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Does children's moral compass waver under social pressure? Using the conformity paradigm to test preschoolers' moral and social-conventional judgments



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ABSTRACT

The current study tested whether preschoolers' moral and social-conventional judgments change under social pressure using Asch's conformity paradigm. A sample of 132 preschoolers ($M_{\text{age}} = 3.83$ years, $SD = 0.85$) rated the acceptability of moral and social-conventional events and also completed a visual judgment task (i.e., comparing line length) both independently and after having viewed two peers who consistently made immoral, unconventional, or visually inaccurate judgments. Results showed evidence of conformity on all three tasks, but conformity was stronger on the social-conventional task than on the moral and visual tasks. Older children were less susceptible to pressure for social conformity for the moral and visual tasks but not for the conventional task.

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Introduction

A large body of research guided by social domain theory (Smetana, 2006; Smetana, Jambon, & Ball, 2014; Turiel, 1983, 1998, 2006) has shown that children understand distinctions between moral issues

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(related to others' welfare, fairness, and rights) and social conventions (shared social norms in various social contexts). For example, by age 4, children consistently view moral transgressions as wrong, whereas social-conventional transgressions are interpreted as wrong only if rules or authority figures say so (Smetana & Braeges, 1990; Smetana et al., 2012). According to this theoretical framework, moral judgments are prescriptive and pertain to how people ought to relate to each other; they are not relative to or defined by the social context (Turiel, 1983). Although evidence of children's early understanding of moral prescriptions is robust, much less is known about whether children hold on to the prescriptive view when making judgments about moral and social-conventional issues in situations involving social pressure.

Children's judgments about different types of normative behavior may be more or less resistant to group pressure. If moral judgments are prescriptive and unalterable (Smetana, 2006; Smetana et al., 2012; Turiel, 1983, 2002, 2006), a judgment about hitting a classmate may be less easily influenced by group consensus than a judgment about a social norm such as not putting a toy back in its designated place. Past studies have not experimentally examined whether children's prescriptions of moral and social-conventional issues can be distinguished by the degree to which they are influenced by peer group judgment. In other words, it is not known whether children change their judgments when faced with social pressure to conform to atypical judgments about moral and social norms and whether change in judgments varies by domain and age. Addressing these questions will expand our understanding of young children's rule alterability and how peers influence normative judgments in young children.

Asch's (1956) classic conformity paradigm provides one way of testing the prescriptiveness of morality. This paradigm has been modified recently for research with young children. For example, using a modified Asch line length task with preschool children, Corriveau and Harris (2010) found that children as young as 3 and 4 years were susceptible to social pressure by adult confederates when making simple line length judgments. Consistent with this finding, 3- and 4-year-olds also showed higher conformist tendencies when making line length judgments in public settings than when their responses were unobserved (Corriveau, Kim, Song, & Harris, 2013). Similarly, preschoolers have demonstrated susceptibility to peer group consensus in animal size visual judgment based on pictures, indicating that peers also serve as a key social reference group as early as 4 years (Haun & Tomasello, 2011).

Young children have also been found to demonstrate conformity in the domain of conventional information and action. For example, when unfamiliar images are labeled in a way that conflicts with children's prior knowledge of conventional names or information, 3- and 4-year-olds tend to accept claims made by others (Bernard, Harris, Terrier, & Clément, 2015; Jaswal, 2004). Similarly, when categorizing objects by their labels, children also tend to conform (Bernard, Proust, & Clément, 2015; Corriveau et al., 2009; Fusaro & Harris, 2008). In terms of object function, Haun, Rekers, and Tomasello (2012) found that even 2-year-olds preferred to follow a group majority's (three individuals) action to open a box rather than a single informant's action (repeated three times), suggesting that young children are more likely to follow majority behavior. More recently, Seston and Kelemen (2014) also found that 3-year olds conformed to group consensus when endorsing statements about novel objects' functions. Moreover, 3- to 5-year-olds' preferences for copying an inefficient action of either a single model or a group were shown to differ by culture, with Chinese Americans showing stronger preferences to imitate the group than Caucasian Americans (DiYanni, Corriveau, Kurkul, Nasrini, & Nini, 2015).

In sum, various studies have demonstrated that children show socially motivated agreement with the unanimous majority against their own initial judgment. This phenomenon has been labeled as "strong conformity" by Haun and Tomasello (2011). So far, little research has used a modified Asch conformity paradigm to examine the effects of social pressure on moral and social-conventional judgments. We know of only two related studies, both with adult participants. Kundu and Cummins (2013) asked two groups of participants to verbally rate the permissibility of 12 moral dilemmas on a 7-point scale. The dilemmas included two categories: typically "permissible" judgments (e.g., pushing a switch of a trolley to cause the death of one person vs. five people) and typically "impermissible" judgments (e.g., killing one's oldest son to appease the leader of a clan on whose land one trespassed) (Greene, Morelli, Lowenberg, Nystrom, & Cohen, 2008). The control group ($n = 17$) rated the dilemmas

in the presence of the experimenter only, whereas the experimental group ($n = 16$) did the ratings in the presence of three male confederates who provided extreme responses (i.e., either 6 and 7 or 1 and 2) that were contrary to social norms. Although the sample size was small, the results showed significant group differences, suggesting that an Asch-like paradigm is useful in studying moral conformity.

More in line with social domain theory, [Lisciandra, Postma-Nilsenová, and Colombo \(2013\)](#) conducted a within-participants experiment with adults using 30 scenarios (10 each for moral, social, and decency violations). To obtain baseline data, participants were first asked to individually fill out a 40-item online questionnaire (30 short scenarios and 10 distractors) on a 7-point scale of approval from *strongly disapprove* to *strongly approve*. Two weeks later, participants were told that their online responses were lost due to server error and needed to be recollected. Participants were then assigned to one of two conditions. In the high social presence condition, an experimenter read aloud the scenarios from the same questionnaire (order reversed) and asked participants to indicate their responses verbally in the presence of three confederates; participants were always the second to last to respond. In the low social presence condition, participants were asked to select their answers on the computer screen in the same room as confederates (whose faces could not be seen but whose responses were shown on participants' computer screen simultaneously with the scenarios). For both conditions, confederates always provided responses that were two points above the mean of participants' baseline responses and in the opposite direction from the normative answer. Also relevant to the current study, [Lisciandra and colleagues](#) reported significant differences in total conformity between the high social presence and baseline conditions but not between the low social presence and baseline conditions. They also found that in the high social presence condition participants conformed significantly more to social violation scenarios than to moral violations, with decency violations in between. No significant domain effect was found in the low social presence condition.

Given that the preschool years are an important time for moral development, extending these findings to young children has both theoretical and practical implications. Exploring moral choices and their alterability during early childhood using a social conformity paradigm may help us to understand whether moral prescriptions hold despite peer influence. Knowing under what conditions young children alter their normative reasoning may help to shed light on how they deal with social conflicts (e.g., group vs. moral concerns) in peer group contexts.

Age is likely to be an important factor in conformity. With increasing age, children have more confidence in their own grasp of reality and consequently show lower rates of conformity to others. For example, one study found that children's capacity to make autonomous decisions and ignore incorrect suggestions made by others on visually unambiguous tasks increased from 3 to 17 years of age ([Walker & Andrade, 1996](#)). [Corriveau and colleagues \(2013\)](#) found significant age-related decreases in conformity even among preschoolers. [Corriveau and Harris \(2010\)](#) found a similar trend, although their results did not reach statistical significance, perhaps due to the small sample size. Given that children are also developing their understanding of morality and social conventions at these ages, children may feel more confident in their judgments about these issues as they get older and, thus, may be less susceptible to peers' opinions and peer pressure regarding these issues.

The current study addressed two questions about young children's early conforming behaviors. First, do children alter their prescriptive judgments regarding moral issues and descriptive judgments regarding social-conventional issues when faced with social pressure and, if so, how do judgments in these two domains compare with each other and with visual judgments? We hypothesized that because social conventions are defined as contextually relative and arbitrary, children would be more susceptible to social pressure and their conformity would be greater for social-conventional issues than for moral issues. A comparison with visual judgments should provide information regarding children's prescriptive views of moral issues. In other words, if the level of conformity on a moral judgment task is similar to or lower than that for visual judgments, it would suggest that children recognize the prescriptive nature of morality. The second research question concerns age differences in conformity in different domains. We hypothesized that conformity would be negatively associated with age across all domains, but especially in the moral domain. This hypothesis was based on existing evidence for age-related decreases in conformity and age-related development in moral prescriptivity ([Smetana, 1981, 2006; Smetana et al., 2012](#)).

Method

Participants

Participants were 132 American preschool children ($M_{\text{age}} = 3.83$ years, $SD = 0.85$, range = 2.77–6.25; 67 girls) from preschools and day-care centers in southern California of the southwestern United States. Background information on children's ethnicity was provided by parental report with the help of teachers. In total, 47 children were identified as Caucasian American, 46 as Asian American, 13 as Hispanic, 12 as mixed ethnicity, 5 as African American, 4 as Middle Eastern, and 4 as "other" (1 child's ethnicity was not indicated). Socioeconomic information about the children was not collected. However, the schools and centers served mostly middle- to upper middle-class families.

Materials

Moral and social-conventional judgments

Eight 8.5 × 11-inch colored drawings depicting familiar moral and social-conventional transgressions (taken from Smetana et al., 2012) were presented on a laptop computer in the same form as the series of lines in the line judgment condition. There were two moral transgressions pertaining to physical harm: hitting another child and shoving another child. There were two moral transgressions pertaining to psychological harm: teasing another child and calling another child names. The social-conventional transgressions were as follows: taking out a toy during snack time, wearing a bathing suit to day care, standing during story time, and a boy wearing nail polish. The film first presented a series of still shots of four moral transgressions and four social-conventional transgressions.

Consistent with previous studies using child-friendly videos instead of live confederates to create social pressure situations (Corriveau & Harris, 2010; Corriveau et al., 2013), this study presented group consensus via short videos that were shown on a laptop. The video featured two child informants who were of similar age as the target children and also gender-matched to the participant (either two male informants or two female informants for male and female participants, respectively). To represent the culturally diverse population of preschools in the area, the child informants included one Asian child and one White Hispanic child, both with neutral rather than extreme facial features. In an unpublished study on the effect of in-group and out-group confederates on visual judgment among Korean preschoolers (Kim, Song, Harris, & Corriveau, 2013), no differences were found between in-group and out-group peer confederates. It is also worth noting that no comments were made regarding the age, gender, or ethnicity of the child informants by participants throughout the procedure, suggesting that these features were not viewed as unusual. In each of these films, the two peer child informants wore the same white-color shirts and were shown viewing the same sets of moral and social-conventional transgression images that were used in the first video portion. For each image, the interviewer in the film (only voice, not visually present) asked, "Is it okay or not okay for the child to [moral/social-conventional transgression]? If you think it's okay to [moral/social-conventional transgression], then raise your hand." For all test trials, the same two children in the video then raise their hands simultaneously. Finally, the film shows the two informants with their hands by their sides.

Visual judgment

Four still frames of three black lines were used, with each line constructed out of black foam board measuring 2 cm in width and 0.5 cm thick (Corriveau & Harris, 2010; Corriveau et al., 2013). The longest (reference) lines were 30, 25, 20, and 15 cm, each shown with the two shorter lines that were 10% and 20% shorter than the reference. For example, the 30-cm reference for a triplet consisted of two shorter lines that were 27 and 24 cm in length. The placement of the longest reference line (left, right, or middle) varied randomly across trials.

The video created for this experiment first presented a series of still shots of three black lines. The two informants (gender-matched to the participant) simultaneously pointed to the same shorter line (either the medium or shortest line) in series of four takes. Finally, the film showed the two informants with their hands by their sides. Although previous conformity studies with preschoolers typically used

three adult or child informants to make up the majority group, pilot testing showed that two peer informants were enough to elicit conformity. Therefore, two peer informants were used in the current study. Indeed, the conformity rates (raw rates for ease of comparison) were in a similar range in our study (12% of trials for visual conformity, 16% of trials for moral conformity, and 21% of trials for social-conventional conformity) as in previous studies (18% of trials in [Corriveau & Harris, 2010](#); 10% of trials in [Corriveau et al., 2013](#)). The same confederates were used across the videos for the three domains. The order of the visual, moral, and social-conventional domain trials were counterbalanced across participants. Order effects were tested and found to be nonsignificant.

Procedure

Children were shown 10-min video clips presented on laptops, followed by interviews during which they were asked to answer basic judgment questions. Children received a total of 24 trials: 4 pretest trials and 4 test trials for each of the three conditions: moral judgment, social-conventional judgment, and visual judgment. All children participated in tasks for all three conditions; order of the conditions was counterbalanced across participants. A camcorder recorded the experiment to capture children's judgments.

Moral and social-conventional judgment task

First, children saw a series of short moral and social-conventional scenarios in which the moral or social-conventional "acceptability" of the behavior of the majority varied. To introduce the task, the experimenter pointed to the first moral scenario and asked, "See this picture? Is it okay or not okay for the child to [moral or social-conventional act]?" After the child responded, this pretest trial question was repeated for each of the remaining three moral/social-conventional scenarios. For children who did not correctly identify the moral and social-conventional transgressions as "not okay" for a given pretest trial, their data for the corresponding test trial were not used because for these trials children already agreed with the peer majority.

To introduce the test trials, the experimenter pointed to a still frame of the two peer informants and said, "Okay, well now I'm going to show you some boys/girls who are also going to be shown some pictures and asked if they think something is okay or not okay. After that, I'm going to ask you whether you think something is okay or not okay. Let's watch." The film featuring the two peer informants was presented. A voice in the film asked the same pretest questions and asked the informants in the video to raise their hands if they think that it is okay to [behavior]. The informants raised their hands simultaneously. The experimenter paused the video, showing a still frame of the informants with their hands lowered. Then the experimenter summarized the informants' response and asked participants a follow-up question: "Oh look. These two little boys/girls think that it is okay to [moral/social-conventional transgression]. What do you think? Is it okay or not okay for a child to [moral/social-conventional transgression]?" This procedure was repeated for each of the remaining three moral/social-conventional scenarios. For each trial/scenario, responses were scored as 0 (*not okay*) or 1 (*okay*). "Okay" responses across the 4 trials for each domain were summed to form the raw rates of conformity. Due to their skewed distribution, these rates were also arcsin-transformed for parametric data analysis.

Line judgment task

First, children participated in 4 *pretest trials*. To introduce the task, the experimenter pointed to the first still frame of three lines and said, "See these three lines? Can you show me the tallest one?" Children were invited to point to the line that they thought was the tallest, and their responses were recorded. This procedure was repeated for all pretest trials.

Second, children received 4 *test trials* in which they watched the second section of the film with gender-matched informants. To introduce the task, the experimenter pointed to a still frame of the two peer informants and said, "Oh look, here are two little girls/boys. These little girls/boys are first going to show us which line they think is tallest, and then I'm going to ask you what you think. Let's watch." The film featuring the two peer informants was presented: The informants always simultaneously pointed to one of the shorter lines. After the video, the experimenter pointed to the still frame of

the two peer informants with their hands by their sides and said, “They pointed to this line. What line do you think is tallest?” Children pointed to the line of their choice, and their response was recorded. This procedure was repeated for all test trials.

Following previous studies of young children’s conformity (Corriveau & Harris, 2010; Corriveau et al., 2013; Haun & Tomasello, 2011; Kim et al., 2013), the pretest and test trials used the same stimuli to avoid the potential confound of stimulus differences with conformity.

Results

Children’s conformity scores were calculated based on their responses after the conformity manipulation (i.e., viewing a given video) as compared with their responses during the pretest. If they failed to choose the “tallest” line in the visual judgment task or said that it was “okay” to do a given moral or social-conventional transgression during the pretest, the conformity paradigm did not apply to them for the given transgression (i.e., leaving no room for conformity). Those trials were excluded from further analyses. Overall, 7.58% of trials were excluded from the visual task, 7.95% of trials were excluded from the moral judgment task, and 14.07% of trials were excluded from the social-conventional task. Invalid trials in different domains did not come from the same participants; no child missed all of the pretest trials in all three domains; only 1 child failed all visual and social-conventional pretests, and 4 children failed all moral and social-conventional pretests.

Following the procedures of past studies of preschoolers’ conformity (Corriveau & Harris, 2010; Corriveau et al., 2013), the dependent variable, conformity, was calculated as the mean proportions of trials on which children conformed (with an arcsin transformation) and a dichotomous variable indicating whether the participant conformed at least once out of 4 trials. To be classified as conforming in the visual task, children needed to have selected the same line as their peers. Preliminary analyses showed no gender differences, so gender was not included in subsequent analyses.

Domain differences

Fig. 1A displays conformity rates (arcsin-transformed scores) by domain. The same set of analyses was also conducted with the raw rates, yielding virtually the same results. A series of paired-samples *t*-tests were conducted to test the values against zero (i.e., no change in opinion [after excluding the prescreened trials]) and, thus, no evidence of conformity) and to compare types of judgments (moral, social-conventional, and visual). These *t*-tests showed that all values were significantly higher than zero ($t_s = 4.53\text{--}7.02$, $p_s < .001$), showing that children’s conformity scores exceeded chance expectation.

To examine domain differences, paired *t*-tests were used instead of repeated measures analysis of variance (ANOVA) in order to retain the maximum number of participants for each comparison (because different participants missed pretest trials in different domains, as mentioned earlier). There were statistically significant differences between moral and social-conventional judgments, $t(118) = -2.52$, $p = .013$, and between visual and social-conventional judgments, $t(110) = -2.79$, $p = .006$, with preschoolers conforming to their peers’ judgments more often on social-conventional transgressions than on moral and visual judgments. As indicated in Fig. 1A, there was no statistically significant difference in conformity between visual and moral judgments. Similar results were found when looking at the percentages of preschoolers who conformed at least once, as indicated in Fig. 1B. McNemar tests were conducted to test whether the percentage of children who conformed at least once varied by judgment domain. McNemar tests revealed a significant difference in conformity between moral and social-conventional judgments ($p < .001$) as well as between visual and social-conventional judgments ($p = .001$). These results confirmed the analyses based on the mean proportions (arcsin-transformed).

Two additional analyses were conducted to see the robustness of the results by subtypes of moral judgments and over time. We used a paired *t*-test to compare conformity rates for the 2 trials pertaining to physical harm (hitting and shoveling) and the 2 trials pertaining to psychological harm (i.e., teasing and calling names). There was no significant difference, $t(114) = 1.47$, *ns*. To examine whether

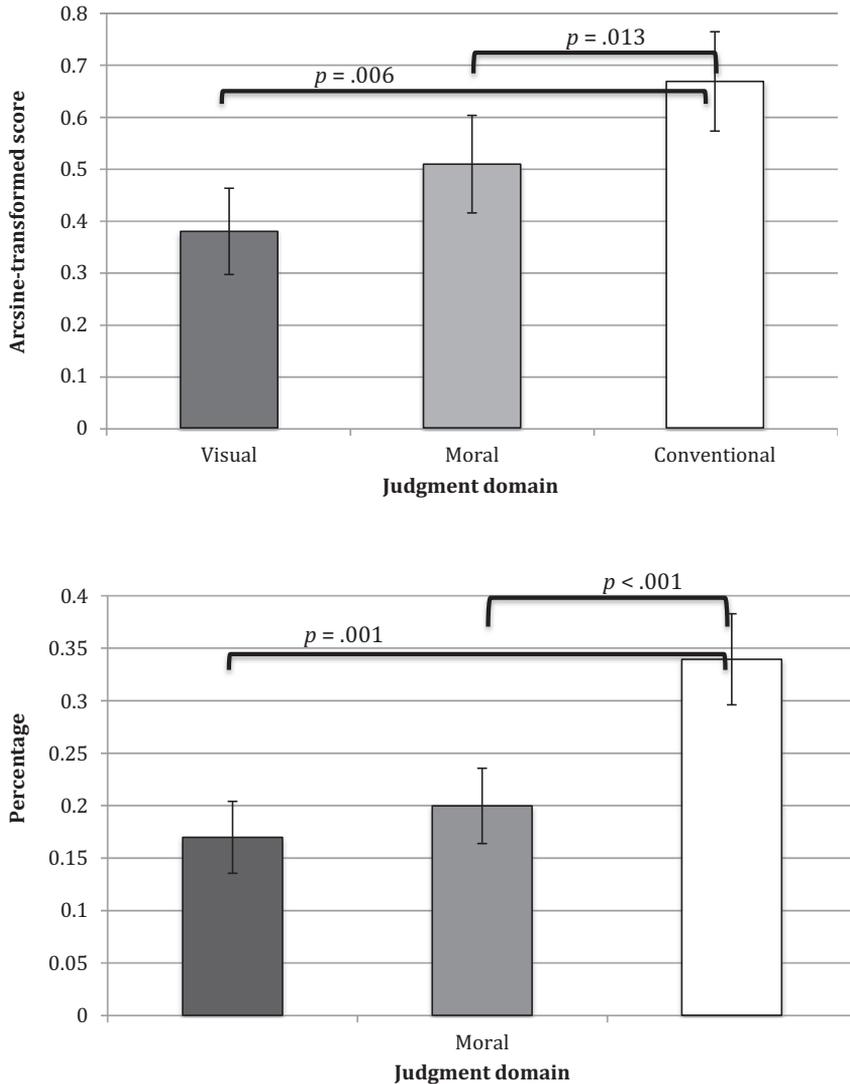


Fig. 1. Conformity rates (and standard errors) by judgment domain (visual, moral, or social-conventional). (A) Proportion of trials (arcsine-transformed) conformed by judgment type. (B) Percentage of participants who conformed at least once by judgment type.

children's conformity level changed across the 4 trials (perhaps as a result of demand characteristics of the setting) within each domain, a repeated measures ANOVA using order of the trials as the repeated measure was conducted for each domain. Results showed no significant differences for any of the three domains ($F < 1.00$, *ns*), indicating that the experimental repetition of the conformity information did not influence children's judgments.

Age differences

Age was found to be significantly correlated with the mean proportion of trials in which children conformed (with an arcsin transformation) for the visual and moral domains ($r_s = -.20$ and $-.19$,

respectively, $ps < .05$) and marginally correlated for the social-conventional domain ($r = -.16, p = .08$). Point-biserial correlations between age and whether children conformed at least once yielded the same results for visual judgments ($r = -.22, p < .05$), moral judgments ($r = -.20, p < .05$), and social-conventional judgments ($r = -.11, ns$). Domain differences in correlation coefficients were tested using Fisher's r -to- Z transformation. No significant differences were found. An overall age affect across domains was confirmed by a more robust repeated measures ANOVA but using only participants who had complete data for all three domains ($n = 106$). Median split (50.35 months) was used to create two age groups. Confirming the results reported above, age and domain showed significant main effects, $F(1, 104) = 7.407, p = .008$ and $F(1, 104) = 42.785, p < .001$, respectively, but their interaction was not significant, $F(1, 104) = 0.045, ns$.

Ethnic differences

Finally, to examine whether the domain differences were consistent across ethnic groups, a 3 (Domain: visual, moral, or conventional) \times 3 (Ethnicity: White, Asian, or other) repeated measures ANOVA was conducted. Because sphericity was not met, we used the Huynh–Feldt test. Results showed no significant ethnic differences in conformity, $F(2, 107) < 1.0, ns$, and no ethnicity by domain interaction, $F(3.5, 187.4) = 1.44, ns$. As reported earlier, the domain effect was significant, $F(1.7, 187.4) = 4.62, p = .014$. Similarly, the proportion of children who conformed at least once did not vary across ethnic groups for visual judgments, $\chi^2(2, N = 122) = 0.90, ns$, moral judgments, $\chi^2(2, N = 127) = 0.95, ns$, and social-conventional judgments, $\chi^2(2, N = 120) = 0.22, ns$.

Discussion

Past research has shown that children understand that moral issues (pertaining to others' welfare, fairness, and rights) are not dependent on personal opinion or social norms. This has been shown to be distinct from more arbitrary, contextually relative social conventions (Nucci, 2001; Smetana, 2006; Smetana et al., 2014; Turiel 1983, 2006). The current study provided a novel test of preschoolers' understanding by comparing their conformity to group consensus across moral, social-conventional, and visual tasks. Preschoolers were found to show evidence of conformity in all three domains, but conformity was significantly greater for social-conventional stimuli than for moral and visual stimuli. Age was negatively and significantly correlated with levels of conformity regarding the moral and visual domains, but no gender or ethnic effects were found.

As hypothesized, the extent to which children altered their judgments of the acceptability of moral transgressions (or conformity to social pressure) did not differ from that found for visual judgments. It is also interesting to note that children's judgments did not differ between psychological and physical harm, although this result needs to be interpreted with caution because only two scenarios were used for each type of harm. Overall, our evidence provides strong support for young children's prescriptive view of morality. Moral prescriptivity was not "absolute" (not alterable or zero conformity). It was at least as strong, however, as children's belief in the accuracy of their own visual judgments. It is possible that children are less readily swayed if they have already detected a strong consensus about a given judgment, but this explanation does not fully account for the current findings because children do adhere to and enforce social-conventional norms once they are learned. According to social domain theory (Smetana, 2006; Smetana et al., 2014; Turiel, 1983, 1998, 2006), morality develops from observations and direct experiences of harm to others and unfairness. Young children apply moral concepts with little nuance or flexibility (much like visual judgments), but with age their understanding of complex, multifaceted moral situations (e.g., the positive motivations of well-intended actors; Jambon & Smetana, 2014) increases. Future research should examine mechanisms underlying the apparent strong sense of morality at this young age.

Consistent with our hypothesis, conventional issues were more subject to peer pressure than were moral issues. This finding is consistent with past research showing that young children are less flexible about moral issues than about social-conventional issues (Smetana et al., 2012). These results extend previous research on early moral development (Smetana & Braeges, 1990; Smetana et al., 2012) with a

new experimental paradigm. More broadly, these results also shed light on the cultural-evolutionary models about the importance of conformist transmission in different domains of human social learning (Henrich, 2001; Henrich & Boyd, 1998). Judgments and behaviors that violate moral rules should be more resilient against conformity effects because of their greater potential in harming others and damaging social bonding and cooperation within the group. Furthermore, social-conventional norms can change over time, even if slowly. For example, one scenario included in the test was about boys wearing nail polish, for which there may be less consensus today than before. Although we retained the item for the integrity of the test, future research should consider adjusting such items.

It is worth noting that social pressure shifted the judgment of only some children, not all children. Many children remained autonomous regarding their own judgments of social-conventional issues even when peers made unconventional social judgments. Such results are consistent with what is typically found in adults (Asch, 1956; Moscovici, 1980; Sherif, 1936) and preschoolers (Clément, Koenig, & Harris, 2004; DiYanni, Nini, Rheel, & Livelli, 2012; Lane, Harris, Gelman, & Wellman, 2014), reflecting the strength of perceptual reality when it comes to visual accuracy and the prescriptivity of norms when it comes to making moral and social judgments. Some researchers have even reported that some children tried to question or correct an adult informant (Koenig & Echols, 2003), suggesting strong autonomy in some children. Future research should explore factors that may account for such individual differences, including children's independence, inhibitory control, parenting practices, and teacher influences, all of which have been linked to children's ability to handle social conflicts (Chen, Fein, Killen, & Tam, 2001; Hart, Ladd, & Burlinson, 1990; Weiss, Dodge, Bates, & Pettit, 1992). In addition, future research should also consider including a condition that uses different stimuli for the pretest and test trials to examine the effects of repeated stimuli and questioning, which may lead to either decreased conformity for some children due to the commitment effect (Tetlock, Skitka, & Boettger, 1989; Whyte, 1993) or increased conformity for others due to demand characteristics (Adair, 1972).

Age was a significant correlate of conformity regarding visual and moral tasks and a marginally significant correlate of social-conventional issues, with younger children conforming at higher rates than older children. These results are consistent with prior studies in the visual domain (Corriveau & Harris, 2010; Corriveau et al., 2013; Walker & Andrade, 1996) and extend the finding to moral judgments, supporting previous research indicating that moral judgments are developing at this young age (Smetana & Braeges, 1990; Smetana et al., 2012). Future research can further explore whether this age-related finding was due to increasing confidence in one's own judgments (i.e., clearer moral understanding), merely increasing willingness to resist social pressure (i.e., more autonomous), or a combination of both. In the domain of epistemic trust, Lane and Harris (2015) recently found that age differences in susceptibility to expert advice could be accounted for by age differences in initial confidence. Similarly, initial confidence in one's own judgments or intuitions underlies age differences in children's susceptibility to others' contradictory testimonies (Chan & Tardif, 2013; Lee, Cameron, Doucette, & Talwar, 2002).

In summary, this study drew on previous research on conformity and social domain theory to show that children's sensitivity to social pressure varied by judgment domain and decreased with age during the preschool years. Results suggest that young children respond to social pressure in all domains, but less so for moral and visual events than for social-conventional events. At the same time, the young participants in this study did not uniformly follow "group consensus," even for social-conventional issues, thereby showing independence in their judgments. Results of this study should help us to better interpret and understand children's sensitivity to social pressures when dealing with moral and social conflicts. Understanding the factors that lead preschool children to be responsive to peers' judgments about moral and social-conventional issues could help us to thwart conformity to social pressure, during the subsequent childhood years, to engage in morally unacceptable behaviors such as cheating and bullying.

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References

- Adair, J. G. (1972). Demand characteristics or conformity? Suspiciousness of deception and experimenter bias in conformity research. *Canadian Journal of Behavioural Science*, 4, 238–248.
- Asch, S. E. (1956). Studies of independence and conformity: A minority of one against a unanimous majority. *Psychological Monographs*, 70, 1–70.
- Bernard, S., Harris, P., Terrier, N., & Clément, F. (2015). Children weigh the number of informants and perceptual uncertainty when identifying objects. *Journal of Experimental Child Psychology*, 136, 70–81.
- Bernard, S., Proust, J., & Clément, F. (2015). Four- to six-year-old children's sensitivity to reliability versus consensus in the endorsement of object labels. *Child Development*, 86, 1112–1124.
- Chan, C. C. Y., & Tardif, T. (2013). Knowing better: The role of prior knowledge and culture in trust in testimony. *Developmental Psychology*, 49, 591–601.
- Chen, D. W., Fein, G. G., Killen, M., & Tam, H. P. (2001). Peer conflicts of preschool children: Issues, resolution, incidence, and age-related patterns. *Early Education and Development*, 12, 523–544.
- Clément, F., Koenig, M., & Harris, P. (2004). The ontogenesis of trust. *Mind & Language*, 19, 360–379.
- Corriveau, K., & Harris, P. (2010). Preschoolers (sometimes) defer to the majority in making simple perceptual judgments. *Developmental Psychology*, 46, 437–445.
- Corriveau, K. H., Harris, P. L., Meins, E., Fernyhough, C., Arnott, B., Elliott, L., ... De Rosnay, M. (2009). Young children's trust in their mother's claims: Longitudinal links with attachment security in infancy. *Child Development*, 80, 750–761.
- Corriveau, K., Kim, E., Song, G., & Harris, P. (2013). Young children's deference to a majority varies by culture and judgment setting. *Culture & Cognition*, 13, 367–381.
- DiYanni, C. J., Corriveau, K. H., Kurkul, K., Nasrini, J., & Nini, D. (2015). The role of consensus and culture in children's imitation of inefficient actions. *Journal of Experimental Child Psychology*, 137, 99–110.
- DiYanni, C., Nini, D., Rheel, W., & Livelli, A. (2012). I won't trust you if I think you're trying to deceive me: Relations between selective trust, theory of mind, and imitation in early childhood. *Journal of Cognition and Development*, 13, 354–371.
- Fusaro, M., & Harris, P. L. (2008). Children assess informant reliability using bystanders' non-verbal cues. *Developmental Science*, 11, 771–777.
- Greene, J. D., Morelli, S. A., Lowenberg, K., Nystrom, L. E., & Cohen, J. D. (2008). Cognitive load selectively interferes with utilitarian moral judgment. *Cognition*, 107, 1144–1154.
- Hart, C. H., Ladd, G. W., & Burlison, B. R. (1990). Children's expectations of the outcomes of social strategies: Relations with sociometric status and maternal disciplinary styles. *Child Development*, 61, 127–137.
- Haun, D. B., Rekers, Y., & Tomasello, M. (2012). Majority-biased transmission in chimpanzees and human children, but not orangutans. *Current Biology*, 22, 727–731.
- Haun, D. B. M., & Tomasello, M. (2011). Conformity to peer-pressure in preschool children. *Child Development*, 82, 1759–1767.
- Henrich, J. (2001). Cultural transmission and the diffusion of innovations: Adoption dynamics indicate that biased cultural transmission is the predominate force in behavioral change and much of sociocultural evolution. *American Anthropologist*, 103, 992–1013.
- Henrich, J., & Boyd, R. (1998). The evolution of conformist transmission and the emergence of between-group differences. *Evolution and Human Behavior*, 19, 215–242.
- Jambon, M., & Smetana, J. G. (2014). Moral complexity in middle childhood: Children's evaluations of necessary harm. *Developmental Psychology*, 50, 22–33.
- Jaswal, V. K. (2004). Don't believe everything you hear: Preschoolers' sensitivity to speaker intent in category induction. *Child Development*, 75, 1871–1885.
- Kim, E. B., Song, H., Harris, P. L., & Corriveau, K. H. (2013). The influence of culture and parenting on children's deference to others: Evidence from South Korea. In *Paper presented at the Society for Research in Child Development biennial meeting, Seattle, WA*.
- Koenig, M. A., & Echols, C. H. (2003). Infants' understanding of false labeling events: The referential roles of words and the speakers who use them. *Cognition*, 87, 179–208.
- Kundu, P., & Cummins, D. D. (2013). Morality and conformity: The Asch paradigm applied to moral decisions. *Social Influence*, 8, 268–279.
- Lane, J. D., & Harris, P. L. (2015). The roles of intuitions and informants' expertise in children's epistemic trust. *Child Development*, 86, 919–926.
- Lane, J. D., Harris, P. L., Gelman, S. A., & Wellman, H. M. (2014). More than meets the eye: Young children's trust in claims that defy their perceptions. *Developmental Psychology*, 50, 865–871.
- Lee, K., Cameron, C. A., Doucette, J., & Talwar, V. (2002). Phantoms and fabrications: Young children's detection of implausible lies. *Child Development*, 73, 1688–1702.
- Lisciandra, C., Postma-Nilsenová, M., & Colombo, M. (2013). Conformality: A study on group conditioning of normative judgment. *Review of Philosophy and Psychology*, 4, 751–764.
- Moscovici, S. (1980). Toward a theory of conversion behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 13, pp. 209–239). New York: Academic Press.
- Nucci, L. P. (2001). *Education in the moral domain*. Cambridge, UK: Cambridge University Press.
- Seston, R. S., & Kelemen, D. (2014). Children's conformity when acquiring novel conventions: The case of artifacts. *Journal of Cognition and Development*, 15, 569–583.
- Sherif, M. (1936). *The psychology of social norms*. New York: Harper.
- Smetana, J. (1981). Preschool children's conceptions of moral and social rules. *Child Development*, 52, 1333–1336.
- Smetana, J. G., & Braeges, J. L. (1990). The development of toddlers' moral and conventional judgments. *Merrill-Palmer Quarterly*, 36, 329–346.
- Smetana, J. G., Jambon, M., & Ball, C. (2014). The social domain approach to children's moral and social judgments. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (2nd ed., pp. 23–45). New York: Taylor & Francis.

- Smetana, J. (2006). Social-cognitive domain theory: Consistencies and variations in children's moral and social judgments. In M. Killen & J. Smetana (Eds.), *Handbook of moral development* (pp. 119–153). Mahwah, NJ: Lawrence Erlbaum.
- Smetana, J. G., Rote, W., Jambon, M., Tasopoulos-Chan, M., Villalobos, M., & Comer, J. (2012). Developmental changes and individual differences in young children's moral judgments. *Child Development, 83*, 683–696.
- Tetlock, P. E., Skitka, L., & Boettger, R. (1989). Social and cognitive strategies for coping with accountability: Conformity, complexity, and bolstering. *Journal of Personality and Social Psychology, 57*, 632–640.
- Turiel, E. (1983). *The development of social knowledge: Morality and convention*. Cambridge, UK: Cambridge University Press.
- Turiel, E. (1998). The development of morality. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology* (Vol. 3, pp. 863–932). New York: John Wiley.
- Turiel, E. (2002). *The culture of morality: Social development, context, and conflict*. Cambridge, UK: Cambridge University Press.
- Turiel, E. (2006). The development of morality. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology, Vol. 3: Social, emotional, and personality development* (6th ed., pp. 789–857). New York: John Wiley.
- Walker, M., & Andrade, M. (1996). Conformity in the Asch task as a function of age. *Journal of Social Psychology, 136*, 367–372.
- Weiss, B., Dodge, K. A., Bates, J. E., & Pettit, G. S. (1992). Some consequences of early harsh discipline: Child aggression and a maladaptive social information processing style. *Child Development, 63*, 1321–1335.
- Whyte, G. (1993). Escalating commitment in individual and group decision making: A prospect theory approach. *Organizational Behavior and Human Decision Processes, 54*, 430–455.