



## Children's reasoning about evaluative feedback

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Children's reasoning about the willingness of peers to convey accurate positive and negative performance feedback to others was investigated among a total of 179 6- to 11-year-olds from the USA and China. In Study 1, which was conducted in the USA only, participants responded that peers would be more likely to provide positive feedback than negative feedback, and this tendency was strongest among the younger children. In Study 2, the expectation that peers would preferentially disclose positive feedback was replicated among children from the USA, and was also seen among younger but not older children from China. Participants in all groups took the relationship between communication partners into account when predicting whether peers would express evaluative feedback. Results of open-ended responses suggested cross-cultural differences, including a greater emphasis by Chinese children on the implications of evaluative feedback for future performance, and reference by some older Chinese children to the possibility that positive feedback might make the recipient 'too proud'.

Evaluative performance feedback can serve a useful function for individuals who want to improve their skills. It can let people know when they are on the right track, and when they need to increase their effort or change strategies to achieve success. Performance feedback can also be important as individuals develop more general conceptions of the self, and of the way they are perceived by others (see Altermatt, Pomerantz, Ruble, Frey, & Greulich, 2002; Dweck, 1999). The present research investigates children's reasoning about social norms that relate to offering evaluative feedback.

Social norms that relate to performance feedback can serve as a potential reference point for children as they try to make sense of the evaluative feedback they receive. For example, a child who expects that people will readily convey positive feedback to others may infer that her failure to elicit such feedback holds negative implications for her performance. Children's beliefs about these norms may also influence the achievement motivation of their peers by guiding behaviour, as would be the case if a

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child were to routinely express positive assessments of peers, and withhold negative ones. Individuals who receive these types of distorted performance feedback on a regular basis may develop an inflated notion their own ability, and remain unaware of deficiencies in their performance (see Dweck, 1999; Twenge, 2006).

The way children reason about norms concerning the disclosure of evaluative feedback also has implications for the development of reasoning about communicative processes. An important default assumption concerning human communication is that people will accurately express what they believe to be true (the maxim of quality; see Grice, 1980). However, when the message has strong evaluative implications, social and relational goals frequently come into conflict with the goal of conveying knowledge accurately (Heyman & Legare, 2005). For example, speakers may be motivated to create a favorable impression, or to protect others from experiencing negative emotions (Banerjee & Yuill, 1999). Speakers may also engage in ingratiation processes as they pursue instrumental goals (Aloise-Young, 1993; Bennett & Yeeles, 1990b; Fu & Lee, 2007). Consequently, the examination of children's reasoning about social norms for evaluative feedback offers a way to gain insight into their understanding of the notion that there is not necessarily a one-to-one correspondence between what people say and what they believe to be true (Robinson, 1994; Robinson, Goelman, & Olson, 1983).

### **The present research**

Study 1 focused on whether children in the USA would differentiate based on valence when reasoning about the expression of evaluative feedback. Previous research suggests that at some point during their preschool years, children begin to develop an understanding that revealing truthful information may not always be desirable. For example, Talwar and Lee (2002); Talwar, Murphy, and Lee (2007)) found that starting around age 3, children often avoid commenting on an unusual mark on an experimenter's face, or admitting that they find a gift to be undesirable. Across the elementary school years, children begin to judge the disclosure of one's transgressions more favorably than they judge the expression of negative feelings about an undesirable gift (Bussey, 1999; Heyman, Sweet, & Lee, 2009; Peterson, Peterson, & Seeto, 1983). There is also evidence that young children have some appreciation that people do not always disclose what they believe to be true, which can be seen when they are asked to predict how people will talk about themselves (Gee & Heyman, 2007; Heyman, Fu, & Lee, 2007). Gee and Heyman (2007) found that children as young as age 4 believe that a boy who likes dolls is less likely to disclose this information than is a girl who likes dolls. However, it is not known how such findings might generalize to expectations beyond those that involve self-disclosure.

We predicted that children would expect that others would be more likely to disclose performance feedback when it is positive than when it is negative, because only the negative performance feedback is likely to pose a threat to one's sense of competence. This may be of particular concern in the USA, where promoting self-confidence and self-esteem are emphasized in the socialization of children (Twenge, 2006). Among adults in the USA, there is a tendency to emphasize positive performance information to a greater extent than negative performance information when providing evaluative feedback (DePaulo & Bell, 1996). The possibility that children might expect others to show a positivity bias in reporting evaluative feedback is also generally consistent with evidence that children often focus more on positive information when

reasoning about people. For example, Heyman and Giles (2004) found that 7- to 9-year-olds were more likely to predict that a child who is smarter than most of her peers will also be smarter than most of her peers in 2 years than to make the corresponding prediction for a child who is less smart than her peers.

Another goal of the present research was to investigate developmental change in children's reasoning about evaluative feedback. During the elementary school years there are well-documented changes in children's reasoning about the types of statements that individuals are likely to make about themselves (Aloise-Young, 1993; Banerjee, 2000; Banerjee & Yuill, 1999; Bennett & Cormack, 1996; Bennett & Yeeles, 1990a, b; Heyman & Legare, 2005), including an increasing concern with how one's statements will affect how one is viewed by others, and a better understanding of the ways in which communication can be targeted to specific audiences to achieve social goals. As a result, older children may be more aware of the option of choosing which information to communicate to others, and may have a greater understanding of the potential consequences. For example, young children may tend to focus only on the emotional impact of negative performance information, whereas older children may also take into account its instrumental value.

We predicted that the younger children would be more likely to expect individuals to preferentially disclose feedback that is positive rather than negative. Classroom practices that emerge during the elementary school years, such as ability grouping and grading based on normative criteria, tend to make negative feedback more salient (Stipek & Daniels, 1988). These changes may lead older children to assume that negative feedback is more prevalent and acceptable. If the younger children were to show a greater positivity bias when reasoning about evaluative feedback it would also be generally consistent with evidence that young children tend to focus on positive qualities and to assume the best when reasoning about people (Droege & Stipek, 1993; Lockhart, Chang, & Story, 2002; Newman, 1991). For example, Lockhart *et al.* (2002) found that a group of 5- to 6-year-olds were more likely to believe negative traits can become positive and that extreme positive traits tend to be maintained over time than were a group of 7- to 10-year-olds, and there is evidence that young children often fail to incorporate negative information into their ability estimates (Ruble, Eisenberg, & Higgins, 1994; Schuster, Ruble, & Weinert, 1998; Stipek & Mac Iver, 1989). However, the existing literature points to other possible predictions as well. For example, Heyman *et al.* (2009) found no differences between the ages of 7 and 11 in children's evaluations of truth telling in response to receiving an undesirable gift. This suggests that younger children and older children might show similar levels of concern about disclosing information that is likely to hurt someone's feelings, and have similar beliefs about a widespread preference for disclosing evaluative information that is positive rather than negative.

Study 1 also sought to determine whether children would reason differently about the disclosure of evaluative information if they were the individual being described, rather than the information describing someone else. Ruble *et al.* (1994) found that elementary schoolchildren were less likely to make use of negative evaluative feedback when it was directed towards themselves rather than others, and the tendency was more pronounced for younger children. Such self-other comparisons have the potential to help determine the extent to which motivational factors such as wishful thinking (Stipek, Roberts, & Sanborn, 1984) play a role in children's judgments, because the motivational implications of evaluative information tend to be stronger when information is directed towards the self (Ruble *et al.*, 1994).

Study 2 built upon Study 1 by focusing on two aspects of the communicative context. The first concerns the relationship between the evaluator and the individual being evaluated, which we examined by asking participants to reason with reference to the evaluation of friends or new acquaintances. We expected that the relationship might make a difference, in light of evidence that children have differentiated relationship schemas by age 4 (Gleason, 2002). However, we did not make specific predictions about the nature of the difference, because it would be reasonable to predict that children would expect friends to be more open with each other, and it would also be reasonable to predict that friends would be more concerned about the potential emotional consequences of conveying negative evaluative feedback.

The second aspect of the communicative context concerns the child's social environment, which we examined by comparing the reasoning of children in the USA and in China as a means to investigate the extent to which the development of children's reasoning in this domain is sensitive to specific cultural inputs. These cultures are of particular interest because of differences in cultural values that may lead to different norms regarding the communication of value-laden information about performance. For example, in East Asian cultures there is a greater emphasis on the goal of learning in order to perfect oneself morally and socially (Li, 2005) and a greater emphasis on group harmony (Markus & Kitayama, 1991).

We predicted that the children from China would show a smaller positivity bias, based on evidence of a greater emphasis on skill development in Chinese culture (Heyman, Fu, & Lee, 2008; Li, 2005; Li & Wang, 2004; Stevenson & Lee, 1996). Heyman *et al.* (2008) examined USA and Chinese children's reasoning about the disclosure of performance outcomes to friends who had either a similar or a dissimilar level of performance. A key result was that participants from China were more likely to mention how self-disclosure would affect their own performance in the future, or the future performance of their classmates. For example, Chinese 6- to 11-year-olds were more likely than their counterparts in the USA to say that a student would disclose his or her academic success to friends who have performed poorly. In a follow-up study, 10- to 11-year-olds from China were more likely than their counterparts from the USA to say that students with successful academic performance should disclose how well they did to poor performers, and to infer that the disclosure was intended as an offer of help. This finding suggests that Chinese children might reason that people are willing to give negative evaluative feedback to others because it provides information that is necessary for skill development. Furthermore, in East Asian countries there is an emphasis on knowing and acknowledging one's weaknesses, including a belief that self-criticism plays an important role in optimal learning and development (Heine, 2001; Markus & Kitayama, 1991).

Although some previous cross-cultural comparisons have used USA samples that are restricted to Euro-Americans, we chose not to restrict the sample in this way because we were primarily interested in the cultural values that are promoted by widespread public representations (see Sperber, 1996), such as those that occur in school. It seems reasonable to assume that examining country effects rather than ethnicity effects would best capture the phenomena of interest (see Heyman *et al.*, 2008).

## STUDY 1

In response to a series of scenarios, participants were asked to predict whether child experts would provide truthful performance feedback to an individual who either

performs well at a new game or performs poorly. Participants were 6- to 11-years-old. Between these ages, there are well-documented changes in children's reasoning about the types of statements that individuals are likely to make about themselves (Aloise-Young, 1993; Banerjee, 2000; Banerjee & Yuill, 1999; Bennett & Cormack, 1996; Bennett & Yeeles, 1990a; Heyman & Legare, 2005), and it seems plausible that such changes in reasoning might extend to reasoning about the types of statements that individuals are likely to make about others.

## Method

### Participants

Participants were 59 elementary school students from a southwestern coastal city in the USA: 28 6- to 7-year-olds ( $M = 7$  years 2 month, range: 5 years 11 month–8 years of 1 month, 17 girls), and 31 10- to 11-year-olds ( $M = 11$  years 0 month, range: 10 years 0 month–11 years 7 month, 13 girls). The sample was approximately 75% Caucasian, 15% Hispanic-American, 7% Asian-American, and 3% African-American. Participants attended schools whose students were from diverse economic backgrounds.

### Procedure

In individualized interviews, participants were presented with a series of scenarios about a character, the *target*, who is playing a new game. Participants were asked to predict whether other characters, the *evaluators*, who are described as child experts at the game, would be willing to offer a truthful evaluative response to the target's query about how well he or she is doing. Participants were presented with two scenarios that described a positive performance outcome for the target, and two that described a negative performance outcome. Within the two scenarios for each valence, participants were asked to imagine themselves as the target in one scenario, and in the other scenario they were asked to imagine another child as the target.

Following each scenario, participants were asked whether the evaluators would accurately disclose their performance evaluations if the target were to ask 'How well am I doing?' Evaluators were described as experts in the game to help participants focus on the question of whether the evaluators would convey an accurate performance evaluation, rather than focusing on whether the evaluators are qualified to make accurate judgments. In the following example, the participant is described as the target, and the performance outcome is negative.

Let's say that you were learning to play a new game and you were playing really badly. If you asked kids who knew a lot about the game 'how well am I doing?' do you think most of them would tell you that you were playing really badly?

## Results and discussion

Responses indicating that the evaluator would express a truthful performance judgment were coded as 1, and responses indicating that the evaluator would not express a truthful performance judgment were coded as 0. Preliminary analyses showed no main or interaction effects of gender or target (self vs. other), so these variables were dropped from subsequent analysis. Because each participant expressed expectations in

both the self and other target conditions, and because there were no effects involving target, participants' responses within these two conditions were averaged to create a single expectation score for the positive evaluation scenario and a single expectation score for the negative evaluation scenario.

The resulting expectation scores were analyzed using a repeated measures ANOVA (see D'Agostino, 1971; Lunney, 1970), with age group as a between-subjects factor and valence as a within-subjects factor. A significant main effect of valence indicated that participants believed the evaluator would be more likely to offer a truthful performance evaluation when the target was performing well ( $M = 0.88$ ,  $SE = .05$ ) rather than poorly ( $M = 0.48$ ,  $SE = .08$ ),  $F(1, 57) = 31.18$ ,  $p < .0001$ ,  $\eta_p^2 = .35$ . This main effect was qualified by a significant interaction between age and valence,  $F(1, 57) = 5.12$ ,  $p = .03$ ,  $\eta_p^2 = .08$ . Means and standard errors for each age by valence condition are presented in Table 1, which shows that children in both age groups thought the evaluator would be likely to offer a truthful judgment when the target was performing well. Younger children were especially likely to say that the evaluator would *not* express a negative judgment when the target was performing poorly, as confirmed by simple effects tests, adjusted to preserve a family-wise  $\alpha$  of .05, indicating that the valence effect was only significant for the younger children,  $p < .0001$ .

**Table 1.** Mean expectation scores for each valence condition in Study 1, by age group

Age group	Positive	Negative
Younger	0.95 (.05)	0.38 (.08)
Older	0.82 (.05)	0.58 (.08)

Note. Higher scores indicate a greater expectation that feedback will be offered. Standard errors are shown in parentheses.

The results of Study 1 add to the evidence that by early elementary school, children are aware that people do not always say what they believe to be true (Gee & Heyman, 2007; Lee & Cameron, 2000; Robinson, 1994), and that this understanding applies when children are reasoning about evaluative feedback. The findings also indicate that children in the USA expect people to be more forthcoming with positive feedback, a tendency that was substantially stronger among the younger children. It does not appear likely that the valence effects are primarily due to motivational factors such as wishful thinking, because there were no significant differences when children were asked to reason about themselves versus others (see Ruble *et al.*, 1994).

## STUDY 2

Study 2 was designed to build-upon the findings of Study 1 by investigating the role of social context in children's reasoning about evaluative feedback. Specifically, we compared the responses of children from China and the USA, and examined the nature of the relationship between evaluators and targets by defining it either as one of friends or one of new acquaintances.

The scenarios and measures were similar to those used in Study 1, except that the characters were described as learning a new language rather than a new game.



This change was made because a couple of the children who participated in pilot testing in China responded that it would not matter whether the truth was told because the characters should be spending time studying rather than playing games. We chose a task that involves academic competence because it serves as an important focus of socialization efforts in both countries. In particular, we selected language learning because it is a skill for which children can plausibly serve as either experts or novices to help insure that participants' responses would be based upon their expectations of the characters' willingness to disclose information, rather than their perceptions of the characters' expertise.

## Method

### Participants

Participants were a total of 120 elementary school students from the USA and China. In the USA there were 30 participants in a 6- to 7-year-old group ( $M = 7$  years 1 month, range: 6 years 0 month–7 years 6 month, 20 girls), and 31 in a 10- to 11-year-old group ( $M = 11$  years 0 month, range: 10 years 0 month–11 years 10 month, 20 girls). The USA sample was approximately 47% Caucasian, 35% Hispanic-American, 12% Asian-American, and 7% African-American. In China there were 29 participants in a 6- to 7-year-old group (15 boys, 15 girls,  $M = 7$  years 1 month, range: 6 years 6 month–8 years 1 month), and 30 in a 10- to 11-year-old group (14 boys, 16 girls,  $M = 11$  years 2 month, range: 10 years 8 month–12 years 1 month). The Chinese sample was 100% Han Chinese. The participants from each country attended schools whose students were from diverse economic backgrounds.

### Procedure

As in Study 1, participants were presented with a series of scenarios in individual interviews. Scenarios were similar in structure to those in Study 2, with four exceptions. First, targets were described as learning a new language rather than a new game. Second, participants were asked how a single evaluator would likely respond rather than how most individuals would respond. Third, targets were identified as classroom friends in some scenarios and as someone the target had just met in other scenarios. Fourth, the participants responded to a total of eight questions. As in Study 1, the four scenarios were a factorial combination of valence (positive, negative) by target (self, other), but the participants in Study 2 were asked two questions following each scenario: one about the evaluator's likely response to a friend, and one about the evaluator's likely response to an acquaintance.

In the following example, the target is a child other than the participant, and the performance outcome is negative.

Let's say that a boy your age was learning to speak a new language and he was speaking it really badly. He asked a kid who knows a lot about the language, 'How well am I doing?'

Following each scenario, participants were asked two questions in a random order that was determined separately for each participant. One question identified the relationship between the evaluator and the target as that of friends.

If the kid he asked was a friend in his class, would that friend tell him that he was speaking it really badly?

A second question described the relationship as that of new acquaintances.

If the kid he asked was someone he just met from another school, would that kid tell him that he was speaking it really badly?

The response options were *yes* and *no* rather than judgments about the likelihood of disclosure as was done in Study 1, to minimize the possibility that the youngest participants would have trouble understanding what was being asked of them. Participants were also asked to explain each of their answers.

The scenarios and measures were written in English initially, and then translated into Chinese for the Chinese participants. To insure that the translation process did not introduce changes in meaning, the Chinese versions were translated back into English by a translator who had not seen the original English versions, and the back-translated versions of the stimuli did not differ in meaning from the original versions.

To help make sense of the expectation measure, children's explanations of their responses were coded into five non-exclusive categories by two independent coders who were bilingual in Chinese and English. Kappas were determined separately for each of the five categories, and ranged from 0.81 to 0.93. Explanations that referred to the concern that expressing evaluative feedback could make the target too proud were coded as *pride avoidance*. For example, one Chinese participant explained, 'He would be afraid that saying I am good will make me too proud'. Explanations referring to emotional consequences other than pride were coded as *emotion*, such as the response of a child from the USA who explained, 'the person doesn't want to hurt your feelings'. References to improving the target's skills or motivation were coded as *future performance*, such as this explanation from a Chinese participant: 'he said I am bad, so that I can know my weakness and correct it immediately'. Responses that made reference to the target's actual performance, or to the evaluator's knowledge of the target's performance, were coded as *performance description*, such as the following from a Chinese participant: 'because I have really learned very well, he would say it according to the facts'. Explanations referring to the relationship between the evaluator and the target were coded as *relationship*, such as the following from a USA participant who explained, 'Because he's my friend'.

## Results and discussion

As in Study 1, responses indicating that the evaluator would express a truthful performance judgment were coded as 1, and responses indicating that the evaluator would not express a truthful performance judgment were coded as 0. Preliminary analyses showed no main or interaction effects of gender or target (self vs. other), so these variables were dropped from further analysis. Children's responses were averaged across the two within-subjects target conditions, resulting in four expectation scores per child: positive and negative scores for scenarios where the evaluator is a friend, and positive and negative scores for scenarios where the evaluator is a recent acquaintance.

The resulting expectation scores were analyzed using a repeated measures ANOVA, with age group and country as between-subjects factors, and evaluator relationship and valence as within-subjects factors. The main effect of valence from Study 1 was replicated, indicating that participants were more likely to believe that the evaluator would offer positive feedback ( $M = 0.74$ ,  $SE = 0.02$ ) than negative feedback ( $M = 0.52$ ,  $SE = 0.03$ ),  $F(1, 116) = 48.34$ ,  $p < .0001$ ,  $\eta_p^2 = .29$ . A significant main effect of



evaluator relationship was also seen,  $F(1, 116) = 6.27$ ,  $p = .014$ ,  $\eta_p^2 = .05$ , indicating that participants believed that friends are more likely to disclose target performance than are new acquaintances ( $M = 0.68$ ,  $SE = 0.02$  and  $M = 0.59$ ,  $SE = 0.03$ , respectively). In addition, a significant main effect of country indicated that participants from the USA ( $M = 0.67$ ,  $SE = 0.03$ ) were more likely to predict that the evaluator would disclose target performance than were participants from China ( $M = 0.59$ ,  $SE = 0.03$ ),  $F(1, 116) = 4.29$ ,  $p = 0.04$ ,  $\eta_p^2 = .04$ .

Valence interacted significantly with country,  $F(1, 116) = 17.99$ ,  $p < .0001$ ,  $\eta_p^2 = .13$ , and age group,  $F(1, 116) = 9.72$ ,  $p = .002$ ,  $\eta_p^2 = .08$ . These two-way interactions were further qualified by a three-way interaction of valence, country, and age,  $F(1, 116) = 3.68$ ,  $p = .058$ ,  $\eta_p^2 = .03$ . Means and standard errors for each valence condition, by country and age, are presented in Table 2. *Post hoc* simple effect and pairwise comparisons were conducted to further interpret this interaction; adjustments were made to preserve a family-wise  $\alpha$  of .05. Analyses of the valence by age effect within each country indicated that this interaction was significant in China ( $p < .01$ ), but not in the USA. As Table 2 indicates, there was a consistent valence effect among both older and younger children from the USA, who were more likely to say that the evaluator would provide feedback when the target had performed well rather than poorly. This was not the case in China, where the valence effect was significant only among the younger group,  $p < .01$ . The responses of the older participants from China did not differ by valence. However, younger Chinese children, like the children from the USA, were more likely to expect that evaluators would prefer to offer positive feedback than negative feedback. When cross-country comparisons were made within each age group, the interaction between valence and country was significant only for the older group ( $p < .001$ ), again indicating the lack of a valence effect within older Chinese children's responses.

**Table 2.** Mean expectation scores for each valence condition and each evaluator condition in Study 2, by country and age group

Group	Valence		Evaluator	
	Positive	Negative	Friend	Acquaintance
<i>USA</i>				
Younger	0.88 (.04)	0.47 (.06)	0.68 (.05)	0.66 (.06)
Older	0.83 (.04)	0.51 (.05)	0.73 (.05)	0.61 (.05)
<i>China</i>				
Younger	0.77 (.04)	0.52 (.06)	0.75 (.05)	0.53 (.06)
Older	0.51 (.04)	0.58 (.06)	0.56 (.05)	0.53 (.06)

Note. Higher scores indicate a greater expectation that feedback will be offered. Standard errors are shown in parentheses.

To examine whether children showed different patterns of reasoning concerning positive versus negative evaluative feedback, children's responses to the positive valence and negative valence items were analyzed separately. Among the positive valence items, there was a significant effect of age ( $p < .001$ ) and an age by country interaction ( $p < .01$ ): younger participants expected disclosure to a greater extent, and this age difference was larger in China than in the USA. Among the negative valence items, there were no significant age or country effects.

The evaluator relationship also interacted significantly with country and age,  $F(1, 116) = 3.77$ ,  $p = .055$ ,  $\eta_p^2 = .03$ . Means and standard errors for each evaluator relationship group, broken down by country and age, are shown in Table 2. *Post hoc* simple effect and pairwise comparisons were conducted to further interpret this interaction; adjustments were made to preserve a family-wise  $\alpha$  of .05. The responses of younger and older children from the USA did not differ depending on the evaluator's relationship. In contrast, the younger children from China were more likely than the older children to predict that the evaluator would provide feedback when the evaluator was a friend as opposed to a recent acquaintance,  $p < .01$ .

Valence also interacted with evaluator relationship,  $F(1, 116) = 10.20$ ,  $p < .01$ ,  $\eta_p^2 = .08$ . This interaction also differed by country,  $F(1, 116) = 4.13$ ,  $p = .04$ ,  $\eta_p^2 = .03$ . Means and standard errors for each valence by evaluator relationship group are presented in Table 3. *Post hoc* simple effect and pairwise comparisons were conducted to further interpret this interaction; adjustments were made to preserve a family-wise  $\alpha$  of .05. As Table 3 demonstrates, the valence effect did not depend upon the evaluator relationship for children from China. The interaction between valence and evaluator relationship was significant for USA children,  $p < .001$ . In the USA, the valence relationship was stronger when the evaluator was a friend rather than a recent acquaintance: Children from the USA predicted that friends would be more likely than acquaintances to offer feedback when the target was performing well ( $p < .001$ ), but no more likely to offer feedback when the target was performing poorly.

**Table 3.** Mean expectation scores from Study 2, by country, valence condition, and evaluator condition

Group	Friend		Acquaintance	
	Positive	Negative	Positive	Negative
USA	0.96 (.03)	0.44 (.05)	0.74 (.05)	0.53 (.05)
China	0.72 (.03)	0.59 (.05)	0.56 (.05)	0.51 (.05)

Note. Mean expectation scores are collapsed over age group. Standard errors are shown in parentheses. Higher scores indicate a higher participant expectation of evaluator feedback.

### Children's explanations of their responses

Children's open-ended explanations of their forced-choice responses were coded into five non-exclusive categories in an attempt to identify the factors that predominated in their reasoning. Within each country, the most common category of response was *performance description* (mentioned in 53% of responses in the USA and 55% in China) in which participants merely indicated how well the target had performed or referred to the evaluator's knowledge of the target's performance. The next most common category of response was *relationship* (23% of responses in the USA and 35% in China), in which participants made reference to the relationship between the evaluator and the target. This category was more common in the friend contexts (43% of responses overall) than in the new acquaintance contexts (15% of responses overall), which suggests that participants were more likely to consider the nature of the relationship when they were reasoning about friends. Responses in the *emotion* category were also fairly common, and were mentioned more often by participants in the USA (30% of responses) than in China (13% of responses), and more commonly mentioned in relation to presenting negative feedback (28% of responses overall) than positive feedback (14% of responses overall).

Of primary theoretical interest were the less frequently used categories of *future performance* (13% of responses overall) and *pride avoidance* (2% of responses overall). Future performance explanations were more common in China than in the USA, especially among the older children: 33% of responses by older Chinese children fell into this category, compared to a maximum of 12% in any other group. Among the older Chinese participants, the mention of future performance was about twice as common in the friend context than in acquaintance context. Notably, pride avoidance responses were never mentioned by children in the USA, or by younger children in China, but were seen in 9% of the responses of older Chinese children. Among this group, references to pride avoidance were most common when participants were asked about offering positive feedback to a friend (26% of responses, compared to a maximum of 7% in other conditions).

## GENERAL DISCUSSION

In the present research, elementary schoolchildren were asked whether child characters would accurately report positive and negative evaluative feedback to peers. The results of Study 1, which was conducted in the USA, suggest that the answer depends upon the valence of the feedback: participants were more likely to expect disclosure concerning positive feedback than negative feedback, and this difference was strongest among the younger children. The results of Study 2, which was conducted in both the USA and China, replicated the valence effect in USA children. The results demonstrated a more limited valence effect among younger Chinese children, and no significant valence effect among older Chinese children. Taken together, these results suggest that younger children in both countries have a general tendency to expect that evaluators will more readily reveal positive performance feedback than negative feedback, and that differences in patterns of socialization between the two countries may play an important role in the development of children's expectations in this domain.

The absence of significant differences in participants' reasoning about feedback that was directed towards themselves versus others helps to rule out the possibility that the age-related differences that were seen are simply due to children's strong desire to achieve favorable outcomes (see Ruble *et al.*, 1994). One factor that may help to account for the age differences is that young children are likely to have less exposure to clear-cut negative feedback (Stipek & Mac Iver, 1989), and consequently they may view it as less normative. It may also be that young children tend to focus on the emotional impact of evaluative feedback for the target, whereas older children begin to consider the instrumental value of the feedback. However, even for adults, the emotional considerations of offering negative evaluative feedback probably outweigh the instrumental considerations in most circumstances (DePaulo & Bell, 1996).

It is not yet possible to identify the source of the differences in results that were obtained in China versus the USA. However, children's open-ended justifications for their responses in Study 2 provide some clues. Chinese participants placed a greater emphasis on how performance feedback might affect the target's performance in the future. For example, one Chinese child who expected an evaluator to provide negative feedback to a target explained, 'he wants to make him work a little bit harder'. These results extend the findings of Heyman *et al.* (2008), which indicate that children in China are more likely than their counterparts in the USA to view the disclosure of one's performance information in terms of how it might affect the future performance of the speaker and

the target. The present study suggests that this difference in focus is not limited to situations that involve the disclosure of evaluative information about the self.

Taken together, these findings suggest that children in the USA and China differ in their emphasis on the goals to be achieved by disclosing performance evaluations. One possible reason for this difference concerns the way in which children conceptualize learning and achievement, including the striving to cultivate personal virtue that is characteristic of Confucian values (Li, 2004, 2005). Perhaps Chinese children believe that negative feedback is required to identify cases in which increased effort or new strategies are needed to be a better student and a better person. It may also be that the cultural emphasis on being aware of one's shortcomings that is evident in Eastern cultures (Heine, 2001; Markus & Kitayama, 1991) promotes acceptance of the possibility that pointing out the flaws of others can have positive consequences.

The present research suggests that for children in China, the potentially negative impact of excessive pride becomes salient during late elementary school. This concern was never mentioned by children in the USA, or by younger children in China, but it was referred to by an average of 26% of older Chinese children concerning the disclosure of positive feedback to a friend. These findings are consistent with evidence of a concern among individuals in China that high achievers will become arrogant and lose interest in self-improvement (Li, 2002). Given the strong modesty norms in China (Heyman *et al.*, 2007; Lee, Cameron, Xu, Fu, & Board, 1997; Lee, Xu, Fu, Cameron, & Chen, 2001), there may also be a greater concern that positive feedback will lead to immodest behaviour. These concerns were not seen among younger children in China, and it may be that they emerge only following extensive experience in a cultural environment in which such values are emphasized. The Chinese participants assumed that a desire to avoid the appearance of immodesty would be more prevalent among friends, which suggests that they were not simply using an abstract social rule that they apply to all situations equally, and that they are particularly interested in helping their friends to succeed.

The results of Study 2 suggest that children take the relationship between communication partners into account when they reason about evaluative feedback. Among children in the USA, there was an assumption that friends would show a stronger positivity bias than acquaintances. There was also a subtle tendency for participants in both countries to assume that evaluators would be more open about expressing evaluative feedback to friends. However, children's explanations suggest that there may be considerable disagreement on this point, with some children in each country expecting greater openness among friends and others expecting greater openness among acquaintances. For example, when asked to reason about the disclosure of evaluative feedback to a new acquaintance, one Chinese participant replied that 'strangers are not frank and would hide something sometimes', and another explained that 'it is a shallow relationship, so it would not be necessary to lie'. There were also diverse opinions about this issue among children in the USA, such as one participant who explained, 'friends tell the truth to each other', and another who said, 'friends don't say things to hurt your feelings'. It is also likely that the relationship between evaluator and target affected reasoning in ways that we were not able to directly assess, a possibility highlighted in children's explanations. For example, children appeared more likely to consider the nature of the relationship when reasoning about friends, and among the older Chinese children, references about *future performance* and *pride avoidance* were seen substantially more often in relation to friends than acquaintances.

The present research addresses whether children expect people to give accurate feedback to others, which is not the same as asking whether individuals will give

dishonest feedback. Adults appear to have a sophisticated understanding of this distinction. DePaulo and Bell (1996) showed adult participants a series of paintings and asked them to identify some they liked and some they disliked. When discussing a disliked painting with its artist, participants used a variety of strategies to protect the artist's feelings while at the same time avoiding overtly false statements. For example, participants emphasized the aspects of the painting that they liked and avoided the aspects they did not like. Although little is known about whether children also engage in similar types of strategies, they do appear to distinguish between lying and failing to disclose the truth. For example, 6- to 7-year-olds tend to be aware of the possibility that a person will avoid disclosing information about his or her negative personality traits, but they tend to be unaware of the possibility that claims about one's positive personality traits may be false (Heyman *et al.*, 2007).

#### **Limitations and future directions**

Some limitations of the present research should be noted. We addressed a narrow range of performance contexts and the only cross-cultural comparisons involved scenarios about language learning. Although the language learning context has a number of advantages, including the plausibility of children with varying levels of expertise, there are also disadvantages, including possible differences between the two countries concerning the extent to which learning a foreign language is expected and valued. For example, it is reasonable to assume that students in China would consider learning English to be more important to their future success than students from the USA would consider learning any particular foreign language to be. There are other methodological decisions that could have affected the results. For example, the different scenarios were constant in every way except for the variables of interest. This allows for an optimal isolation of effects, but it also may have a pragmatic implication that children should take these variables into consideration when responding, even though they might not do so otherwise. In addition, there may be distinctions in children's reasoning that could have been picked up by more sensitive measures, such as asking them to rate the likelihood of disclosure rather than simply predicting whether disclosure will occur.

Future work is needed regarding children's expectations about different types of positive and negative feedback. One potentially important distinction is the extent to which feedback is global or specific, given that global feedback, including global praise, is associated with increased vulnerability to motivational difficulties in the face of obstacles (Kamins & Dweck, 1999; Mueller & Dweck, 1998).

There are other aspects of the social context of evaluative communication that need to be examined. One is whether the evaluation was requested versus unsolicited. In the present study, we asked participants about situations in which the targets asked how well they were doing, which may have led to different predictions than would have been seen if the evaluation had been unsolicited. Another question is whether the feedback is provided by children or adults. There is evidence that elementary schoolchildren communicate value-laden information about themselves differently to peers versus adults, with modesty seen as more important among peers (Watling & Banerjee, 2007). It would not be surprising if this were also relevant to the disclosure of evaluative feedback.

In addition to examining the present results in more detail, it will be important to examine how they generalize across populations. Although we describe the results in terms



of differences between the USA and China, that data was only collected in one city in each country, and there are within-country differences that could impact children's reasoning in this domain, including differences based on ethnicity and geographical region.

Another direction for future research concerns the causes and consequences of children's expectations about evaluative feedback. One such question concerns whether children who observe others providing more positive feedback than negative feedback would infer that people are more forthcoming with positive feedback in general. This possibility suggests a potential explanation for the age-related change in children's expectations in the present study: it may be that people tend to provide more positive feedback to younger children than to older children, and as a result, younger children are more likely to infer that people will convey positive feedback. Another question concerns whether children's expectations about what feedback others will express relate to their beliefs about the types of communication that are appropriate, and to the decisions they make about providing feedback to others. A third question concerns how children's expectations about the feedback others will provide affect the way that they respond to evaluative feedback. For example, it is possible that if individuals grow up expecting others to offer positive feedback at every opportunity, they will have difficulty maintaining adaptive achievement motivation in certain contexts (see Dweck, 1999).

### Conclusion

The present research suggests that young children in the USA and China are aware that people are not always willing to provide accurate performance feedback to others. Among participants in the USA, there was a clear assumption that peers would preferentially disclose positive feedback over negative feedback, with this tendency strongest for the younger children. Among participants from China, the younger children also expected a positivity bias, but there was no valence effect among the older children. Children's open-ended responses suggest that the absence of a positivity bias among older Chinese children may be related to the concern that positive evaluations will lead to negative outcomes for the target. These findings point to the importance of social context in the development of children's reasoning about evaluative communication.

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