Children's evaluations of rule violators

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A R T I C L E   I N F O

A B S T R A C T

Children show remarkable sensitivity to others' conformity to conventional norms. The present research examined how this sensitivity is reflected in preschool-aged (4- and 5-year-old; N = 45) and young school-aged (7- and 8-year-old; N = 45) children's evaluations of people who violate rules. In two studies, children were made to believe they were playing a game against real, online opponents. Opponents either conformed to or violated the rules of the game, and their actions produced either positive or negative outcomes for the child. Children evaluated each opponent on a set of interaction, affiliation, and learning questions. Preschool-aged children's evaluations primarily depended on whether or not people violated the rules, regardless of the circumstances of their violations. Young school-aged children's social evaluations, however, were also influenced by the helpfulness or harmfulness of the violators' actions.

Several lines of research demonstrate that young children are sensitive to violations of social norms. Preschool-aged children expect people to follow norms (Kalish, 1998), object when they do not (Josephs, Kushnir, Grafenhain, & Rakoczy, 2015), and can provide rationales for why one should conform to different kinds of norms (Smetana, 1981; Turiel, 1983). One value of this early sensitivity to social norms is that it helps children adapt their own behavior to social expectations. Another potential value is that understanding social norms may guide children's expectations and evaluations of other people. Someone who violates a social norm or rule may be perceived as a poor social partner, unpredictable, or unreliable depending on the particular norm and the circumstances of the violation. The current paper explores young children's evaluations of people who violate simple conventional norms (e.g., game rules). We ask whether children respond the same way to all violators, or whether their social judgments depend on ancillary qualities of the violations, such as whether they bring about desirable or undesirable outcomes for the child (e.g., winning or losing).

1. Background

What is wrong with violating a social norm or rule? Research in moral development has emphasized that there are different kinds of norms with different justifications for conformity (Smetana, 2006; Turiel, 1983). The current study focuses on violations of conventional norms, which are particularly complex cases because there is nothing inherently positive or negative about the actions they proscribe or require. For example, absent the rules, there is no reason to identify moving a game piece one versus two spaces as right or wrong. In contrast, moral norms reflect abstract principles of harm and justice and thus have objective value. It is wrong to poke another player in the eye with a game piece, even if the game's rules don't

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explicitly forbid it (Turiel, 1998). A large body of research demonstrates young children's understanding of the fundamental conceptual differences between conventional and moral norms: children judge conventional norms to be relatively alterable, contingent on the rules, and context-relative, at least in comparison to moral norms (Nucci, 1981; Smetana, 1981; Killen, 1991). Children do, however, also appreciate the normative constraints (i.e., prescriptive force) of conventions. Preschoolers react strongly to breaches of conventional rules and tend to enforce or teach the rules to those who violate them (Rakoczy, Warneken, & Tomasello, 2008; Göckeritz, Schmidt, & Tomasello, 2014).

The majority of prior research on children's understanding of conventional violations has focused on their judgments and reactions to the violations themselves (Smetana, 1985; Rakoczy et al., 2008). In the current research, we ask children to evaluate the *people* who violate conventional rules. Although children's strong reactive attitudes to conventional violations signal their sensitivity to conventions, it is not obvious how their reactions would affect their evaluations of violators. For example, one can object to a rule violation without thinking the violator is a bad person or a poor social partner. Conversely, there are many offenses that may not warrant protest, but still affect interaction (e.g., violating linguistic conventions; Birch, Vauthier, & Bloom, 2008). In the next section, we consider the potential effects of conventional violations on social evaluations and then discuss particular types of evaluations that may be affected by one's fidelity to conventional rules.

2. Evaluations of rule violators

People who knowingly violate moral norms are considered mean or dangerous, and generally to be avoided. Evaluations of people who violate conventional norms, however, are more complicated because conventional violations often have no significance beyond being a violation. For example, no harm comes from using the dessert fork during the salad course. In other cases, however, conventional violations produce negative consequences. Even if the action itself is not problematic, it may have undesirable outcomes. If a basketball player runs with the ball, the other team gains possession. Early school-aged children recognize this aspect of conventional violations: In their justifications for the wrongness of violations, they often refer to the likelihood of consequences, such as social condemnation, external punishment or failures of social coordination (Davidson, Turiel & Black, 1983). Additionally, conventional violations may signal an objectionable attitude or negative intention on the part of the violator. For example, a person who wears shorts to a wedding may be indicating disrespect or rudeness (Turiel, 1978).

In some situations, however, conventional violations do not produce negative outcomes nor are they motivated by ill intentions. In the current study, children evaluate someone whose violation yields positive outcomes and is seemingly produced with benevolent intentions. Why might a child negatively evaluate this type of violator? One rationale is that adhering to conventions is an important signal of group membership (Henrich & Gil-White, 2001). In fact, children tend to prefer members of outgroups who conform to ingroup norms over members of their ingroup who violate those norms (Abrams & Rutland, 2008). Flouting group norms may be interpreted as purposeful rejection of the group's standards, and may signal that a person is likely to violate other conventions valued by the group (Blakemore, 2003). Additionally, from an adult's perspective, individuals who violate conventional norms, regardless of the subsequent outcome or motives, are thought to be difficult to coordinate with and generally unpredictable (Lewis, 1969; Skyrms, 1990). Moreover, from a child's perspective, individuals who violate conventional norms may be perceived as poor learning sources or unreliable models for learning other types of social information (Rakoczy, Warneken, & Tomasello, 2009; Zmyj, Buttelmann, Carpenter, & Daum, 2010). Thus, there are several tenable reasons why a child would assign negative evaluations to rule violators irrespective of the outcomes associated with the violation.

In the current research, we examine the developmental trajectory of children's evaluations of rule violators by testing both preschool-aged (4- to 5-year-olds) and young school-aged children (7- to 8-year-olds). The selection of these age groups was motivated by prior research suggesting a shift from preschool-aged children's attention to general, normative information to young school-aged children's increased attention to specific, psychological information (see Miller, 1986; Aboud, 1988; Kalish, 2012). For example, Helwig and colleagues presented children with a game in which rules incorporated psychological harm (e.g., "smart, smart, stupid" rather than "duck, duck, goose"). Older children tended to evaluate actions (e.g., "Is it OK for Sally to call her stupid?") based on psychological criteria (e.g., hurting a player's feelings) whereas younger children evaluated actions based on contextual features (e.g., whether or not the rules of the game legitimized the action; Helwig, Hildebrant, & Turiel, 1995). Similarly, research on "white lies" demonstrates that older children are more likely than younger children to tell white lies and judge them as acceptable when there are prosocial intentions motivating the lie (Talwar, Murphy, & Lee, 2007; Heyman, Sweet, & Lee, 2009; Xu, Boa, Fu, Talwar, & Lee, 2010). Both these lines of work suggest that younger children may focus more on the mere presence of a rule violation whereas older children may pay more attention to the consequence or motives of the violation.

This paper will investigate three types of evaluations that children could make after observing whether or not someone violates a simple conventional norm (e.g., a game rule). The first type of evaluation we ask children to make is whether or not they would want to play additional games with the opponent. A child might not consider someone with a history of norm violating to be a good partner for games or other norm-governed activities because they are unpredictable or unlikely to follow such norms in the future (Skyrms, 1990). Alternatively, the outcome of the game (i.e., whether the child wins or loses) may drive children's willingness to play future games with the opponent.

Children could also evaluate a rule violator as a poor social partner, even outside the context of game playing. In the current research, we measure this type of evaluation by asking whether children would want to share with the opponent,

whether they would want to be friends with the opponent, and whether they perceive the opponent to be nice or mean. Prior research on children's social affiliation suggests that children prefer to associate with individuals who conform to their group's linguistic conventions (Kinzler, Dupoux, & Spelke, 2007), but also with those who have a history of prosociality (Olson & Spelke, 2008; Kinzler & DeJesus, 2013). Thus, it's unclear whether children's affiliative evaluations in the current research will focus primarily on others' conformity to conventions or to the positive or helpful outcomes their actions produce.

The third kind of evaluation we consider is whether a child would want to learn the rules to a new game from their opponent. Prior research on children's selective trust has demonstrated that young children prefer to learn new words from someone who has followed linguistic conventions (Koenig & Harris, 2005; Wohlgelernter, Diesendruck, & Markson, 2010) and are less likely to learn conventional information in one domain from people who have demonstrated unconventional behavior in another domain (Birch et al., 2008). Thus, we hypothesize that violations will strongly influence children's evaluations of whom they would want to learn from. Note that each of the types of evaluations we measure are potentially dissociable from each other. For example, a rule violator who displays helpful behaviors may be worth affiliating with, but a poor source for learning social information.

2.1. Present studies

The remainder of this paper reports the results of two experiments assessing children's evaluations of actors who violate or conform to the rules of a novel game. The particular violation we chose to examine was a game rule because young children are able to quickly learn such rules and tend to show strong fidelity to them (Rakoczy et al., 2008; Rakoczy, 2008). Moreover, the context of a game provides a clear goal structure for evaluating positive and negative outcomes for the child: Winning the game is positive, losing is negative. While clearly games are a special context of social interaction, they may not be unrepresentative. Games are a somewhat more formalized and explicit setting, but many, if not all, social interactions also involve coordinating around shared norms (see Rakoczy, 2007).

In these experiments, we attempted to isolate the specific influence of following and violating the rules. For example, Experiment 1 dissociated rule conformity from outcomes: Sometimes an opponent's violation produced a positive outcome for the child and sometimes a negative outcome. This allowed us to ask whether evaluations depend on the violation itself or on the outcome it produced. In Experiment 2, we present children with violations that are unsuccessful. Does breaking the rules without affecting the outcome of the game affect children's evaluations in the same ways or different ways as when rule violations do affect the outcome of the game?

2.2. Experiment 1

In Experiment 1, we examined how children evaluate actors who either conform to or violate conventional rules of a simple game. We manipulated the outcome of the game (e.g., whether the child won or lost) and whether or not the opponent followed or violated the rules. Although we characterize the conditions in terms of outcomes, it is also likely that children were drawing inferences about the opponents' motives (e.g., were they trying to help or harm the participant's chances of winning?). Because we were not attempting to assess the independent contributions of intention and outcome, we did not explicitly provide rationale for the rule violators' actions. However, whether they intended them to be so or not, the rule violators' actions did in fact help or hurt the child's chances of winning the game. If children attend primarily to the outcomes of rule violations, they might positively evaluate someone who broke the rules and helped them win. However, if children evaluate others based on their rule conformity alone, they might negatively evaluate anyone who broke the rules, regardless of whether the violation helped or hurt their chances of winning the game.

2.3. Participants

Participants included 25 four and five year-olds (14 female; M age = 4.9 years, range = 4.0-5.8 years) and 25 seven and eight-year olds (12 female; M age = 8.1 years, range = 7.1 years to 8.9 years) recruited from daycares and after school programs serving a predominately middle class population in a Midwestern city. The participant demographics reflected that of the city: 80% Caucasian, 8% Asian, 8% Black and 4% other minorities.

2.4. Materials and design

The experiment was administered on a tablet and took approximately fifteen minutes to complete. The game used in the experiment consisted of a spinner with the numbers one through four and a game board that both the participant and the opponent could move across (see Fig. 1). To activate the spinner, the participant touched a button next to the spinner and then used their finger to slide across the board the corresponding number of spaces. The first player to reach the final square on the board won the game. Once the first player won, the game ended without the second player reaching the goal.

For each of the four trials, participants saw a photograph of a child opponent who was matched in age and gender to the child participant. All of the children in the photographs were Caucasian. There was a small speech bubble next to the opponent, which was read aloud by the experimenter and which allowed the opponent to communicate with the participant throughout the game. There were four types of opponents and outcomes. Two of the opponents followed the rules of the
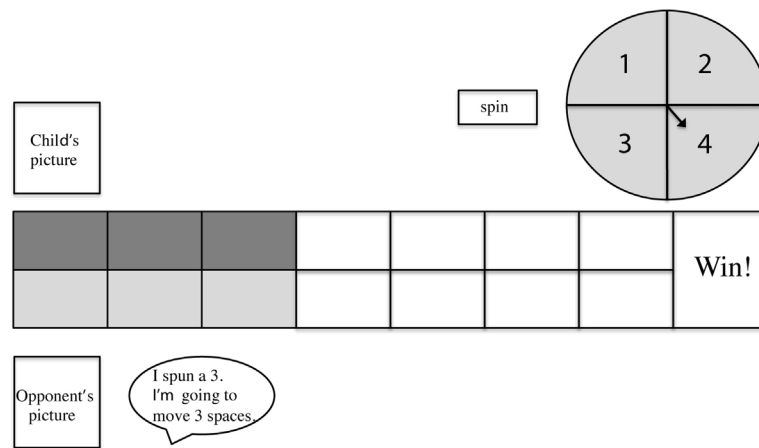
Fig. 1. Experimental Setup for all conditions in Experiment 1 and Experiment 2.

Table 1
Dependent Measures.

Order	Question Type	Question
Question 1	Manipulation check	"Did [opponent] follow the rules of the game?
Question 2	Play	"Would you want to play this game with [opponent] again?"
Question 3	Play	"Would you want to play a different game with [opponent] again?
Question 4	Affiliation	"If you had candy to share, would you share with [opponent]?"
Question 5	Affiliation	"Would you want to be friends with [opponent]?"
Question 6	Affiliation	"Do you think [opponent] is mostly nice or mostly mean?"
Question 7	Selective Learning	"Would you want [opponent] to teach you the rules to a new game?"

game, which in one case resulted in the participant winning and in the other case resulted in the participant losing. The other two opponents violated the rules of the game either by moving fewer spaces than what the spinner dictated (i.e., a helpful rule violator), which resulted in the participant winning, or moving more spaces than what the spinner dictated (i.e., a harmful rule violator[1]), which resulted in the participant losing. All participants played with each of the four types of opponents, but the order of the opponents was randomized across participants. The photographs and names used for the opponents were counterbalanced across the four trials.

After playing with each opponent, the participant answered seven questions, in a fixed order, about the opponent (see Table 1). We grouped these questions into three question types, which we later used to organize our analyses. The participant could answer 'yes,' 'maybe,' or 'no.' The first question was whether or not the opponent violated the rules of the game, which served as a manipulation check. The following two questions asked about playing games with the opponent in the future. These items likely reflect children's judgment of the opponent as well as their expectations about winning or losing against the opponent in the future. The final four items asked about more general social affiliation. These questions assessed children's feelings toward the opponent outside the game context (i.e., interactions that did not involve winning or losing).

2.5. Procedure

At the beginning of the experiment, the experimenter told participants that they would be playing a game against four other children who were the same age and same gender as the participant (e.g., "four other five year-old girls"). The experimenter then explained that the other children had already learned the rules of the game and would be playing at home, but that the participant would be able to see the other children's responses on the screen. The experimenter then used the tablet to take a picture of the participant and told the participant that the opponents would be able to see their picture. The participant was then asked if they had any questions about the online setup of the game.

Following the introduction, the experimenter taught the rules of the game to the participant and demonstrated how to use the spinner and move across the screen. The participant then had an opportunity to practice the game with the experimenter. At the end of the practice game, the experimenter announced who won the game and reminded the participant that players could only move across the board the number of spaces dictated by the spinner.

After the practice trial, participants saw a picture of the first opponent who introduced him or herself in a speech bubble and invited the participant to play the game (e.g., "Hi, my name is Daniel. Do you want to play this game with me?"). The

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[1] The actions of the "harmful rule violator" do not provide any harm to children in the moral sense, but rather, harm their chances of winning the game.
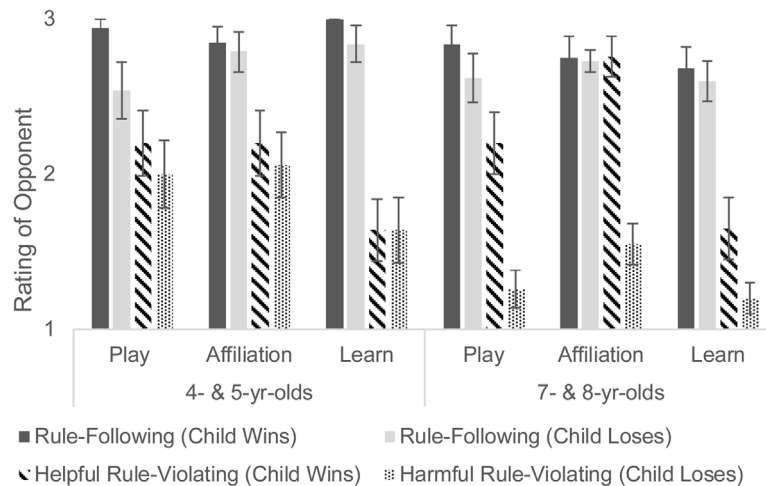
Fig. 2. Mean ratings in Experiment 1 for each question type within each age group. Note that responses were coded on a 1–3 scale with 1 indicating "no," 2 indicating "maybe" and 3 indicating "yes." Error bars represent +/− 1 standard error of the mean.

experimenter then told the participant that they would get to spin first. After the participant moved his or her piece the correct number of spaces, the spinner spun and the opponent's piece moved. After each of the opponent's turns, the speech bubble next to the opponent stated the number they had spun and the number of spaces they moved (e.g., "I spun a two. I moved two spaces" or, for violators, "I spun a two. I moved four spaces"). The participant and the opponent took turns until one of the players reached the winning square. At the end of each game, the experimenter stated the results (e.g., "Yay, you won!" or "Sorry, Daniel won.") and reminded the participant that they would now be answering questions about that opponent, who would not be able to hear the participant's responses (e.g., Now I'm going to ask you some questions about Daniel. Daniel won't be able to hear what you say."). The rule-following opponents followed the rules on each of their turns. The rule-violating opponents followed the rules on their first turn and violated the rules on their final two turns. This design choice was meant to convey that the opponents were aware of the rules, and later decided to violate them. However, we did not explicitly measure children's interpretation of the opponent's knowledge of the rules. After playing with all four opponents, the experimenter told the participant that the opponents were not real children.

3. Results and discussion

Children evaluated all four opponents on six different questions (plus a manipulation check), each with an answer of "yes" (coded as 3), "maybe" (coded as 2), and "no" (coded as 1). A factor analysis on these questions revealed a single factor accounting for 50% of the variance, with a sharp drop to a second factor accounting for 10%. Inspection of the factor loadings showed that all items loaded high on factor 1. For younger children, especially, the two "play again" questions showed a slightly different pattern: there was a lower loading on factor 1 (on the order of 0.5 rather than 0.8) and a higher loading on the second factor (-0.5 compared to weak positive loading for other items). Thus, for both empirical and theoretical reasons we decided to analyze the two "play again" questions as a distinct factor. Additionally, because we had theoretical reasons for considering the "learn from" question as distinct from the other affiliation questions (namely, one could be a good source of information but undesirable to affiliate with and vice versa), we conducted separate analyses to examine whether or not the "learn from" question did, in fact, show the same pattern of results as the three "affiliation" questions.

The first question we asked participants was whether or not the opponent followed the rules of the game, which served as a manipulation check. If the participant did not answer correctly, we reminded him or her about what happened during the game (e.g., "she spun a 4 and moved 2 spaces") and then asked the question again. There were no significant differences in the number of reminders needed across conditions. All participants correctly answered the question after the first reminder. In line with the factor analysis, we grouped the remaining questions into two categories: play questions and affiliation questions (see Table 1). For each of these categories of questions, we conducted 2 × 2 x 2 analyses of variance (ANOVA) with age group (young vs. old) as a between-subjects factor and rule fidelity (followed vs. violated rules) and outcome (participant won vs. participant lost) as within-subjects factors. Given concerns about the normality of the data, we conducted a parallel set of non-parametric tests, which produced the same results as the ANOVAs. The mean ratings for individual questions are presented in the Appendix.

An omnibus ANOVA on the play again questions revealed a significant three-way interaction between age, rule fidelity, and outcome, $F(1, 49) = 8.54$, $p = 0.004$, $\eta_p^2 = 0.08$ (see Fig. 2). We then split the analyses apart by age group to examine a priori hypotheses about possible developmental differences in children's evaluations. For younger children, there were main effects of rule fidelity, $F(1, 24) = 31.55$, $p < 0.0001$, $\eta_p^2 = 0.39$, and outcome, $F(1, 24) = 10.80$, $p = 0.002$, $\eta_p^2 = 0.18$, but no significant rule fidelity by outcome interaction. Additionally, younger children evaluated the rule follower whom they

won against more highly than the rule follower whom they lost against ($p = 0.003$), but they did not differentiate between the helpful and harmful rule violators. For older children, there were main effects of rule fidelity, $F(1, 24) = 73.67$, $p < 0.0001$, $\eta_\rho^2 = 0.60$, and outcome, $F(1,24) = 30.14$, $p < 0.0001$, $\eta_\rho^2 = 0.38$, as well as a significant rule fidelity by outcome interaction, $F(1, 24) = 21.69$, $p < 0.0001$, $\eta_\rho^2 = 0.31$. We followed up this interaction with pairwise comparisons between the opponents. Older children's ratings for the two rule followers did not differ significantly from each other ($p = 0.062$), but all other comparisons between opponents were significant ($p < 0.01$ for all; Bonferroni-corrected). Older children were most interested in playing with the rule followers, but were more interested in playing with the helpful rule violator than the harmful rule violator. Younger children, however, preferred playing with the helpful rule follower, suggesting they neither liked losing nor playing with violators.

We then analyzed the affiliation measure, which included a sharing question, a trait attribution (e.g., "nice or mean"), a friendship choice, and a selective learning question. The omnibus ANOVA revealed a significant three-way interaction between age, rule fidelity, and outcome, $F(1, 49) = 12.26$, $p = 0.001$, $\eta_\rho^2 = 0.21$. We then split the analyses apart by age. For younger children, there was a main effect of rule fidelity, $F(1, 24) = 49.98$, $p < 0.0001$, $\eta_\rho^2 = 0.85$, but no main effect of outcome and no interaction between rule fidelity and outcome. Younger children rated the rule followers more highly than the rule violators, but did not distinguish between the two rule followers nor the two rule violators. For older children, there were significant main effects of rule fidelity, $F(1, 24) = 32.68$, $p < 0.0001$, $\eta_\rho^2 = 0.71$, outcome, $F(1,24) = 40.15$, $p < 0.0001$, $\eta_\rho^2 = 0.55$, and a significant interaction between rule fidelity and outcome, $F(1,24) = 33.25$, $p < 0.0001$, $\eta_\rho^2 = 0.59$. Pairwise comparisons revealed that older children's ratings for the two rule followers and the helpful rule violator were not significantly different from each other ($p > 0.05$ for all). The harmful rule violator was rated lower than all other opponents ($p < 0.05$ for all). Thus, older children evaluated all opponents as positive social partners except for the harmful rule violator. Conversely, younger children's affiliative evaluations were driven primarily by whether or not the opponent followed the rules.

Because of our prior hypothesis that the learn-from question could pattern differently from the other affiliation questions, we examined the pairwise comparisons between opponents at each of the age groups for this question separately. In general, the pattern of results was the same as in the overall affiliation measure. However, for older children, the evaluation for the helpful rule violator was significantly lower than the evaluations for either rule follower ($p < 0.0001$ for each) and no different from the harmful rule violator. This suggests that although older children are willing to affiliate with those who violate rules in a helpful manner, they do not necessarily see those people as reliable informants.

These results indicate that younger children's evaluations were primarily based on whether or not the opponents displayed fidelity to the rules, regardless of how the rule violations affected the outcome of the game. Young children did not distinguish between helpful and harmful violators and preferred rule followers to rule violators, even when the violator helped them win the game. One concern is that younger children may not have actually distinguished positive and negative outcomes. However, results from the "play-again" questions found that younger children were less likely to want to play games with people who had beat them, fairly or not, suggesting they did see winning as a positive outcome and losing as a negative outcome.

Older children's evaluations distinguished between helpful and harmful rule violators. On both measures, older children evaluated the helpful rule violator more highly than the harmful rule violator. Moreover, on the affiliation measure, older children rated the helpful violator just as highly as either rule-following player. Older children's lower response for the helpful rule violator (in comparison to the rule followers) on the play again measure may reflect their reaction to the fact that games like those used in the experiment are not fun if the element of chance is removed. Although a person who cheats to help one win might not be a good opponent (they 'ruined' the game), their actions make them a good person to interact with outside of a game context. Older children's positive evaluations for rule violators did not, however, extend to seeing those opponents as good sources of social information.

Overall, younger children's evaluations do not seem to be sensitive to the outcomes associated with rule violations. However, it may be that from the child's perspective, the violators in Experiment 1 were all producing the same outcome: They are changing who wins or loses the game. Thus one hypothesis is that young children are responding similarly to all violators because they actually affected the outcome of the game. In Experiment 2, we present children with "unsuccessful" violations that do not change the outcome of the game. Experiment 2 uses the same setup as Experiment 1, but the violators' actions do not produce the outcomes they made more likely. For example, the player who violated the rules by moving too few spaces actually won the game whereas the player who violated the rules by moving too many spaces lost the game. We hypothesize that by reducing the consequences of the violations (i.e., changing the outcome of the game), young children may focus on the helpfulness of the specific actions (violating by moving too many or too few spaces). For older children, we might expect that reducing the consequences of the violations would lead them to treat all violators similarly. If the rule violations do not change the outcome of the game, then in some sense, they weren't worth it.

3.1. Experiment 2

3.1.1. Participants

Participants included 20 four and five year-olds (11 female; M age = 4.91 years, range = 4.0-5.9 years) and 20 seven and eight-year olds (9 female; M age = 8.2 years, range = 7.0 years to 8.9 years) recruited from the same population as Experiment 1. No child had participated in Experiment 1.
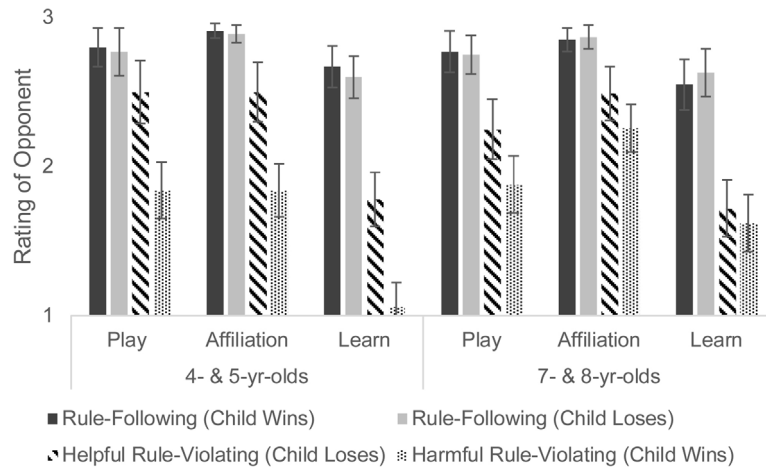
Fig. 3. Mean ratings in Experiment 2 for each question type within each age group. Error bars represent +/− 1 standard error of the mean.

3.2. Materials and design

The materials used in Experiment 2 were the same as those used in Experiment 1 with one notable change. The two trials in which the opponents violated the rules of the game did not yield the same outcomes as in Experiment 1: the opponent who violated the rules by moving too many spaces did not succeed in winning the game and the opponent who violated the rules by moving too few spaces did not succeed in losing the game. Thus, the helpful rule violator actually beat the participant at the game and the harmful rule violator actually lost the game to the participant. The other two opponents (i.e., rule-following) were identical to those in Experiment 1. After playing with each opponent, participants were asked the same seven evaluative questions from Experiment 1, again in a fixed order.

3.3. Procedure

The design and procedure used in Experiment 2 was nearly identical to Experiment 1. The games against the rule-following opponents were exactly the same as in Experiment 1. In the game against the harmful rule-violating opponent who moved too many spaces, the opponent cheated on two out of two turns. For example, the opponent might have spun a 1 and a 2, but moved 3 spaces each time. The participant might have spun a 3 on their first and second turns and a 2 on their third turn, which meant they won the game. In the game against the helpful rule-violating opponent who moved too few spaces, however, the opponent only cheated on two out of three turns. For example the opponent might have spun a 3 on their first and second turn and only moved two spaces, but then on their third turn they might have spun a 4 and moved 4 spaces, which allowed them to win the game.

4. Results and discussion

As in Experiment 1, we first asked participants whether or not the opponent followed the rules of the game to ensure that they had attended to the manipulation. All participants correctly answered this question immediately or after a reminder of what happened during the game. There were no significant differences in the number of reminders needed across conditions. For the remaining questions, we conducted a factor analysis, which revealed that the Experiment 2 items followed the same pattern as those from Experiment 1. Thus, we analyzed the play again questions as one measure and the general affiliation questions as a second measure. For each of these measures, we conducted a 2 (Age group: young and old) x 2 (rule fidelity: followed vs. violated rules) x 2 (outcome: participant won vs. participant lost) ANOVA (see Fig. 3). It is important to note that in Experiment 2, the opponent who violated the rules when the participant lost the game actually displayed helpful behaviors (e.g., not moving as many spaces as she should have) while the opponent who violated the rules and the participant won the game, actually displayed harmful behaviors (e.g., moving more spaces than she should have).

An omnibus ANOVA on the play again questions revealed significant main effects of rule fidelity, $F(1, 38) = 60.57$, $p < 0.001$, $\eta_\rho^2 = 0.61$ outcome, $F(1, 38) = 4.92$, $p = 0.033$, $\eta_\rho^2 = 0.11$ and a fidelity x outcome interaction, $F(1, 38) = 4.065$, $p = 0.05$, $\eta_\rho^2 = 0.10$. However, there was no significant three-way interaction between age, rule fidelity and outcome. Although age did not interact with the other factors, we separated the analyses by age for the purpose of comparing Experiment 2 with Experiment 1. For younger children, there was a main effect of fidelity, $F(1, 19) = 24.74$, $p < 0.0001$, $\eta_\rho^2 = 0.57$ and a fidelity x outcome interaction, $F(1, 19) = 7.36$, $p = 0.014$, $\eta_\rho^2 = 0.28$ but no effect of outcome. Younger children's ratings did not differentiate the rule followers from each other: they were equally interested in playing again with those whom they lost against

and those whom they won against. However, unlike in Experiment 1, younger children were more likely to want to play with the helpful rule violator (i.e., the one they lost against) than with the harmful rule violator (i.e., the one they won against), $F(1,19) = 5.43$, $p = 0.031$, $\eta_\rho^2 = 0.21$. For older children, there was a main effect of fidelity, $F(1, 19) = 37.48$, $p < 0.001$, $\eta_\rho^2 = 0.66$, but no effect of outcome or fidelity x outcome interaction. Older children's evaluations did not distinguish between the rule followers whom they won or lost against nor, in contrast to Experiment 1, the rule violators whom they won or lost to. Thus, both age groups of children indicated that they would like to play again with rule followers over rule violators, and, additionally, for younger children, helpful rule violators (whom they lost against) over harmful rule violators (whom they won against).

We next analyzed the affiliation measures in an omnibus ANOVA and found main effects of fidelity, $F(1, 38) = 91.97$, $p < 0.001$, $\eta_\rho^2 = 0.71$ outcome, $F(1, 38) = 11.40$, $p = 0.002$, $\eta_\rho^2 = 0.23$ and a fidelity x outcome interaction, $F(1, 38) = 10.89$, $p = 0.002$, $\eta_\rho^2 = 0.22$. There was no main effect of age nor did age significantly interact with the fidelity and outcome factors. Both younger and older children preferred rule followers to rule violators and, additionally, both age groups preferred helpful rule violators (whom they lost against) over harmful rule violators (whom they won against), $F(1, 19) = 4.48$, $p = 0.048$, $\eta_\rho^2 = 0.11$ for younger, $F(1, 19) = 13.75$, $p = 0.001$, $\eta_\rho^2 = 0.26$ for older. Unlike older children's results in Experiment 1, neither age group reliably evaluated the helpful rule violators as highly as either of the rule following opponents.

As in Experiment 1, we analyzed the learning question separately to test whether it patterned differently from the affiliation measure. The overall pattern of results was the same as in the affiliation questions. Both age groups of children preferred rule followers to rule violators and did not distinguish rule followers from one another. The older children did not distinguish rule violators from one another, but the younger children preferred to learn from the helpful rule violator over the harmful rule violator, $F(1, 19) = 5.11$, $p = 0.03$, $\eta_\rho^2 = 0.15$. Thus, older children's results follow the same pattern as the learning question in Experiment 1 whereas younger children's results follow the pattern observed in the affiliation measure.

The results of Experiment 2 differed in two ways from those of Experiment 1. First, although younger children continued to prefer rule-followers to either helpful or harmful violators, they did show a preference for helpful over harmful violators on all three measures. One explanation for this effect is that in the absence of a decisive impact on the outcome of the game, younger children focused more on the intentions of the violators. Alternatively, an asymmetry in the design may account for the difference. The setup of the study required that helpful violators cheated relatively less frequently than harmful violators (e.g., 2 out of 3 versus 2 out of 2 turns). Thus one explanation for the results is that younger children ignored intentions and simply preferred opponents who violated relatively less to those who violated relatively more (note: they both violated the rules on two turns).

In contrast to Experiment 1, older children's evaluations did not distinguish between the rule violators nearly as often nor as strongly in Experiment 2. Older children only rated the helpful violator higher than the harmful violator on the affiliation measure, but never as highly as the rule followers. The fact that the violations did not change the outcome of the game may have led older children to discount the helpfulness of the violation. In Experiment 1, the helpful rule violator's actions led them to suffer the consequence of losing the game. The helpful violator in Experiment 2 was thus not as helpful as the helpful violator in Experiment 1. Additionally, older children may have perceived the helpful cheaters as less committed to help because they did not act consistently to achieve the helpful goal (i.e., failing to violate on the third turn). We suggest that changes from Experiment 1 to Experiment 2 made it more difficult to for older children to identify the motives driving the violation. In Experiment 1, the helpful violator was clearly and effectively acting to help the child. In Experiment 2, the goals of the helpful violator were less clear, and less distinct from those of the harmful violator.

5. General discussion

The present research investigated how conventional violations affect preschool and young school-aged children's social evaluations. In both experiments, younger children consistently preferred the rule followers to the rule violators, regardless of the type of violation (e.g., helpful or harmful). In Experiment 1, younger children's affiliative evaluations did not distinguish between rule violators who produced helpful or harmful outcomes, suggesting their evaluations were solely focused on the act of rule violating. In Experiment 2, however, when violations did not change the outcome of the game, younger children's affiliative evaluations did distinguish between helpful and harmful violators. Together these results suggest that younger children's evaluations are most sensitive to the presence or absence of a rule violation, but that they do show some recognition of the type of violation. In contrast, older children's evaluations focused on ancillary qualities of the violations, namely the outcomes they produce. Across both experiments, older children evaluated the helpful rule violator more highly than the harmful rule violator on the affiliation measures. These differential ratings were most pronounced in Experiment 1, in which older children evaluated the helpful rule violator as highly as either rule following opponent. Overall, these results suggest developmental differences in how rule violations affect preschool-aged and young school-aged children's social evaluations. Additionally, the present research adds to the growing literature on children's motivation to learn and conform to conventional rules (see Kalish & Sabbagh, 2007) by also demonstrating that rule conformity and deviance affect children's expectations and judgments of other people.

The results from these studies suggest that preschool-aged children's evaluations are strongly affected by whether or not people conform to conventional rules. Although their evaluations were sensitive to the type of evaluation (helpful versus harmful actions) in Experiment 2, preschoolers never evaluated the rule violators as highly as the rule followers (unlike older children in Experiment 1). This result aligns with Helwig and colleagues' finding that preschool-aged children's judgments of

conventional violations are most strongly focused on the presence or absence of rules rather than the consequences produced by the violation (Helwig et al., 1995). Similarly, recent work on children's spontaneous responses to conventional violations demonstrates that preschool-aged children protest violations that produce neutral or in some cases, identical outcomes to rule conforming actions (Rakoczy et al., 2008). Taken together, these results support the proposal that preschool-aged children may be especially likely to focus their attention on the general, normative components of human behavior (Kalish, 2012).

Older children, in contrast, based their evaluations on whether or not rule violations produced positive outcomes, particularly for violations that are consistent and consequential. These results align with previous research demonstrating that children become increasingly relativistic about the seriousness of conventional violations with age (Smetana, 1981; Helwig et al., 1995). Additionally, in research on children's assignment of blame and punishment, older children see well-intentioned or accidental actions as less blameworthy whereas younger children tend to disregard the motives of a harmful action (Zelazo, Helwig, & Lau, 1996; Shiverick & Moore, 2007). Thus, these results extend previous findings by demonstrating that older children's relativism in judging conventional violations also applies to their evaluations of violators.

One interpretation of the observed age-differences is that younger children focused less on the competitive aspect of the task (i.e., they cared less about winning). It could be that the younger children simply did not understand the competitive structure of the game. We think this is unlikely as there were ample cues and feedback that there was one winner and one loser in each game. Moreover, young children were more likely to want to play the game again when they won than when they lost. However, younger children's social evaluations were not dependent on the outcome of the game in the same way they were for older children in Experiment 1. Younger children may have viewed the games primarily as opportunities for collaborative interactions. Other researchers have noted that this type of collaboration is intrinsically motivating for young children, who often seek out ways to work together towards shared goals (Warneken & Tomasello, 2006). In the context of collaboration, rule violations disrupt joint activity, regardless of their motives or consequences.

The observed age-related findings suggest that the salience of rule violations on children's social evaluations lessens over the course of development. Why do young children focus so strongly on rule violations? Children's ratings of whom they wanted to learn from provide one perspective on their evaluations. In general, both older and younger children did not want to learn new games from people who violated rules. However, only younger children's affiliation judgments tracked their learning preferences: they were less likely to affiliate with people whom they did not want to learn from. One possibility is that young children, who are still relatively new to the social world, might think that it is especially important to be able to learn from social partners. Younger children tend to seek out information about conventional rules and are motivated to act in accordance with normative expectations (Kalish & Cornelius, 2007; Kalish & Sabbagh, 2007). If younger children are primarily concerned with learning conventional forms, they should surround themselves with reliable learning models. In fact, some research has found that 3 year-old children prefer to interact with agents who have imitated conventional rather than unconventional behaviors (Wohlgelernter et al., 2010) and prefer to interact with people knowledgeable of conventions than those who are ignorant of them (Kim, Kalish, Weisman, Johnson, & Shutts, 2016). Older children, in contrast, have more experience in the social world and may be less concerned with interacting with people whom they can learn from. It may not be as important for older children to affiliate with reliable social models if they already have a solid understanding of conventional rules and expectations. With a firmer grasp of conventional rules, older children may look deeper into people's motives for behaving when choosing social partners. Thus, if rule conformity is important for the sake of learning, it may be especially important for younger children who are still developing expertise in the social world.

The current studies focused on children's evaluations of violators of conventional game rules. Although game rules are a relevant convention for children, it may be that different types of conventions have distinct influences on children's social evaluations. From an adult's perspective, there are gradations in the seriousness of conventional violations, with some violations more obviously related to social judgment than others (e.g., unconventional tool uses versus violations of politeness conventions). One challenge of conventional learning is for children to distinguish conventions that are normative and binding (e.g. driving on the correct side of the road) from those that are more like statistical regularities (e.g., saying "tom-AY-to" rather than "tom-AH-to"). Young children may tend to miss the subtleties of the significance of different kinds of violations. Older children, however, who have had more experience observing and even committing rule violations, may be more likely to recognize that it is sometimes permissible to break rules, particularly in domains in which rule violations do not produce meaningful consequences (e.g. white lies; see Heyman et al., 2009). Although violations of codified rules likely lead to stronger judgments, violations of informal conventions that mark group affiliation may also lead to negative social evaluations (see Abrams, Rutland, Ferrell, & Pelletier, 2008). There is research suggesting that even infants are very attentive to social regularities, such as accent, and use evidence of conformity to these regularities to guide their social interactions (Kinzler, Shutts, DeJesus, & Spelke, 2009). Future research could examine how conventional violations with group-level significance influence children's social evaluations.

Future studies could also address the roles of helpful and harmful intentions in the case of moral violations. Recent research demonstrates that children weigh intentions more heavily into their judgments when evaluating moral rather than conventional violations (Josephs et al., 2015). Although this work contrasted whether an act was intended or not, rather than how the act was intended, it may be a general principle of moral cognition that people assess the motives of the violator when determining how to respond to immoral behavior. Learning when specific motives or outcomes matter when judging both moral and conventional violations may require some experience. For example, the seriousness of the violation, the benefit resulting from the violation, and the nature of the participants may all make a difference (see Kohlberg, 1969).

The current research contributes to a growing literature on children's understanding of social conventions (Kalish & Sabbagh, 2007; Rakoczy & Schmidt, 2013). The specific contribution of this work is that young children use rule violations as the basis of social evaluations about other people. They do not just object to conventional violations (Rakoczy et al., 2008; Schmidt, Rakoczy, & Tomasello, 2011), but also object to the violator. Furthermore, the significance of violations does not depend on the outcomes they produce, at least for younger children. Instead, it seems to be that the violation itself is objectionable and reflects badly on the violator. One hypothesis is that young children are particularly interested in learning social rules and have an interest in affiliating with others who are good sources of information about such rules. Older children, however, who have more experience in the social world, may be less focused on the mere occurrence of a violation, and more interested in what the violation signals about the goals of the person who commits it.

Appendix A

See Tables A1, A2, A3 and A4.

Table A1
Mean ratings for younger children in Experiment 1.

Question Type		Rule ±/Win	Rule±/Lose	Rule-/Win	Rule-/Lose
Play	Question 2	2.96	2.24	1.84	1.8
Play	Question 3	2.92	2.84	2.64	2.2
Affiliation	Question 4	2.92	2.92	2.44	2.2
Affiliation	Question 5	2.8	2.84	2.12	2.16
Affiliation	Question 6	2.84	2.84	2.12	1.8
Selective	Question 7	3	2.6	1.64	1.64

Note: Rule + indicates rule-followers and Rule − indicates rule-violators. Win and Lose refer to whether or not the child won or lost the game.

Table A2
Mean ratings for older children in Experiment 1.

Question Type		Rule ±/Win	Rule±/Lose	Rule-/Win	Rule-/Lose
Play	Question 2	2.84	2.64	1.83	1.04
Play	Question 3	2.84	2.6	2.38	1.48
Affiliation	Question 4	2.84	2.76	2.67	1.48
Affiliation	Question 5	2.76	2.72	2.75	1.36
Affiliation	Question 6	2.64	2.72	2.88	1.8
Selective Learning	Question 7	2.68	2.6	1.67	1.16

Table A3
Mean ratings for younger children in Experiment 2.

Question Type		Rule ±/Win	Rule±/Lose	Rule-/Win	Rule-/Lose
Play	Question 2	3.00	2.80	1.38	2.29
Play	Question 3	2.70	2.80	2.47	2.24
Affiliation	Question 4	2.93	2.93	1.93	2.28
Affiliation	Question 5	2.87	2.80	1.81	2.07
Affiliation	Question 6	2.93	2.93	2.06	2.43
Selective Learning	Question 7	2.67	2.60	1.07	1.78

Table A4
Mean ratings for older children in Experiment 2.

Question Type		Rule ±/Win	Rule±/Lose	Rule-/Win	Rule-/Lose
Play	Question 2	2.90	2.81	1.62	2.14
Play	Question 3	2.70	2.80	2.24	2.47
Affiliation	Question 4	2.69	2.68	2.19	2.38
Affiliation	Question 5	2.87	2.91	2.06	2.34
Affiliation	Question 6	3.00	3.00	2.53	2.75
Selective Learning	Question 7	2.63	2.55	1.62	1.72

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