keil, F. C. (2005). The development of cynicism. *Psychological Science, 16*, 385–390.
- Olson, K. R., Banaji, M., Dweck, C. S., & Spelke, E. S. (2006). Children's biased evaluations of lucky versus unlucky people and their social groups. *Psychological Science, 17*, 845–846.
- Phillips, D. A. (1987). Socialization of perceived academic competence among highly competent children. *Child Development, 58*, 1308–1320.
- Pomerantz, E. M., Ruble, D. N., Frey, K. S., & Greulich, F. (1995). Meeting goals and confronting conflict: Children's changing perceptions of social comparison. *Child Development, 66*, 723–738.
- Quatman, T., & Swanson, C. (2002). Academic self-disclosure in adolescence. *Genetic, Social, and General Psychology Monographs, 128*, 47–75.
- Robinson, E. J., Champion, H., & Mitchell, P. (1999). Children's ability to infer utterance veracity from speaker informedness. *Developmental Psychology, 35*, 535–546.
- Ruble, D. N., & Frey, K. S. (1991). Changing patterns of comparative behavior as skills are acquired: A functional model of self-evaluation. In J. Suls & T. A. Wills (Eds.), *Social comparison: Contemporary theory and research* (pp. 79–113). Hillsdale, NJ: Erlbaum.
- Sedikides, C. (1993). Assessment, enhancement and verification determinants of the self-evaluation process. *Journal of Personality and Social Psychology, 65*, 317–338.
- Smetana, J. G., Metzger, A., Gettman, D. C., & Campione-Barr, N. (2006). Disclosure and secrecy in adolescent-parent relationships. *Child Development, 77*, 201–217.
- Sperber, D. (1996). *Explaining culture: A naturalistic approach*. Oxford, England: Blackwell.
- Stevenson, H. W., & Lee, S. (1996). The academic achievement of Chinese students. In M. H. Bond (Ed.), *The handbook of Chinese psychology* (pp. 124–142). New York: Oxford University Press.
- Wang, Q. (2006). Culture and the development of self-knowledge. *Current Directions in Psychological Science, 15*, 182–187.
- Wellman, H. M., & Gelman, S. A. (1992). Cognitive development: Foundational theories of core domains. *Annual Review of Psychology, 43*, 337–75.
- Wentzel, K. R. (2005). Peer relationships, motivation, and academic performance at school. In A. Elliot & C. Dweck (Eds.), *Handbook of competence and motivation* (pp. 279–296). New York: Guilford Press.

Received February 18, 2006

Revision received October 9, 2007

Accepted October 19, 2007 ■

### **Correction to Heyman et al. (2008)**

In the article “Reasoning About the Disclosure of Success and Failure to Friends Among Children in the United States and China,” by Gail D. Heyman, Genyue Fu, and Kang Lee (*Developmental Psychology*, 2008, Vol. 44, No. 4, pp. 908–918), an error was introduced in the production process. The heading for the bottom half of Table 1 should be “China,” not “Canada.”