

Praising Young Children for Being Smart Promotes Cheating



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Praise is one of the most commonly used forms of reward. It is convenient, is nearly effortless, and makes the recipient feel good. However, praising children for being smart carries unintended consequences: It can undermine their achievement motivation in a way that praising their effort or performance does not (Cimpian, Arce, Markman, & Dweck, 2007; Kamins & Dweck, 1999; Mueller & Dweck, 1998; see Dweck, 2007). In this study, we investigated whether the negative consequences of praising children for being smart extend to the moral domain, by encouraging cheating.

There is some prior work suggesting that evaluative feedback can influence children's moral behaviors (Fu, Heyman, Qian, Guo, & Lee, 2016; Mueller & Dweck, 1998; Zhao, Heyman, Chen, & Lee, 2017). Telling 5-year-olds (but not younger children) that they have a reputation for being good leads to a reduction in their cheating, presumably because they are interested in maintaining this reputation (Fu et al., 2016). We propose that telling children that they are smart, a form of *ability praise*, may have the opposite effect by motivating them to cheat to appear smarter. In a study consistent with this possibility, Mueller and Dweck (1998) found that 10-year-olds exaggerated how well they had performed after receiving ability praise. However, little is known about whether ability praise can influence young children's moral behavior. The present research addressed this question by comparing the effects of ability and performance praise on preschool children's cheating.

Method

Participants were 300 preschool children in eastern China: one hundred fifty 3-year-olds (age range = 3.08

to 4.00 years, $M = 3.62$, $SD = 0.27$; 71 boys, 79 girls) and one hundred fifty 5-year-olds (age range = 5.01 to 6.00 years, $M = 5.38$, $SD = 0.33$; 78 boys, 72 girls). To measure cheating, we used a version of a well-established peeking paradigm (see Heyman, Fu, Lin, Qian, & Lee, 2015), in which an experimenter hides a playing card (with a number from 3 to 9, excluding 6) behind a barrier and children guess whether it is greater or less than 6. The children are told that they can win a prize if they guess correctly on at least three of the six trials.

The session began with a practice trial in which the children were told that they had guessed correctly. They were then randomly assigned to three conditions (50 children in each condition): In the ability condition, children were told, "You are so smart." In the performance condition, they were told, "You did very well this time." In the baseline condition, no praise was given.

The real guessing game, which was identical across the three conditions, followed this practice trial. On each trial, the children were instructed not to peek. Unbeknownst to them, the game was rigged to ensure success on two of the first five trials and failure on three. On each trial, the children were told whether they had been successful, but no praise was given. During the pivotal sixth trial, the experimenter left the room for 60 s after eliciting a promise not to peek at the card. Acts of cheating, defined as any obvious forms of peeking (i.e., the child got out of his or her seat or

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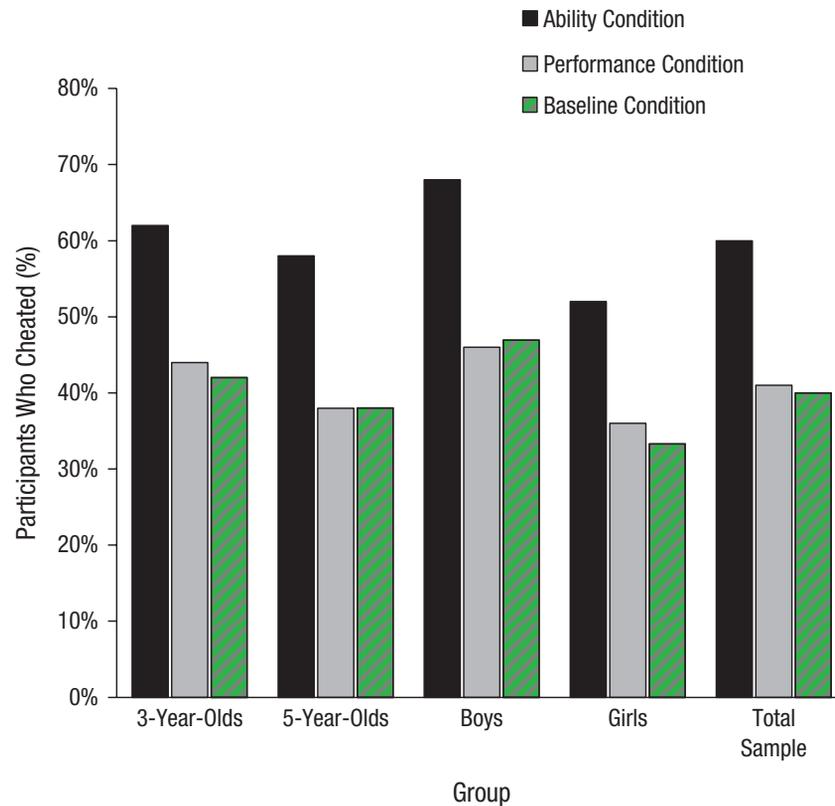


Fig. 1. Percentage of participants who cheated in each age group, within each gender, and overall, broken down by condition.

leaned over the barrier), were recorded by a hidden camera.

A pretest was used to assess basic numerical understanding, and the 3 children who failed (all 3-year-olds) completed an analogous color-guessing task instead (see the Supplemental Material available online for more details about the procedure, including the pretest). Because our analyses showed that the pattern of results did not differ when these 3 children who failed the pretest were excluded, we report results that included the data from all participants.

Results

Figure 1 shows the cheating rate for each age group and gender, broken down by condition. There was more cheating in the ability condition than in the other conditions overall, in each age group, and within each gender ($ps < .05$ for all chi-square tests).

We conducted a binary logistic regression analysis in which condition, age, gender, and their interactions were the predictors of cheating. The final model was significant, $\chi^2(3, N = 300) = 15.68, p = .001$, $-2 \log$ likelihood = 399.13, Nagelkerk $R^2 = .068$, and revealed

two significant effects. One was a main effect of condition (Wald = 10.12, $df = 2, p = .006$). A priori comparisons with the ability condition as the reference showed that cheating rates were significantly higher in the ability condition than in the performance and baseline conditions—performance condition: $\beta = 0.78, SE = 0.29$, Wald = 7.26, $df = 1, p = .007$, odds ratio = 2.19, 95% confidence interval (CI) = [1.24, 3.87]; baseline condition: $\beta = 0.82, SE = 0.29$, Wald = 7.93, $df = 1, p = .005$, odds ratio = 2.27, 95% CI = [1.28, 4.02]. The other significant effect was a main effect of gender; compared with girls, boys cheated more across the three conditions, $\beta = 0.55, SE = 0.24$, Wald = 5.39, $df = 1, p = .020$, odds ratio = 1.74, 95% CI = [1.09, 2.77]. No other effects were significant ($ps > .1$).

Cheating latency did not differ significantly across conditions ($ps > .1$).

Discussion

We examined how different forms of praise affect young children's moral behavior. The results showed that 3- and 5-year-olds who were praised for their ability on a single occasion were more likely to cheat than

their counterparts who were praised for their performance, or not praised at all.

It is likely that ability praise promotes cheating because, unlike performance praise, it is a generic form of language that implies the presence of a stable ability (e.g., smartness) that underlies performance (Cimpian et al., 2007). In our study, ability praise may have motivated children to cheat in order to uphold the positive trait assessment or the reputation of being smart (Zhao et al., 2017). Surprisingly, the effect was the same for 3-year-olds and 5-year-olds. This finding demonstrates that even 3-year-olds are sensitive to the difference between ability and performance praise, and that their understanding of ability overlaps with that of older individuals. This finding also raises questions about what kind of conceptual understanding is required for ability praise to have behavioral consequences.

Our findings demonstrate that ability praise can promote cheating in young children. More broadly, they build on evidence suggesting that subtle social cues have the power to shape children's thinking and behavior (Bryan, Master, & Walton, 2014) and suggest that researchers cannot rule out the importance of socialization effects in young children just because there are no obvious sources of direct teaching or reinforcement.

Action Editor

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Author Contributions

L. Zhao, K. Lee, and G. D. Heyman developed the study. L. Chen collected the data. L. Zhao performed the data analysis and drafted the manuscript. K. Lee and G. D. Heyman provided critical revisions. All the authors approved the final version of the manuscript for submission.

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Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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Open Practices



All data have been made publicly available via the Open Science Framework and can be accessed at <https://osf.io/p2z8a/>. The complete Open Practices Disclosure for this article can be found at <http://journals.sagepub.com/doi/suppl/10.1177/0956797617721529>. This article has received the badge for Open Data. More information about the Open Practices badges can be found at <https://www.psychologicalscience.org/publications/badges>.

References

- Bryan, C. J., Master, A., & Walton, G. M. (2014). "Helping" versus "being a helper": Invoking the self to increase helping in young children. *Child Development, 85*, 1836–1842. doi:10.1111/cdev.12244
- Cimpian, A., Arce, H. M. C., Markman, E. M., & Dweck, C. S. (2007). Subtle linguistic cues affect children's motivation. *Psychological Science, 18*, 314–316. doi:10.1111/j.1467-9280.2007.01896.x
- Dweck, C. S. (2007). The perils and promises of praise. *Educational Leadership, 65*(2), 34–39.
- Fu, G., Heyman, G. D., Qian, M., Guo, T., & Lee, K. (2016). Young children with a positive reputation to maintain are less likely to cheat. *Developmental Science, 19*, 275–283. doi:10.1111/desc.12304
- Heyman, G. D., Fu, G., Lin, J., Qian, M. K., & Lee, K. (2015). Eliciting promises from children reduces cheating. *Journal of Experimental Child Psychology, 139*, 242–248. doi:10.1016/j.jecp.2015.04.013
- Kamins, M. L., & Dweck, C. S. (1999). Person versus process praise and criticism: Implications for contingent self-worth and coping. *Developmental Psychology, 35*, 835–847. doi:10.1037//0012-1649.35.3.835
- Mueller, C. M., & Dweck, C. S. (1998). Praise for intelligence can undermine children's motivation and performance. *Journal of Personality and Social Psychology, 75*, 33–52. doi:10.1037/0022-3514.75.1.33
- Zhao, L., Heyman, G. D., Chen, L., & Lee, K. (2017). Telling young children they have a reputation for being smart promotes cheating. *Developmental Science*. Advance online publication. doi:10.1111/desc.12585