

# Children's Beliefs About Self-disclosure to Friends Regarding Academic Achievement

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## Abstract

*Self-disclosure to friends is a potentially useful way for children to pursue a range of desired goals. Here we examined reasoning about the appropriateness of disclosing one's own academic outcomes in a sample of 7-, 9-, 11-, 13-, and 15-year-old Chinese participants (N = 150). The valence of (1) the outcomes to be disclosed and (2) the corresponding outcomes for the potential audience for the disclosure was manipulated factorially, and participants judged whether disclosure was advisable and explained their responses. Disclosure was seen as more appropriate under valence-matching conditions than valence-mismatching conditions. How participants judged each type of disclosure under valence-mismatching conditions varied as a function of participant age: As compared with younger participants, older participants considered disclosure of weak performance to a stronger performer more acceptable and disclosure of strong performance to a weaker performer less acceptable. These findings suggest that older children are more likely than younger children to appreciate that self-disclosing positive performance outcomes can bring social costs, and that self-disclosing negative performance outcomes can bring social benefits.*

*Keywords:* self disclosure; academic achievement; peer relations; social cognition

## Introduction

Self-disclosure to friends is a potentially useful way for children to pursue a range of desired goals. In the domain of academic achievement, letting friends know about successes has the potential to enhance one's reputation, and letting friends know about difficulties has the potential to elicit social support or instrumental help (Altermatt & Ivers, 2011; Bosson, Johnson, Niederhoffer, & Swann, 2006). However, disclosure to friends can also lead to negative consequences. Revealing successes can make others feel inadequate and lead to being seen as a 'show-off' (Bennett & Yeeles, 1990;

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Heyman, Fu, & Lee, 2008; Juvonen & Murdock, 1995), and revealing difficulties can lead to being seen as incompetent. The focus of the present research is on children's judgments about when self-disclosure about academic achievement is appropriate.

We focus on disclosures that have implications for competence because of their implications for academic achievement. For example, students' fears of being judged as incompetent often stand in the way of reaching out for the help that they need (Ryan, Pintrich, & Midgley, 2001). Theoretically, this focus is of interest in light of debates about children's understanding of what behaviors and outcomes imply about psychological traits (Boseovski & Lee, 2006; Heyman, 2009; Liu, Gelman, & Wellman, 2007), including questions of what academic outcomes imply about underlying intellectual abilities (Dweck, 1999). Such reasoning is also closely intertwined with important psychological constructs such as social comparison (Dijkstra, Kuyper, van der Werf, Buunk, & van der Zee, 2008; Ruble & Frey, 1991) and self-presentation (Banerjee, 2002; Banerjee & Yuill, 1999; Banerjee, Bennett, & Luke, 2010; Watling & Banerjee, 2007) that undergo substantial development after the early elementary school years.

The likely effects of different forms of competence-related disclosures may depend on audience response (Altermatt & Ivers, 2011; Altermatt, Pomerantz, Ruble, Frey, & Greulich, 2002; Brickman & Bulman, 1977; Duval & Wicklund, 1972). Children appear to have some appreciation of this notion even during the early elementary school years, as is suggested by their sensitivity to audience when reasoning about self-presentation (Banerjee, 2002; Heyman et al., 2008; Watling & Banerjee, 2007). By eight years of age, children consider modesty to be a more appropriate self-presentational strategy to use with peers than with adults (Watling & Banerjee, 2007) and even younger children have some understanding of how to adjust their communication based on their audience. For example, by six years of age, children know that it is better to talk about reading difficult books in the company of individuals who appreciate smart people than with individuals who appreciate athletic people (Banerjee, 2002).

A limited number of studies have focused on children's beliefs about disclosure of academic outcomes (Heyman et al., 2008; Quatman & Swanson, 2002), and the results point to a particular type of sensitivity to the audience: valence matching. Valence matching occurs when children predict that disclosure will be more likely when the valence of outcomes for the speaker and audience are matching (i.e., when both have relatively good or relatively bad outcomes) rather than mismatching (i.e., when one has a relatively good outcome and one has a relatively bad outcome). Valence-matching effects are consistent with theoretical frameworks suggesting that imbalances in performance can strain relationships (Benenson & Schinazi, 2004; Tesser, 1988).

Heyman et al. (2008) found evidence of valence matching among children aged 6 to 7 and 10 to 11 in both China and the USA. This pattern was evident when participants predicted that individuals would be more likely to disclose their poor academic performance to peers who also had performed poorly than to peers who had performed well. It was also evident when they predicted that individuals who had performed well would be more likely to disclose their performance to strongly performing peers than to peers who had performed poorly (see also Quatman & Swanson, 2002, for evidence of a valence-matching strategy among adolescents). The use of a valence-matching strategy appears to be motivated by a desire to avoid undesirable social outcomes that can result from drawing attention to mismatches in performance (Heyman et al., 2008). These undesirable outcomes include concerns about being judged negatively when

disclosing poor performance to successful peers, and about embarrassing poorly performing peers by disclosing one's successful performance.

Heyman et al. (2008) also found that with age children in both the USA and China come to increasingly expect that individuals will disclose negative performance to their friends. This finding suggests a growing understanding that the disclosure of negative information about the self can sometimes have positive consequences.

Findings from Heyman et al. (2008) fit within the context of a broader set of findings showing that children's reasoning about self-presentation undergoes some systematic age-related changes. One such change, which takes place between the ages of 6 and 11, is an increasing appreciation that presenting oneself in a modest way can carry social benefits (Banerjee, 2000; Watling & Banerjee, 2007). During this period, children also become more skilled at generating appropriate interpersonal justifications for a range of self-presentational behaviors (Banerjee, 2000; Banerjee & Yuill, 1999; Bennett & Yeeles, 1990; Watling & Banerjee, 2007) and become better at understanding how to tailor their descriptions of themselves to meet desired goals (Aloise-Young, 1993). For example, Aloise-Young (1993) found that 8- and 10-year-olds, but not six-year-olds, gave different self-descriptions when assigned the goal of describing themselves to children at another school vs. convincing children at another school to choose them as partners for a game. There is also evidence of age-related change in reasoning about self-presentation among older children. Juvonen and Murdock (1995) found that between the ages of 10 and 14, children increasingly consider it appropriate to down-play one's effort on academic tasks when communicating with popular peers. There are also a range of other changes that take place during adolescence that are likely to influence self-presentational processes, including increasing levels of concern about how the self is perceived by others (Elkind, 1967; Harter, 1999), and increasingly complex social relations and expectations (Montemayor, Adams, & Gullotta, 1990).

### *The Present Research*

As noted previously, the focus of the present research is on the children's reasoning about disclosures relevant to competence. We focus on cognitive competence as indexed by academic performance (Wentzel, 1994). In doing so, we build on the work of Heyman et al. (2008), which examined how children between the ages of 6 and 11 reason about the likelihood that a student would disclose his or her success or failure to friends who had performed either well or poorly on the same task. In the present research, we examine reasoning about disclosure among children between 7 and 15 years of age.

The present research addresses children's notions about what people *should* do rather than what they *will* do. There is no reason to assume that children's notions of what others will do will necessarily correspond to what they think is appropriate to do. For example, a child might expect classmates to cheat on homework but reject the notion that doing so would be appropriate.

We address the topic by testing Han Chinese participants in China. Much less is known about children's reasoning about disclosure in East Asia than in the West, but some research points to possible cultural differences. East Asian children appear to raise concerns about the implications of disclosure for future performance to a greater extent than do Western children (Heyman et al., 2008). Additionally, children in China are explicitly taught to show modesty by avoiding calling attention to their accomplishments (Fu, Heyman, & Lee, 2011). In China, an orientation toward future

performance and modesty, along with the strong cultural motivation to be viewed as competent by peers, is likely to create tension for children when deciding whether to disclose competence-related information.

In addressing our first goal of examining age-related changes, we focused on how children perceive valence mismatch situations. These situations present individuals with a potential conflict between trying to achieve the goal of limiting negative emotional responses vs. trying to achieve the goal of improving their own future performance or the future performance of others. Specifically, as discussed previously, although valence mismatch situations can lead individuals who have performed poorly to experience negative emotions, they also present an opportunity for individuals who have performed well to provide useful guidance to those who have performed poorly (Heyman et al., 2008). It is possible that due to the increasing competitive pressures that older children face, they come to believe it is more acceptable to disclose when doing so improves the speaker's relative standing among peers, and less acceptable to disclose when doing so harms the speaker's relative standing among peers. An alternative possibility is that older children believe it is more acceptable to disclose poor performance to successful peers than do younger children because it may lead to useful offers of help from more competent peers (Heyman et al., 2008). This possibility is consistent with evidence suggesting that with age, children in China become increasingly focused on the implications of disclosure for their future performance (Heyman, Fu, Sweet, & Lee, 2009). It is also possible that as children become older they become less accepting of the disclosure of positive performance outcomes to poorly performing friends as they become increasingly sensitive to the risk of hurting others' feelings.

## Method

### *Participants*

Participants were 150 Chinese children from five age groups: 30 7-year-olds [16 males,  $M = 7.37$ , standard deviation ( $SD$ ) = .21, range: 6.99 to 7.67], 30 9-year-olds (15 males,  $M = 9.47$ ,  $SD = .27$ , range: 9.05 to 9.98), 30 11-year-olds (15 males,  $M = 11.21$ ,  $SD = .30$ , range: 10.65 to 11.65), 30 13-year-olds (14 males,  $M = 13.23$ ,  $SD = .40$ , range: 12.72 to 13.97), and 30 15-year-olds (13 males,  $M = 15.25$ ,  $SD = .35$ , range: 14.73 to 15.93). Participants were from an urban–rural junction in the eastern region of China where Han Chinese people make up 99.1% of the population. All participants were Han Chinese.

### *Procedure*

Participants were tested on a one-on-one basis in children's schools in a private area. Four Chinese graduate students who were blind to the hypotheses of the study served as testers. Test sessions consisted of a series of stories and test questions. All stories were read to participants in Chinese, and participants' responses were written down by the testers. Participation required both consent from a parent or legal guardian, and oral assent from each child participant.

Participants were presented with four questions in which they were asked whether high or low performing students should disclose their performance to high or low performing peers. For example, in both speaker, strong performance conditions participants were first told, 'There is a boy named Xiaoming. Xiaoming got a really high score on a test at school'.

Participants were then asked the following two questions: ‘Should Xiaoming tell his friends in his class about his high score if he knows that they got really high scores too?’ and ‘Should Xiaoming tell his friends in his class about his high score if he knows that they got really low scores?’ In each case, participants were asked to make *appropriateness of disclosure ratings* along a 5-point scale, with 1 indicating that the speaker definitely should not disclose and 5 indicating that the speaker definitely should disclose. The scale was provided in writing with numbers and associated descriptions indicating each point. Response options were also presented verbally. At the start of the study, participants were given training in how to use this scale. For example, on one training item, they were told, ‘Suppose you are very likely to go to a foreign country and you were asked how likely it would be that you would travel to a foreign country. What answer would you pick?’ Participants could either respond verbally or by pointing to each of these questions, and experimenters recorded their responses. After each rating, participants were asked, ‘why do you think so?’ in order to probe for explanations of their responses.

Character gender was manipulated so that half of participants heard all stories about male characters and half heard all stories about female characters. Questions about high performers were clustered together as were questions about low performers, with the order of these pairs randomly determined.<sup>1</sup>

## Results

Preliminary analyses indicated no significant main effects or interactions involving participant or character gender so these factors were dropped from subsequent analyses.

### *Appropriateness of Disclosure Ratings*

Figure 1 shows the patterns of academic disclosure by age group, and Table 1 summarizes the means and standard deviations. To examine how patterns of disclosure differed as a function of disclosure type and age, an analysis of variance was conducted

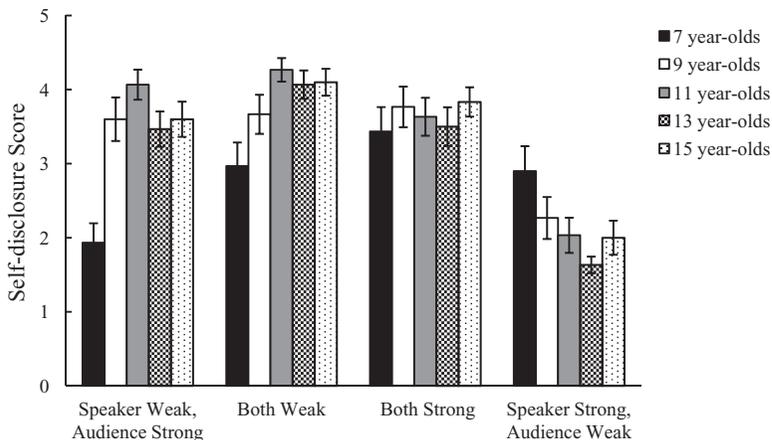
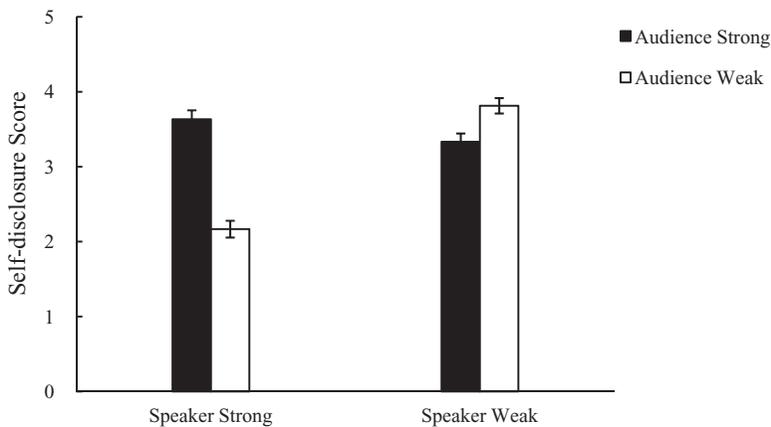


Figure 1. Ratings of Appropriateness of Disclosure.

**Table 1. Self-disclosure Scores**

Group	Speaker strong				Speaker weak			
	Audience strong		Audience weak		Audience strong		Audience weak	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age 7	3.43	1.81	2.90	1.85	1.93	1.44	2.97	1.75
Age 9	3.77	1.50	2.27	1.55	3.60	1.61	3.67	1.45
Age 11	3.63	1.40	2.03	1.30	4.07	1.11	4.27	.87
Age 13	3.50	1.43	1.63	.61	3.47	1.31	4.07	1.05
Age 15	3.83	1.09	2.00	1.26	3.60	1.30	4.10	.99

*Figure 2. Valence-matching Effect.*

on the *appropriateness of disclosure* ratings with age group (7, 9, 11, 13, and 15) as a between-subjects factor, and speaker outcome (positive, negative) and audience outcome (positive, negative) as within-subjects factors.

There were main effects of speaker outcome, reflecting a tendency to view the disclosure of negative outcomes more favorably than the disclosure of positive outcomes,  $F(1, 145) = 39.68, p < .001, \eta^2 = .22$ ; of audience outcome, reflecting a tendency to view disclosure to successful performers more favorably than disclosure to unsuccessful performers,  $F(1, 145) = 29.465, p < .001, \eta^2 = .17$ ; and of age,  $F(4, 145) = 3.81, p < .01, \eta^2 = .09$ , with the lowest overall approval rate for disclosure seen in the youngest age group.

Results also revealed the predicted interaction between speaker outcome and audience outcome (see Figure 2),  $F(1, 145) = 62.17, p < .001, \eta^2 = .30$ . This interaction reflects a tendency to engage in valence matching, with disclosure viewed more favorably when there was a match in outcomes between speaker and audience than when there was a mismatch. Means and standard errors by valence condition are as follows: both weak,  $M = 3.813$ , standard error (SE) = .103; both strong,  $M = 3.633$ , SE = .120; speaker weak, audience strong,  $M = 3.333$ , SE = .111; and speaker strong, audience

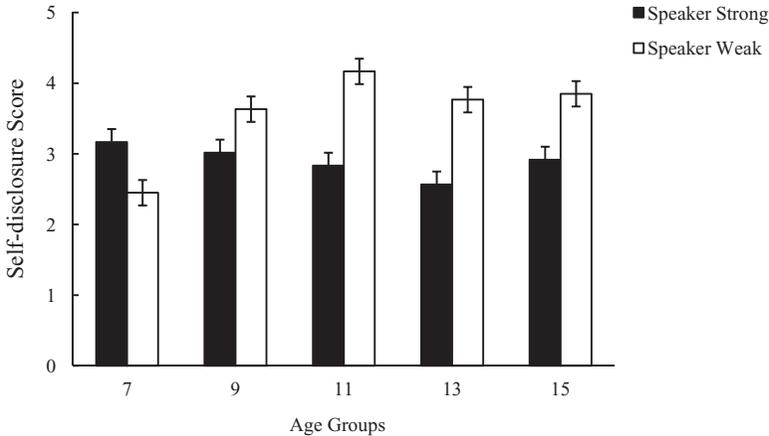


Figure 3. Interaction Between Age Groups and Speaker Outcome.

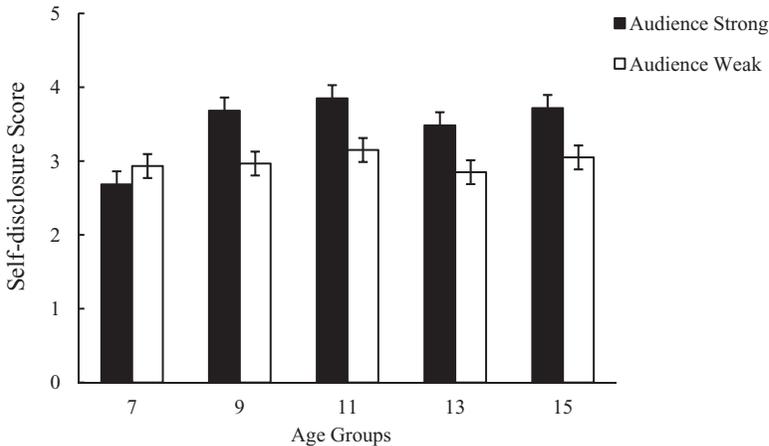


Figure 4. Interaction Between Age and Audience Outcome.

weak,  $M = 2.167$ ,  $SE = .112$ . Differences were significant both for positive speaker outcome ( $F(1149) = 77.88$ ,  $p < .001$ .) and for negative speaker outcome ( $F(1149) = 11.26$ ,  $p = .01$ .)

There was also an interaction between speaker outcome and age (see Figure 3),  $F(4, 145) = 11.89$ ,  $p < .001$ ,  $\eta^2 = .24$ , with the speaker outcome effect becoming stronger with age and with the youngest group actually showing the reverse pattern of the speaker outcome main effect. Simple effects tests indicated that the differences based on speaker outcome were significant within each age group (from youngest to oldest, respectively:  $F(1145) = 8.99$ ,  $p < .01$ ;  $F(1145) = 6.66$ ,  $p < .05$ ;  $F(1145) = 31.12$ ,  $p < .001$ ;  $F(1145) = 25.21$ ,  $p < .001$ ;  $F(1145) = 15.25$ ,  $p < .001$ ).

Finally, there was an interaction between audience outcome and age (see Figure 4),  $F(4, 145) = 4.21$ ,  $p < .005$ ,  $\eta^2 = .10$ . Simple effects tests indicated that there was no significant difference in audience outcome for seven-year-olds,  $F(1145) = 1.51$ ,  $p = .221$ , but there were significant differences for the other four age groups, with

disclosure viewed less positively when audience outcome was weak (from youngest to oldest, respectively:  $F(1145) = 12.44, p < .001$ ;  $F(1145) = 11.86, p < .001$ ;  $F(1145) = 9.71, p < .01$ ;  $F(1145) = 10.76, p < .001$ ).

Examining age effects separately in each condition, we found that when speaker performance was weak and audience performance was strong, seven-year-old children viewed disclosure as less appropriate than the other four age groups (all  $ps < .001$ ). We also found that when both were weak performers, seven-year-old children viewed disclosure as less appropriate than 11-, 13-, and 15-year-olds (all  $ps < .01$ ). Finally, we found that when the speaker performance was strong and the audience performance was weak, seven-year-old children viewed disclosure as more appropriate than did 13-year-olds ( $p < .005$ ).

### *Explanations of Responses*

Children's open-ended explanations were coded by two Chinese graduate students with extensive experience coding data. They initially randomly selected six participants' responses from each age group to code independently, and then discussed them before independently coding the rest of the responses. In each case, they discussed all disagreements until they came to agreement. Kappa was .87.

The coding system used was based on one used by Heyman et al. (2008). The five categories from that study (*emotions*, *future performance*, *performance description*, *relationships*, and *privacy*) were used along with a new category of *modesty*. Responses that referred to emotions or concerns about the judgments of others were coded as *emotions* (e.g., 'they will laugh at him', 'she will feel so ashamed of herself'). Responses that made reference to improving performance or learning together were coded as *future performance* (e.g., 'her friends will correct her errors—he will get improvement', 'his friends will help him to revise, and make progress next time'). Responses that referred only to the performance of the speaker or the audience were coded as *performance description* (e.g., 'his classmates got low scores, too'). Responses that referred to the goal of maintaining positive interactions and successful relationships were coded as *relationships* (e.g., 'he wants to stay friends'). Responses that referred to the issue of privacy were coded as *privacy* (e.g., 'there's no need to tell others'). Responses that made reference to the importance of maintaining modesty or avoiding the appearance of arrogance were coded as *modesty* (e.g., 'she should help others, but not show off—this is nothing to gloat about').

A total of 97.7% of explanations were judged as falling into one of the six coding categories. The proportions of explanations that fell into each coding category are shown in Table 2, by age group and the combination of speaker outcome by audience outcome.

As is consistent with findings of Heyman et al. (2008), the predominant explanations fell into the categories of *emotions* and *future performance*. The relative frequency of these two categories in the valence mismatch conditions was of central theoretical interest. These were analyzed using 5(age groups)  $\times$  2(emotion and future performance)  $\chi^2$  analyses in each of these conditions. Effects were significant in the speaker strong, audience weak condition  $\chi^2(4, N = 118) = 23.694, p < .001$ , as well as in the speaker weak, audience strong condition  $\chi^2(4, N = 118) = 15.975, p < .05$ . As can be seen in Table 2, these differences reflect an age-related shift toward increasing use of the emotion category at the expense of the future performance category in the condition involving a strong performer's disclosure to a weak performer. In contrast, the reverse pattern was seen in the condition involving a weak performer's disclosure to a

**Table 2. Proportions of Codable Responses in Each Category by Age, Speaker Outcome, and Audience Outcome**

Coding category	Speaker strong		Speaker weak	
	Audience strong	Audience weak	Audience strong	Audience weak
Emotions				
Age 7	.276	.345	.667	.444
Age 9	.138	.517	.333	.467
Age 11	.357	.700	.200	.300
Age 13	.333	.733	.267	.333
Age 15	.407	.633	.250	.483
Future performance				
Age 7	.241	.517	.233	.259
Age 9	.310	.276	.567	.267
Age 11	.179	.100	.667	.533
Age 13	.133	.067	.467	.433
Age 15	.185	.100	.400	.367
Performance description				
Age 7	.172	.034	.033	.222
Age 9	.206	.000	.000	.133
Age 11	.071	.000	.000	.067
Age 13	.133	.000	.000	.067
Age 15	.037	.000	.036	.100
Relationships				
Age 7	.034	.000	.033	.037
Age 9	.000	.000	.033	.100
Age 11	.107	.000	.067	.067
Age 13	.033	.100	.133	.067
Age 15	.000	.100	.107	.100
Privacy				
Age 7	.103	.000	.033	.037
Age 9	.103	.034	.067	.033
Age 11	.036	.000	.067	.033
Age 13	.167	.000	.133	.100
Age 15	.148	.000	.179	.667
Modesty				
Age 7	.172	.103	.000	.000
Age 9	.206	.172	.000	.000
Age 11	.250	.200	.000	.000
Age 13	.200	.100	.000	.000
Age 15	.222	.167	.000	.000

strong performer. This finding suggests that older children may focus more on avoiding others' negative emotional responses while also increasingly realizing the ways in which disclosure can benefit poor performers.

## Discussion

We examined children's judgments of the appropriateness of self-disclosure about positive and negative information regarding academic performance. In doing so, we extended findings of Heyman, Fu, and Lee, 2008. In that study participants tended to assume that disclosure would take place to a greater extent when the outcomes of the speaker and audience match than when they mismatch. The present study showed that this valence-matching pattern extends to judgments about the *appropriateness* of self-disclosure; participants tended to assume that disclosure was more appropriate when the outcomes of the speaker and audience match than when they mismatch.

The present findings of valence matching contribute to a growing body of research suggesting that unequal outcomes in relationships can create tensions (Benenson & Schinazi, 2004; Tesser, 1988). Recent research indicates that some such tensions exist even in very young children (Ng, Heyman, & Barner, 2011; Shaw & Olson, 2012; Warneken, Lohse, Melis, & Tomasello, 2011). This suggests that the valence-matching tendencies observed in the present research may originate from fundamental social-cognitive processes involving inequality aversions that might threaten egalitarian tendencies.

In our research, we tested children in five age groups, ranging from the age of 7 to 15, allowing for a more detailed picture of age-related changes in reasoning about academic self-disclosure than has been provided by prior research. Of primary interest were potential age-related changes in children's reasoning about valence mismatch conditions. By choosing to disclose, an individual whose performance compares *unfavorably* with others risks experiencing negative emotions but also may receive help from successful performers. By choosing to disclose, an individual whose performance compares *favorably* with others risks being perceived as immodest (Banerjee, 2000; Watling & Banerjee, 2007) or creating negative feelings within the relationship (Benenson & Schinazi, 2004), but may also benefit from being viewed as more competent.

In the present research, there were substantial age-related changes in reasoning about disclosure, especially between 7- and 11-years of age: Older children were more likely than younger children to view disclosure of poor performance to stronger performers positively and to view disclosure of strong performance to poorer performers negatively. This shift may be because older children have come to understand that (1) it is important for low performers to put aside their own negative feelings that may arise from social comparisons with those who are more successful in order to maximize opportunities for success, and (2) there are potentially high social costs of letting others know that you are more successful than they are. The age-related findings we observed are generally consistent with findings of substantial changes in children's reasoning about self-presentation during the late elementary school years (Banerjee, 2000; Banerjee & Yuill, 1999; Bennett & Yeeles, 1990; Watling & Banerjee, 2007), including age-related increases in emphasizing modesty (Banerjee, 2000; Watling & Banerjee, 2007).

These age-related shifts paralleled shifts in children's explanations. As children became older, they increasingly focused on implications for future performance when

reasoning about disclosure of negative performance to successful performers, but they increasingly focused on emotional consequences when reasoning about disclosure of positive performance to low performers. These findings suggest that over time, children come to understand that disclosing one's poor performance to successful performers may increase the likelihood of obtaining help that can lead to future success. The findings also suggest that over time, children may increasingly avoid disclosures of successes that may cause poorer performers to feel uncomfortable.

Theoretically, the findings suggest that long after children clearly understand that performance does not necessarily speak to one's underlying traits (Heyman, 2009), they are concerned that highlighting differences in performance has the potential to make others feel inadequate. It is particularly notable that evidence of such a concern was seen in China even with the strong focus on the transformative potential of effort there (Stevenson et al., 1990). The results also suggest that even when children overcome the barrier of focusing on whether revealing poor performance will lead them to be judged as incompetent (Ryan et al., 2001), they are still concerned that others may judge themselves negatively after being outperformed. The present work also points to the need for further examination of children's ideas about when it is appropriate to reveal negative information about oneself, which may be quite different than hiding positive things about oneself.

Further work is needed to look more closely at how patterns of academic self-disclosure may relate to conceptions of friendship (Altermatt & Ivers, 2011). For example, it is possible that our age-related results are associated with age-related changes in what it means to be a friend. Characteristics of individuals considering disclosure, such as their perceptions of their own capabilities (see Butler, 1989; Newman, 1990), should also be examined.

It will also be important to look more closely at possible cross-cultural differences in patterns of academic self-disclosure. Previous research suggests that valence effects are stronger in the USA than in China for expectations of disclosure (Heyman et al., 2008), and this may be the case for beliefs about the appropriateness of disclosure as well. Additionally, there are cross-cultural differences in a number of the beliefs and values that come into play when reasoning about the appropriateness of value-laden exposure. For example, in East Asia, there is a stronger tendency to view academic difficulties as opportunities for self-improvement than in the West (Li, 2012); consequently, there may be a greater focus on the implications that disclosure can have on one's future performance in China than in the USA (Heyman et al., 2008, 2009). Additionally, there is a greater concern with protecting others from losing face in East Asia than in the West, and this could result in a greater emphasis on avoiding disclosures that might cause others to feel embarrassed or even ashamed (Li, 2012). Finally, there are cross-cultural differences in the extent to which academics are valued that could influence reasoning about disclosure: Wang and Pomerantz (2009) found that although the value American children place on academics tends to decline in seventh and eighth grade, no such decline is seen for Chinese children.

Future research will also be needed to replicate this research in larger samples, and to examine how beliefs about disclosure relate to implicit beliefs about academic competence, including its implications for what individuals are capable of achieving in the future (Blackwell, Trzesniewski, & Dweck, 2007). Further research will also be needed to look more closely at potential gender differences (see Benenson & Schinazi, 2004). Although we did not see evidence of such differences in the present research, other work points to potential differences. For example, Heyman et al. (2008) found

that 10- to 11-year-old children in both the USA and China were more likely to recommend that girls disclose their poor performance to high performing peers than they were to recommend that boys do so. Additionally, the present research provides a strong foundation for examining links between cognition and behavior (see Xu, Bao, Fu, Talwar, & Lee, 2010), and for how reasoning about disclosure relates to individual differences in academic performance and social acceptance.

The present research points to the complexities children face when deciding whether to disclose information about their performance to others. The findings suggest that when determining whether disclosure is appropriate, children take into account the content of the information as well as what they know about their potential audience. Results also suggest that as children become older, they become increasingly concerned about the effects of self-disclosure when there is a risk of making others feel inadequate, but they also begin to appreciate that individuals may stand to benefit by disclosing their weaknesses to others.

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## **Note**

1. An additional set of questions was pilot-tested concerning the disclosure of other types of positive and negative information. These are not reported here because the interpretation of these results was not clear enough. This is because in scenarios designed to assess children's reasoning about unlucky and lucky outcomes, many participants focused on personal decisions characters could have made that would made them less reliant on luck in the first place.