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Children's Evaluation of Other People's Self-Descriptions

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Abstract

Children's evaluations of what people communicate about themselves were examined in three studies with a total of 296 participants (aged four to 12). Participants heard scenarios in which characters' motivations to reveal truthful information were systematically manipulated to examine (1) children's understanding that people do not always reveal true information, and (2) children's use of contextual cues to judge the credibility of what individuals say about themselves. Results from Study 1 suggest that elementary school children are quite sophisticated at reasoning with reference to motive information. Study 2 suggests that preschool children can also make use of motive information that is salient and familiar. For example, even preschool children responded that boys are less likely than girls to reveal to peers that they like to play with dolls. Study 3 suggests that children's reasoning about self-presentation is linked to their beliefs about social acceptability norms.

Keywords

motives; self-presentation; source evaluation; gender stereotypes

A major topic of social cognition research in the last couple of decades has been the development of theory of mind (see Wellman, Cross, & Watson, 2001). To date, much of this research has focused on children's understanding of false belief (Flavell & Miller, 1998). Despite the importance of this research, many scholars have argued that other critical aspects of the development of psychological understanding have been largely ignored (Bloom & German, 2000; Miller, 2000). For example, one important skill children need in order to function effectively in their social environment is to be able to understand that people do not always provide accurate reports of their own beliefs. The present article focuses on one particular context in which the potential for such distortion is often evident: when individuals communicate information about themselves. There are many reasons why people may reveal untrue self-descriptions such as a lack of self-knowledge (e.g., Burton & Mitchell, 2003), a desire to present themselves in a favorable manner (e.g., Bennett & Yeeles, 1990b), and purposeful deceit (e.g., Lewis, Stanger, & Sullivan, 1989). Of interest are both children's perceptions of how people are likely to present themselves in different contexts, and how children use contextual cues to judge the credibility of what others say about themselves.

Consider that adults do not always believe what other people say. Instead, they evaluate statements in light of other information such as social context and their previous knowledge of the speaker's trustworthiness and personal beliefs (e.g., Brehm & Lipsher, 1959; Dodd & Bradshaw, 1980; Eagly, Wood, & Chaiken, 1978; Lui & Standing, 1989; Maddux & Rogers, 1980; Miller, 1999). By considering a source's knowledge, motives, and goals, adults can critically evaluate information and actively participate in learning, as opposed to passively accepting information. Whether young children are capable of such critical thinking about the

communications of others is subject to debate (Clément, Koenig, & Harris, 2004; Dawkins, 1993).

Children's ability to successfully reason about how people present themselves has a number of important implications. One implication concerns children's level of vulnerability to manipulation by others. For example, a child who does not evaluate statements in light of social contexts might not discount an individual's attempt to show off, and may consequently experience feelings of inadequacy (Bennett & Yeeles, 1990a). A credulous child might also be deliberately tricked or misled by others into doing something he or she does not want to do (Aloise & Miller, 1991), or duped into believing something patently untrue (Ceci, Ross, & Toglia, 1987). Furthermore, even in situations in which children are not being manipulated, understanding how people present themselves can influence the way children interpret and respond to social information. For example, being able to utilize contextual cues when judging self-reported information helps children understand that certain communications are meant to be taken as a joke. Additionally, because many children's books and movies involve situations in which a character misrepresents himself, an awareness of this possibility for manipulation would likely enhance children's enjoyment and understanding of such stories.

There is evidence that preschool and early elementary school children possess the cognitive capacity to understand that sources can sometimes be unreliable (Ackerman, 1983; Bussey, 1992; Ceci et al., 1987; Koenig, Clément, & Harris, 2004; Koenig & Harris, 2005; Lampinen & Smith, 1995; Lee, Cameron, Doucette, & Talwar, 2002; Robinson, Champion, & Mitchell, 1999; and Robinson, Mitchell, & Nye, 1995). For instance, four-year-olds understand that individuals sometimes make untrue statements to get what they want or to get out of trouble (Bussey, 1992; Lee et al., 2002; Robinson et al., 1995), and three-year-olds are less likely to assimilate information from an adult described as 'silly' than an adult who was not described that way (Lampinen & Smith, 1995).

However, there is also substantial evidence suggesting that until late elementary school years, there are limitations in the extent to which children are able to critically evaluate what others say about themselves. For example, children in early elementary school often fail to appreciate that individuals may adapt their own communication in response to their audience, or that they may have associated self-presentational motives for doing so (Aloise-Young, 1993; Banerjee, 2000, 2002; Bennett & Yeeles, 1990a). Along these lines, Banerjee and Yuill (1999a) found that young children often fail to incorporate social cues in accounting for what people say about themselves. In this research, they presented six- to 11-year-old children with stories in which a character tells a group of other children untrue information about herself (e.g., falsely claiming not to be hurt or scared). Participants were then asked why the character said what she said. The six- and seven-year-old children were significantly less likely than the older children to give an explanation that referred to the character's intent to manipulate other children's evaluation of her.

One critical component of understanding that individuals may distort what they say about themselves is the appreciation that individuals may wish to present themselves in a socially desirable manner. Some evidence suggests that certain social evaluative concerns do not emerge until around the age of eight (Bigelow & La Gaipa, 1975; Heyman & Legare, 2005; Vasey, Crnic, & Carter, 1994). Vasey and colleagues asked elementary school children to generate possible reasons why a character might be worried in different settings. Younger participants were less likely than children over the age of eight to list threats of social evaluation as one of their worries. If young children do not think that others are concerned with social evaluation, it may mean that they are unlikely to take such concerns into account when evaluating people's claims about themselves. Moreover, Heyman and Legare (2005) found that there was a substantial shift between the ages of seven and 10 in children's appreciation

of motives to appear socially desirable. They found that, unlike six- and seven-year-olds, 10- and 11-year-olds appreciated that individuals might lie when reporting their own highly evaluative traits, such as how honest and smart they are. Such findings would suggest that children in early elementary school may have difficulty understanding that individuals could be motivated to distort what they say about themselves.

Another critical aspect of recognizing that people may distort what they say about themselves is an appreciation that skepticism may be necessary when evaluating claims people make when an ulterior motive is present. Several studies suggest that it is also around the age of eight that children show a tendency to engage in such discounting (e.g., Miller & Aloise, 1990; Mills & Keil, 2005). Mills and Keil (2005) found that children around this age begin to show skepticism of statements that are aligned with an individual's self-interests. This evidence of relatively late development suggests that early elementary school children may not effectively take into account motives and social context when evaluating other people's statements.

Of interest in the present research is whether early elementary school children might show such sophisticated reasoning if cognitive task demands were kept to a minimum. This possibility would be consistent with other findings that children demonstrate more sophisticated social reasoning in familiar social contexts (Kassin & Lepper, 1984; Miller & Aloise, 1990), and in conditions that minimize information processing demands (Aloise & Miller, 1991; Banerjee & Yuill, 1999b; Lampinen & Smith, 1995).

In the present research, scenarios were developed to assess children's understanding that individuals might be motivated to say different things about themselves in different contexts. This understanding was investigated by examining both their predictions of what individuals might reveal about themselves and their evaluations of the credibility of other people's self descriptions in different contexts.

We included scenarios that would be salient and familiar to early elementary school children. One social context that may be highly salient to younger children is gender role behavior. Research has shown that even preschool children have formed gender schemas (e.g., Bem, 1981) and are aware of the possibility that certain activities are associated with a particular gender (Eichstedt, Serbin, & Poulin-Dubois, 2002; Killen, Pisacane, Lee-Kim, & Ardila-Rey, 2001; Martin, 1989; Martin & Halverson, 1981; Poulin-Dubois, Serbin, Eichstedt, Sen, & Beissel, 2005; Serbin, Poulin-Dubois, & Eichstedt, 2002; Urberg, 1982). For example, even preschool-age children believe that dolls are generally considered feminine toys and would prefer to include a female, rather than a male, into a doll-playing group (Killen et al., 2001).

Another example of a salient context with which young children may be familiar is deception, either to avoid getting into trouble or to get out of doing something that they do not want to do. This is suggested by evidence that by the age of three, children spontaneously engage in deceptive behavior, such as lying to conceal a misdeed, for their own benefit (Chandler, Fritz, & Hala, 1989; Lewis et al., 1989; Polak & Harris, 1999).

Study 1

The aim of Study 1 was to investigate the development of elementary school children's reasoning about what people say about themselves based on motive and social context information. Of interest was children's understanding that individuals may be motivated to conceal information about themselves in some contexts. Also of interest was whether children judge information as less credible when provided by someone with a clear motive to distort. The age range of six to 12 years was selected as a starting point for investigation because of prior work suggesting a substantial developmental change in reasoning about self-presentation

during this age range (Aloise-Young, 1993; Banerjee & Yuill, 1999a; Banerjee, 2000, 2002; Bennett & Yeeles, 1990a, b; Heyman & Legare, 2005).

Method

Participants—A total of 72 children participated, with 24 in each of three age groups: six- to seven-year-olds (10 boys, 14 girls; $M = 7$ years 1 month), eight- to nine-year-olds (9 boys, 15 girls; $M = 9$ years 1 month), and 10- to 12-year-olds (12 boys, 12 girls; $M = 11$ years 9 months). The children were recruited from elementary schools in a large southwestern US city. Participants were 71 percent White, 21 percent Hispanic, 6 percent Asian-American, and 3 percent African-American.

Procedure—Participants were interviewed individually in a quiet area at their school. Children were presented with two sets of scenarios, one that concerned what story characters would say about themselves, and one that examined children's judgments of the credibility of story characters' statements. In the former set of scenarios, which we refer to as the self-presentation prediction scenarios, participants predicted whether a story character would reveal particular information about themselves, and in the latter set of scenarios, which we refer to as the credibility judgment scenarios, participants evaluated the credibility of statements characters made about themselves. Within each set of scenarios, information about the characters was manipulated in ways that relate to possible motives to distort information.

Self-presentation Prediction Scenarios—Two groups of self-presentation scenarios were developed to investigate children's understanding that individuals may be differentially motivated to conceal or reveal different information about themselves in different contexts. Within each of these groups of scenarios, contextual variables were systematically manipulated to create high conflict and low conflict self-presentation demands.

Gender context: Participants were presented with four scenarios in a random order in which they were asked to predict how the main character (the *character*) would present himself or herself based on gender information about the other children (the *audience*). This set of scenarios examining children's reasoning about a character's self-disclosures of an activity stereotypically aligned with the female gender (doll playing) was specifically selected in order to be familiar to participants in the age group of interest. The four scenarios included all possible combinations of character and audience genders. For example, in the scenario of a male character and a female audience, children were told, 'I know a boy who likes to play with dolls. If some girls asked him if he likes to play with dolls, what would he tell them?' All participants responded to this question with an affirmative response (that the character would answer 'yes, he likes to play with dolls'), a negative response (that the character would answer 'no'), or an uncertain response ('I don't know' or 'it depends'), and the data was coded categorically.

Academic context: Participants were asked two questions in a random order, designed to assess their predictions about whether characters would modify their communication about unsuccessful academic performance based upon the audience's performance. The two contexts varied in the possible motivation for a character to reveal truthful information. In this, and the following two measures, participants only heard characters that were either all males or all females. In a *low conflict* question, they were asked, 'If a girl had trouble at school and all of her friends also had trouble at school, do you think she would talk to her friends about it?' They were also asked a *high conflict* question in which the character's situation was different from the audience's situation: 'If a girl had trouble at school and none of her friends had trouble at school, do you think she would talk to her friends about it?' All participants responded to this question with an affirmative, a negative, or an uncertain response.

Credibility Judgment Scenarios—Two measures were presented to examine children's reasoning about the effect of motives in relation to perceived credibility: a camp context measure and a music context measure. Within each measure, participants were asked to make credibility judgments about the statements of two characters, one of whom had an obvious motive to distort information about him or herself (*high motive*) and one of whom had a *low motive* to distort.

Camp context: Participants heard two scenarios that described a character who reported feeling sick. The characters' motives differed across scenarios: in the low motive scenario, the character was described as wanting to go to camp, and in the high motive scenario, the character was described as not wanting to go to camp. For both scenarios, participants are asked to evaluate the credibility of the character's report of feeling sick. The following is an example of what participants were presented in the high motive scenario:

Olivia hates going to camp and does not want to go today. Olivia knows that she won't be allowed to go to camp if her mom thinks she feels sick. When Olivia's mom asks her if she feels sick, she says, 'Yes, I do feel sick.' Do you think that Olivia really does feel sick?

Music context: Participants heard two scenarios in which children were asked to make credibility judgments about a character's reports of their music preferences. In the low motive scenario, the goal is for 'other kids to find out about the kind of music she likes,' and in the high motive scenario, the goal is to get 'other kids to think that she likes the same kind of music'. For both scenarios, the character gives information about herself and participants are asked to evaluate the credibility of the statement. The following is an example of what participants were presented with in the high motive scenario: 'Teresa really wants other kids to think that she likes the same kind of music that they like. If Teresa told you that she likes a certain song, how much would you believe her?'

Participants were trained before the start of the interview session to make credibility judgments using a seven-point scale (seven squares of increasing size) in which 'not believe at all' was coded as 1 and 'totally, completely believe' was coded as 7. This scale was only used for the music context.

Scenarios were presented in a random order that was determined separately for each participant. In all scenarios except the gender context, half of the participants heard the characters described as being of the same gender as themselves (e.g., girls heard about female characters), and half heard characters described as being of the opposite gender (e.g., girls heard about male characters). For the scenarios in which characters were identified by name, each participant had character names drawn at random from a set of masculine and feminine names. This name assignment procedure was intended to minimize the possibility that children's responses could be systematically influenced by any associations children might have with particular names (see Kasof, 1993).

Results and Discussion

Self-presentation Prediction Scenarios—One question of interest in Study 1 was children's perceptions about the effect of gender on what people would reveal about themselves. To that end, participants' categorical responses regarding whether characters would reveal their doll-playing enjoyment were examined using loglinear analyses, and the data of the gender context are presented in Table 1. The general pattern of responses across the three age groups appeared relatively similar, although there was a main effect of age, $G^2(2) = 16.73, p < .005$, such that, across all scenarios, younger participants were more likely than older children to say that a character would reveal doll-playing tendencies.

As hypothesized, children gave different responses based on information about gender: responding that boys would be less likely than girls to admit that they liked dolls (effect of character gender: $G^2[1] = 142.93, p < .001$) and that both boys and girls would likely hide the fact that they like dolls when asked by an audience of boys (effect of audience gender: $G^2[1] = 16.51, p < .001$). There was also a significant interaction of age and character gender such that the sensitivity to the character gender information increased with age, $G^2(2) = 11.17, p < .05$. Despite the differences across age, children in all age groups significantly differentiated between the likelihood that male vs. female characters would disclose playing with dolls (six- to seven-year-olds: $G^2[1] = 29.55, p < .001$; eight- to nine-year-olds: $G^2[1] = 62.52, p < .001$; 10- to 12-year-olds: $G^2[1] = 58.55, p < .001$, all adjusted for Bonferroni *post hoc* analyses).

Although there was no age by audience gender interaction, analyses of each age group separately revealed that only the oldest group showed a significant effect of audience gender ($G^2[1] = 10.90, p < .05$, after Bonferroni adjustment). Specifically, for the 10- to 12-year-olds, there was a significant effect of audience gender for female characters ($G^2[1] = 24.06, p < .001$, after Bonferroni adjustment) but not male characters ($G^2[1] = 1.82, p > .4$).

In sum, the results from this measure suggest that even young elementary school children have an understanding of the effect of both character gender and audience gender on the information that a person will reveal about himself or herself, although these effects were stronger in older children. It is notable that the present study finds a main effect of audience on children's reasoning about self-presentation. This result is consistent with evidence that young children will also modify the communication of their own gender-related behaviors depending on the nature of their audience (Banerjee & Lintern, 2000). The lack of an interaction effect between character gender and audience gender suggests that young children do not expect girls and boys to show different patterns of adapting their behavior to their audience as might be predicted based on evidence that children behave differently when around same-sex peers and opposite-sex peers (Maccoby, 1990).

In the second self-presentation prediction scenario measure, participants were presented with scenarios in which the character's motivation to reveal truthful information was manipulated. The number of participants in the academic context who responded that the character would tell others that she did poorly on her schoolwork is presented in Table 2. Participants were more likely to predict that the character in the high conflict condition would distort the truth than the character in the low conflict information ($G^2[1] = 15.75, p < .001$). Although the six- to seven-year-olds did not differentiate between high conflict and low conflict conditions ($G^2[1] = 5.961, p > .05$), there was no significant effect of age.

Results also indicate that the children in the two older age groups, but not the six- to seven-year-olds, expected individuals to adapt their communication based on information about their audience's performance, as shown by a significant age by conflict condition interaction effect ($G^2[2] = 14.41, p < .01$). Specifically, older children were more likely to expect characters to reveal their poor performance to others who also performed poorly as compared with others who had been successful. These results parallel those by Quatman and Swanson (2002), indicating that high school students show greater willingness to disclose information about their academic performance and goals to peers with comparable performance histories. The interaction with age suggests that this sensitivity to audience increases over time and is consistent with other findings of age-related increases in sophistication in reasoning about self-presentation (Banerjee, 2000, 2002; Bennett & Yeeles, 1990a).

Credibility Judgment Scenarios—Children's evaluations of credibility were made in both the camp and music contexts in which characters' motives for distortion were manipulated. Participants' responses of belief of the characters' claims to be sick in each of the camp context

scenarios are presented in Table 3. Children systematically used motive information when judging the credibility of the characters: they were less likely to believe that a character was sick if she did not want to go to camp than if she did want to go to camp ($G^2[1] = 79.23, p < .001$). The eight- to nine-year-olds and the 10- to 12-year-olds had stronger condition effects than the youngest age group, leading to a significant interaction effect of participant age and motive condition ($G^2[2] = 10.19, p < .05$). As can be seen from Table 3, sensitivity to motivation increases with age, but even the six- to seven-year-olds significantly differentiate between the two motive conditions ($G^2[1] = 10.68, p < .05$).

For the Music Context measure, children's belief judgments of the two characters with either a low motive (the character really wants other kids to learn more about her) or a high motive to distort (character really wants to be like the other kids) were compared. As shown in Table 4, participants were more likely to rate a character in the low motive condition as credible than a character in the high motive condition ($M = 5.34$ vs. $3.13, F[1, 69] = 83.12, p < .001$), which was the only significant effect in the model. Furthermore, even the youngest children responded to this credibility measure in a similar manner to the older children.

In sum, both credibility judgment measures show that even six- to seven-year-olds can take into account motives when evaluating what people say about them. The camp credibility measure also provides evidence that this capacity continues to develop over the course of the later elementary school years.

Study 2

The results of Study 1 indicated that even the six- to seven-year-olds showed sensitivity to context and character motivation in their expectations about self-presentation and in their credibility judgments. They were also able to differentiate between contexts in which characters had either lower or higher motivation to distort information. In fact, few age-related differences were found. These results are consistent with research suggesting that even early elementary school children are able to reason about self-presentation in some situations (Banerjee & Yuill, 1999b; Josephs, 1994).

Study 2 examines whether preschool-age children might also have some capacity to consider social context and motives when evaluating what people say about themselves. Such a possibility is plausible in light of recent evidence indicating that children as young as four years of age systematically take into account a source's prior color identification performance when determining whose claims to believe about the color of an unseen object (Clément et al., 2004). Similarly, evidence also suggests even five-year-olds show a developing sense of skepticism when presented with statements aligned with a person's self-interest (Mills & Keil, 2005).

Method

Participants—A total of 50 children participated, with 25 in each of two age groups: four-year-olds (13 boys, 12 girls; $M = 4$ years 6 months) and five-year-olds (13 boys, 12 girls; $M = 5$ years 4 months). Participants were 72 percent White, 18 percent Hispanic, 6 percent African-American, and 4 percent Asian-American.

Procedure—The procedure and materials were the same as Study 1, with three exceptions. Firstly, the academic context measure was deleted for this younger set of participants, because six- and seven-year-olds in Study 1 did not differentiate their responses based upon the manipulation of motivation to deceive. Secondly, when presenting the two credibility judgment measures, the key story manipulation was repeated twice. Thirdly, in preparation for the music context measure, participants were given more hands-on training on the rating scale for

information that children could observe to be true (e.g., that a green folder was in fact green) and for information that is highly implausible (e.g., that the experimenter is two years old). The exercise was repeated with different examples until correct use of the scale was demonstrated.

Results and Discussion

Self-presentation Prediction Scenarios—The number of participants in the gender context asserting that girls and boys would reveal enjoyment of playing with dolls to an audience of boys and to an audience of girls is presented in Table 1. Overall, preschool children showed differentiation in their responses to the four different conditions, and there were no significant differences between the four- and five-year-olds. Specifically, both age groups were more likely to claim that a female character would reveal that she likes to play with dolls, compared with a male character ($G^2[1] = 8.57, p < .05$), and were more likely to claim that both boys and girls would reveal liking to play with dolls to a female audience than a male audience ($G^2[1] = 8.32, p < .05$). These results parallel the results of Study 1 and demonstrate that preschool children, like elementary school children, have an idea that people may not always be motivated to describe themselves truthfully to others, and that this understanding emerges early in the context of salient gender roles.

Despite preschool children's systematic reasoning about gender on this measure, large differences are seen when comparing the results across Studies 1 and 2, indicating a stronger differentiation between scenario conditions for the elementary school children, as seen in Table 1. This age difference was confirmed by a 2 (age: preschool-age, elementary school-age) $\times$ 2 (character gender: male, female) $\times$ 2 (audience gender: male, female) loglinear analysis, which included the participants in both studies, in which there was a main effect of age ($G^2[1] = 34.48, p < .001$). This analysis also confirmed main effects of character gender ($G^2[1] = 89.33, p < .001$) and audience gender ($G^2[1] = 28.90, p < .001$), as previously reported in each separate study. There were two significant interaction effects. Firstly, there was an interaction between character gender and audience gender ($G^2[1] = 10.00, p < .005$). Follow-up analyses suggest that the effect of audience gender is stronger for female characters ($G^2[1] = 32.71, p < .001$) than male characters ($G^2[1] = 5.81, p > .05$). Secondly, there was a significant effect of age by character gender ($G^2[1] = 16.94, p < .001$), such that the effect of character gender was stronger in the elementary school children in Study 1 ($G^2[1] = 127.04, p < .001$) than the preschool children in Study 2 ($G^2[1] = 9.33, p < .05$).

Credibility Judgment Scenarios—The results of the camp context measure, shown in Table 3, suggest that preschool children were more likely to think that a character was sick if she had a low motive to distort than if a character had a high motive to distort ($G^2[1] = 4.05, p < .05$). Both four- and five-year-olds responded similarly to the two conditions, and there was no effect of age.

Results also suggest limitations in young children's reasoning about credibility. This was seen in comparing responses across the camp contexts in the two studies: despite preschool children's significant differentiation of responses between the low motive and high motive to distort scenarios, their responses were different from the elementary school-age participants in Study 1. Consistent with analyses of each individual study, there was a main effect of context ($G^2[1] = 53.05, p < .001$). Results also indicated that preschool children were less likely to be skeptical than elementary school children when there was a high motive to falsely claim illness (main effect of age: $G^2[1] = 13.94, p < .001$) and were also less sensitive to the context manipulations than older children (age by motive interaction: $G^2[1] = 19.35, p < .001$).

Limitations in young children's reasoning were also seen in the music context measure, shown in Table 4, in which participants did not systematically respond to the two scenarios as the

older children did in Study 1. One possible explanation of the children's differential responses to the two credibility judgment measures may be because of the greater inferential leap that is required to understand the characters' motivation to distort information in the music context. Taken together, results of the two credibility judgment measures suggest that preschool children are already beginning to use social context to evaluate credibility, but they also undergo considerable development after this point.

Study 3

The results of Studies 1 and 2 indicated that, by the time they reach preschool age, children clearly understand that individuals might possess different motivations to reveal information about themselves, and that this understanding continues to develop into elementary school years. One context in which this was seen was in children's reasoning about whether individuals would reveal that they like to play with dolls. Although the preschool children in Study 2 systematically distinguished between the different gender conditions, they were significantly more likely than the elementary school children in Study 1 to respond that a boy would admit that he plays with dolls to a male audience (across all participants in Study 2, 64 percent responded that a boy would admit doll playing to a male audience, as compared with 7 percent across all participants in Study 1). One possibility is that these age differences may be a function of children's growing appreciation that individuals are able to manipulate self-presentation by selectively revealing or concealing information about themselves as they choose. This possibility is consistent with the research suggesting considerable changes in children's understanding of self-presentation across development (e.g., Aloise-Young, 1993; Banerjee, 2000, 2002; Bennett & Yeeles, 1990a). However, it is also possible that such results reflect changes in awareness about what types of information others might be motivated to hide. For example, it is possible that young children may not think doll playing to be a violation of gender roles, and are thus, less likely to be aware that individuals may wish to hide the fact they like to play with dolls. An association between children's reasoning about social norms and children's beliefs about what another person will disclose about themselves could help explain development in self-presentation reasoning. Study 3 investigates whether differences in such judgments of social acceptability norms contribute to age-related differences in self-presentation judgments, and as well as to individual differences in these ratings seen within age groups.

Method

Participants—A total of 75 children participated, with 25 children in each of three age groups: four-year-olds (15 boys, 10 girls; $M = 4$ years 8 months), five-year olds (13 boys, 12 girls; $M = 5$ years 6 months), and a comparison group of eight-year-olds (9 boys, 16 girls; $M = 8$ years 6 months). Participants were 72 percent White, 23 percent Hispanic, 4 percent African-American, and 1 percent Asian-American.

Procedure—To examine the relationship between children's reasoning about the social acceptability of a behavior and their judgments of how a person might present themselves concerning that behavior, participants were presented with the gender acceptability norms measure. This measure, which contained four scenarios in random order, was adapted from the gender context measure in the previous two studies. Scenarios varied in a 2 (character gender: male, female) by 2 (audience gender: male, female) within-subjects design, such that the four scenarios included all possible combinations of character and audience genders. Following each scenario, participants were asked two questions.

Participants were first asked a social acceptability (SA) question that asked them to predict how the main character would feel in that particular situation (e.g., 'How do you think Tracy

would feel if some boys found out that she likes to play with dolls?’). Participants chose from a series of five faces: a large frown representing ‘very unhappy’ (coded as 1), a small frown representing ‘a little unhappy’ (coded as 2), a neutral face representing ‘not happy nor sad’ (coded as 3), a small smile representing ‘a little happy’ (coded as 4), and a large smile representing ‘very happy’ (coded as 5).

Participants then responded to a self-presentation (SP) question that asked them to predict whether the character would reveal the truth (e.g., ‘If some boys asked Tracy if she likes to play with dolls, do you think she would say, “Yes, I do play with dolls” or would she maybe say “No, I don’t play with dolls.”’). Responses were coded categorically.

Results and Discussion

As shown in Table 5, for the SA questions, children of all ages were more likely to say that it would be more upsetting for a male to have peers who were aware that he likes to play with dolls than for a female to have peers who were aware that she likes to play with dolls. Children of all ages also responded that characters of either gender character would be more upset if male peers rather than female peers discovered that the character enjoyed doll playing. This was confirmed by a 3 (age: four-year-olds, five-year-olds, eight-year-olds) by 2 (character gender: male, female) by 2 (audience gender: male, female) repeated measures ANOVA that revealed a significant effect of age ($F[2, 288] = 16.30, p < .001$). *Post hoc* tests found that the SA rating difference between the eight-year-olds and both the four- and five-year-olds to be significant ($F[1, 198] = 20.79, p < .001$ and $F[1, 198] = 24.66, p < .001$, respectively). There was also a significant effect of character gender ($F[1, 288] = 33.87, p < .001$) and audience gender ($F[1, 288] = 12.76, p < .001$). Results from the SA questions suggest that preschool children are more likely overall than the older comparison group to think that it is socially acceptable to like playing with dolls.

Results for the SP question, in which participants were then asked to predict whether a character in the scenario would reveal liking to play with dolls, are shown in Table 6. The results generally replicate those from Studies 1 and 2, indicating that even four- and five-year-olds made use of character gender when deciding whether the characters would tell others that he or she liked to play with dolls, and that there are age-related changes in self-presentation prediction from preschool to elementary school. Results from a 3 (age: four-year-olds, five-year-olds, eight-year-olds) $\times$ 2 (character gender: male, female) $\times$ 2 (audience gender: male, female) loglinear analysis revealed a significant effect of age ($G^2[2] = 23.81, p < .001$), and a significant effect of character gender ($G^2[2] = 44.49, p < .001$). Follow-up pairwise contrasts for age revealed that the responses of the eight-year-old group was significantly different than the responses of the four- and five-year-old groups ($G^2[1] = 23.579, p < .001$ and $G^2[1] = 11.13, p < .005$, respectively), suggesting that preschool children were more likely overall than elementary children to respond that a character would reveal liking to play with dolls. No other effects were significant.

We also wanted to examine whether individual differences in SA ratings predict a participant’s SP predictions. Because there were no significant effects of audience gender in the SP question, children’s responses were collapsed across audience gender, creating an SA rating score and an SP prediction score for the two main character genders. Using the SA rating scores and the SP prediction scores, we found age to be predictive of SP prediction scores only for male characters ($F[1, 73] = 18.28, p < .001$) and not for female characters ($F[1, 73] = 0.54, p > .4$). A mediation analysis was then conducted to examine whether SA rating scores could account for the age-related changes in SP prediction scores for the male characters (Sobel, 1982, 1986). When SA rating scores are added into the model of age predicting SP prediction scores, the ability of age to predict SP prediction scores is greatly reduced ($z = -2.248, p < .05$). Log linear analyses conducted on the uncollapsed data also suggest similar findings.

These results suggest that children's reasoning about social norms plays a role in explaining age-related changes seen in children's reasoning about how people talk about themselves.

General Discussion

The aim of this article was to investigate children's evaluation of other people's self-disclosures. This was assessed both through their predictions concerning what information individuals would reveal about themselves and through their judgments about the credibility of others people's claims. Results from Studies 2 and 3 indicate that even preschool children have the cognitive capacity to evaluate what people say about themselves when presented with familiar contexts in which possible motives for distortion are likely to be salient. This capacity was evident when four- and five-year-olds used character and audience gender information to predict whether a character will reveal an enjoyment of playing with dolls. This capacity was also evident when children showed greater skepticism of a character's claim to be sick if children were informed that the character was motivated to get out of going to camp.

These results are consistent with other evidence of early competence in children's understanding that things are not always as they appear, and to apply that understanding to their reasoning about what people say (Flavell, Green, & Flavell, 1986; Koenig et al., 2004; Wellman et al., 2001). One reason for the sophisticated performance seen in young children in some prior research may be that these assessments focus on familiar situations. For example, it is likely that children would have observed someone lying to get out of doing something undesirable, or at least have read about such a possibility in a book. Similarly, the salience of deception may play a role in demonstrations of early competence. Research suggests that children's understanding of deception strategies in game-like contexts may help them focus better when reasoning about the mental processes of others (Chandler & Hala, 1994; Chandler et al., 1989; Wellman et al., 2001).

Results from the present studies also suggest change during elementary school years in how children evaluate self-disclosure. Older children took into consideration the audience's successful or unsuccessful performance to a greater extent than did younger children when predicting whether the character would disclose unsuccessful academic performance. In addition, older children were more likely than younger children to take into account motives for fitting in when evaluating a character's claim about liking a particular song. Study 3 also suggests age-related changes in what is considered to be socially appropriate. This awareness is associated with children's predictions of what others will reveal about themselves and offers one possible explanation for the developmental change across early childhood in reasoning about the communications of others.

Although our studies show early sensitivities in many of our measures, children under the age of eight still showed limitations in their reasoning as compared with older children. This pattern of age-related change evident in the present research is consistent with other evidence suggesting that children under the age of eight still have difficulty in evaluating what others communicate about themselves in some types of situations (e.g., Banerjee & Yuill, 1999a; Banerjee, 2000; Bennett & Yeeles, 1990a, b; Heyman & Legare, 2005; Mills & Keil, 2005). Taken as a whole, this body of research suggests that, across the elementary school years, children are acquiring sensitivity to the types of contexts in which individuals are likely to manipulate what they say about themselves. The present work contributes to this research by providing evidence that this learning includes the ability to apply skeptical thinking across a wider range of contexts, including those in which significant inferential leaps are required to determine the motivations of individuals making claims. Our results also suggest that children's understanding of social acceptability is changing over these years and that this understanding

of social acceptability is closely associated with how children assess claims when individuals might have an interest in presenting themselves in a socially desirable way.

Implications

The present research has implications for children's developing understanding of gender roles by suggesting that their understanding about gender affects their reasoning about how people talk about themselves. Children as young as four showed an appreciation for the ways in which gender may affect people's motivation to conceal information about themselves. Results from Study 3 suggest that learning about social norms is closely intertwined with the development of self-presentation, implying that young children may already feel pressure to hide information about themselves when it violates gender roles. Indeed, other research indicates that changes across childhood in what children choose to disclose about their sex-typed play preferences vary with their changing schemas of gender stereotypes (Banerjee & Lintern, 2000). Therefore, not only are children changing what they choose to reveal about themselves dependent on the gender of the audience, but children are also aware of the fact that other people may also selectively reveal information about themselves.

The present work also suggests that young children's familiarity with a context may bootstrap their ability to make more sophisticated judgments. This suggests that children can be taught critical evaluation skills by first highlighting the potential for distortion in more familiar domains, or by highlighting salient motives for distortion. Such a possibility is generally consistent with other evidence indicating that it is possible to foster young children's critical thinking by directing their attention to sources of information (Giles, Gopnik, & Heyman, 2002).

Future Directions

One important issue to further explore is the association between children's developing beliefs about social acceptability and its effects on their perceptions of self-presentation. If children's beliefs about normative and counter normative behavior guide their reasoning about self-presentation, then it suggests that self-presentation is dependent upon context and can possibly be changed. Although this study shows the relation between children's reasoning about social norms and their reasoning about self-presentation, further experimental work is needed to determine whether increased knowledge of social norms can directly lead to more sophisticated reasoning about what people say about themselves.

Another important future consideration is to assess children's evaluation of sources involving children's reasoning in real-world contexts. In real-life situations, children are potentially faced with many source characteristics that may be used to make inferences regarding the motivation, reliability, and truthfulness of their sources. Children are able to use credibility cues such as the speaker's knowledge, occupation, and the child's own history of interactions with the speaker. One difficulty with these circumstances is that it may be complicated to evaluate which of the cues is most important. For example, it may be difficult to determine a speaker's credibility, because speakers can have more than one motivation for disclosing information. Even adults have difficulty judging source motivation (e.g., Berndt, 2005; Eagly et al., 1978). Examining which characteristics children deem to be important when making credibility judgments would be useful for situations in which parents, teachers, and other authority figures wanting to change the beliefs or behaviors of a child.

Conclusions

When making judgments about the communication of others, young children showed sophistication in contexts where motivations were salient and familiar. The results of the

current research also suggest that children take into account their knowledge of similar situations and their knowledge of what is socially acceptable when evaluating people's self descriptions. These results suggest that even preschool-age children are not as credulous as they are sometimes made out to be (Dawkins, 1993).

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Table 1

Number of Participants from Studies 1 and 2 Responding that the Character Would Tell the Audience about Playing with Dolls

Age Group	Female Character		Male Character	
	Female Audience	Male Audience	Female Audience	Male Audience
Study1				
Six- to seven-year-olds	19	18	9	4
Eight- to nine-year-olds	22	15	3	1
10- to 12-year-olds	21	8	1	0
Study2				
Four-year-olds	24	15	18	15
Five-year-olds	23	17	17	17

Table 2

Number of Participants Responding that the Character Would Tell Others that He Did Poorly in School for Study 1

Age Group	Conflict	
	Low	High
Six- to seven-year-olds	9	10
Eight- to nine-year-olds	17	5
10- to 12-year-olds	16	5

Table 3

Number of Participants Responding in Belief that the Character was Sick in Camp Credibility Measure from Studies 1 and 2

Age Group	<u>Motivation to Distort</u>	
	Low	High
	Study1	
Six- to seven-year-olds	13	4
Eight- to nine-year-olds	17	1
10- to 12-year-olds	19	0
	Study2	
Four-year-olds	14	11
Five-year-olds	16	9

Table 4

Mean Credibility Ratings for Music Preference Measure from Studies 1 and 2

Age Group	<u>Motivation to Distort</u>	
	Low	High
Study 1		
Six- to seven-year-olds	5.08 (1.90)	2.67 (1.83)
Eight- to nine-year-olds	5.42 (1.67)	3.36 (1.67)
10- to 12-year-olds	5.56 (1.38)	3.08 (1.38)
Study 2		
Four-year-olds	3.64 (3.10)	4.60 (2.78)
Five-year-olds	4.60 (2.72)	3.84 (2.78)

Note: Ratings are on a seven-point scale, with a rating of 1 indicating that the participant did not believe and a rating of 7 indicating that the participant fully believed the character. Standard deviations are shown in parentheses.

Table 5

Mean Ratings of Social Acceptability in Study 3

Age Group	Female Character		Male Character	
	Female Audience	Male Audience	Female Audience	Male Audience
Four-year-olds	4.52 (1.05)	3.36 (1.73)	3.24 (1.67)	2.72 (1.74)
Five-year-olds	4.08 (1.41)	3.48 (1.78)	3.44 (1.53)	3.04 (1.51)
Eight-year-olds	3.40 (1.41)	2.96 (1.14)	2.00 (.24)	1.56 (.87)

Note: Mean ratings for the social acceptability measure for each of the four gender conditions are shown, with standard deviations in parentheses. Ratings are on a five-point scale, with 1 indicating that the character would be 'very unhappy' and 5 showing that the character would be 'very happy' if others found out about liking to play with dolls.

Table 6

Number of Participants Responding that the Character Would Reveal Liking Doll Playing in the Self-presentation Question in Study 3

Age Group	Female Character		Male Character	
	Female Audience	Male Audience	Female Audience	Male Audience
Four-year-olds	22	19	14	16
Five-year-olds	24	23	18	16
Eight-year-olds	21	17	6	4

Note: The numbers of children responding that the character would reveal liking to play with dolls in the Self-presentation measure are shown.