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Preschool Children Transfer Real-World Moral Reasoning into Pretense

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Abstract

Is it wrong to pretend to kick or pretend to steal? The current experiment examined whether preschoolers extend their moral principles from reality into pretense and whether this transfer depends on the proximity of the pretend world to the real world. Children are known to transfer their knowledge of object properties, causality, and problem solutions between pretend and real worlds. However, do children maintain their real-world moral reasoning in pretense? Preschoolers ($N = 63$) judged the acceptability of antisocial behaviors in pretend, fantastical, or non-pretend scenarios. Children found antisocial behaviors to be equally unacceptable in both pretend and non-pretend situations but found antisocial behaviors to be more acceptable in the fantastical situations. These results imply that children extend their real-world representations of morality in pretense, but more so for pretend scenarios that are similar to the real world. Implications for children's understanding of the reality-fantasy boundary and moral reasoning are discussed.

Keywords

pretense; moral reasoning; cognitive development

1. Introduction

Pretend play requires children to maintain representations of real-world knowledge while simultaneously thinking about and acting on ideas contradicting reality. For example, when a young child pretends to diagnose and cure her doll of an illness she is acting upon her knowledge of the real world (i.e., what doctors do to help people feel better), but at the same time she is ignoring her knowledge of the real world (i.e., the doll can get sick). Despite its complexity, children engage in pretend play themselves and understand the pretend play of others beginning around age two and become increasingly successful at differentiating

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pretense from reality over the course of the preschool years (Bourchier & Davis, 2002; Woolley & Cox, 2007; Flavell, Flavell, & Green, 1983; Corriveau, Kim, Schwalen, & Harris, 2009).

On the surface, it seems children would risk changing their understanding of reality through manipulating and altering their representations of the real world in pretense. By pretending to diagnose and cure her doll, might the young child come to believe that dolls can be ill? Therefore, theories of pretense representation have attempted to explain how children maintain a distinction between pretense and reality (e.g., Harris, 2000; Leslie, 1987; Lillard, 2001; Nichols, 2004; Perner, 1991). Leslie (1987) argued that pretend representations are created by first making, and then changing, a copy of a real representation, and Lillard (2001) theorized that pretend representations function like the philosopher's Twin Earth, a copy of reality which is modified only in a few specific way(s). These theorists further argue that using copies of real representations serves to ensure one's real-world knowledge is not affected by what happens in a pretend world. Thus, most theories recognize the importance of children's use of real-world knowledge in creating pretend representations, yet acknowledge the need for keeping pretend representations separate from real representations in order for children to maintain an accurate understanding of reality. Examining whether and when children transfer knowledge between pretend and real worlds will potentially shed light on how children represent the boundary between reality and non-reality and their understanding what information can pass between the two worlds.

In support of the theories concerning pretense representation, previous research suggests that children utilize some of their real knowledge, in particular objective knowledge about physical properties, while pretending. For example, a series of studies conducted by Harris and Kavanaugh (1993) examined children's awareness of the pretend-real distinction, including how children acknowledge when a pretend scenario has begun and how they maintain rules of causality during pretense. After watching an experimenter pretend to spill milk, children as young as two years of age were able to correctly follow along with the scenario by pretending to clean up the spill in the correct location. Harris, Kavanaugh, and Meredith (1994) showed that children are not limited to only a single causal transformation; they are able to connect multiple causal relationships to create causal chains and can determine the outcome of these chains. The fact that children use their real-world understanding of objective causal relationships in order to make inferences throughout pretend play makes clear that the pretend-reality boundary is porous in at least one direction, allowing real-world information into pretense.

More recent empirical work also supports the hypothesis that young children's reasoning about pretense is "grounded" in their understanding of reality (for review, see Lillard & Woolley, 2015). Lane and colleagues (2016) show that children's ability to imagine improbable and impossible events was related to whether or not they believe those events can actually take place in the real world. This finding suggests that the forms of pretense that children engage in are largely tied to their knowledge about reality. In another study, 3- to 5-year-olds both protested and corrected pretend actions that did not align with their knowledge about what is factually true in the world, such as a duck saying "oink", indicating

that children are concerned about and motivated toward maintaining real-world information in pretense (Van de Vondervoort & Friedman, 2017).

Previous work on the transfer of information between pretend and real worlds has been focused on the transfer of general knowledge (e.g., facts, words) or physical rules (e.g., cups filled with liquid will spill when tipped over). Therefore, it is unknown whether real-world *social* knowledge, such as moral evaluation, is maintained in pretense. Since antisocial actions do not have any physical consequences in the pretend world (i.e., pretending to kick someone will not physically hurt them and pretending to steal from someone will not leave them with fewer resources), perhaps children would not utilize their real-world moral understanding when evaluating these pretend behaviors. On the other hand, infants are known positively evaluate prosocial individuals and negatively evaluate antisocial individuals (DesChamps, Eason, & Sommerville, 2015; Hamlin, Wynn, & Bloom, 2007; Meristo & Surian, 2014) and children continue to object to antisocial behaviors into the preschool years (Smetana, 1981, 2006). Theorists have argued that children's evaluations of others are rooted in early-developing, strong, and unchanged beliefs about how others should behave morally (Hamlin, 2013; Smetana, 1981, 2006), perhaps suggesting that children would maintain their real-world moral evaluation even in a pretend world.

Further, pretending ability has been theoretically and empirically linked to children's understanding of others' minds (e.g., Lillard, 1993; Taylor & Carlson, 1997). Although the exact mechanism driving this correlation is an open question, hypotheses have included that (1) both abilities rely on the same representational ability, and/or (2) that the experience of pretending allows children to practice seeing the world from others' perspectives and experience different mental states. If the latter is true, experimenting with or being tolerant of others' experimentation with moral rules in pretend worlds may be a way children use or refine their social knowledge and skills. For example, children may allow pretend stealing to occur in order to experience or observe the motivations and emotions of a thief and the consequences of the action based on experiencing or observing the reaction of a victim. In order to understand young children's treatment of moral issues in pretend play, we sought to test whether or not preschool children judge antisocial and prosocial behaviors similarly across pretend and non-pretend contexts.

Further, although previous work indicates that young children's pretense seems to be largely grounded in their understanding of reality, there is one key factor that might influence children's tendency to use real-world knowledge in their reasoning about pretense—how similar the pretend world is to reality. Walker, Ganea, and Gopnik (2015) examined children's treatment of the boundary between pretense and reality by testing children's tendency to transfer information in the opposite direction—from a pretend world to the real world—and whether the transfer of information in this direction depends on how similar the pretend and real worlds are to one another. After exposing preschoolers to a novel causal process using a close world (less fantastical) or far world (more fantastical) version of a story, they found that children were more likely to generalize the novel causal relation from the more realistic stories compared to the very fantastical stories. Thus, preschoolers are not only sensitive to the degree to which pretend worlds differ from the real world, but that they

rely on these proximity judgments to guide their decisions about whether to transfer objective knowledge from a pretend world to the real one.

An open question is whether children also take proximity into account when transferring real-world knowledge into pretense. It may be that children are also less likely to transfer their real-world knowledge to a pretend world when that pretend world is distant from reality (i.e., fantastical). Therefore, a second aim of the current work was to test whether children's transfer of real-world moral reasoning into pretense depends on the proximity of the pretend world to reality in order to further specify children's understanding of the pretense-reality distinction.

2. The current study

The current study examined whether children's real-world knowledge—specifically, their moral evaluation—is maintained in a pretend world and whether this transfer depends on the proximity of the pretend world to the real world. To this end, preschool children were asked to judge the acceptability of antisocial and prosocial behaviors in either a realistic scenario or in one of two types of pretend scenarios, one which did not include fantastical elements, and thus was highly similar to the real world scenario, or one which did include fantastical elements and thus was less similar to the real world scenario.

It is possible that children transfer their moral principles and reasoning into pretense, similarly to how they maintain physical properties and causal knowledge while pretending. However, due to the permissibility afforded by pretend play, it is possible that children may not maintain their ideas about (im)moral behavior. For instance, a child may know it is unacceptable to steal in real life, but be perfectly accepting of people pretending to do so. Further, perhaps the transfer of moral principles depends on the proximity of the pretend world to the real world. Based on previous work suggesting that preschool children differentially transfer knowledge learned in pretend worlds to the real world based on proximity, we hypothesized that children would be less likely to maintain their moral reasoning in the fantastical scenarios compared to pretend scenarios that were highly similar to the real world.

3. Method

3.1 Participants

Sixty-three children aged 3 – 5 years (32 females, 31 males; $M_{\text{age}} = 55.5$ months, $SD = 8.8$ months, range = 36.0 – 71.5 months) were recruited through a database of volunteers, a local preschool, and a local children's museum. Participants were mostly White (87.8%) and came from well-educated homes (27% had at least one parent with a Bachelor's degree and another 50% had at least one parent with a graduate degree). An additional four children were tested, but their data were discarded due to failure to complete the procedure or experimenter error. Parents gave informed consent for their children's participation in the study and children gave verbal assent. All children were compensated with a small prize.

3.2 Design and Materials

Participants were assigned to either the pretend, fantastical, or real condition. Six short stories describing two preschool children engaging in everyday actions were created (See Table for description of actions). In the pretend and fantastical conditions, the actions were always described in the context of pretend play. The difference between the two was that the pretend condition was set in the real world and the participants were told that the characters were “like you”, but in the fantastical condition, the characters were described as living in other worlds (e.g., outer space) or having fantastical powers; the stories were set in unreal locations (e.g., under water); and the characters did unreal things (e.g., playing soccer with stars). In the real condition, the stories involved children really engaging in the same actions. Four stories included a moral transgression and two stories described prosocial actions (e.g., helping, sharing). Two of the antisocial stories involved psychological transgressions and two involved physical transgressions. Small (approximately 3 inch) wooden figures of children were used to act out the stories for participants in all conditions. In the real condition, appropriately-sized props (crayons, blocks, a spoon, and a soccer ball) were also used. The names of the characters in the stories and the gender of the wooden figures matched the gender of the participant.

3.3 Procedure

All participants were tested individually in a university lab, at a local children’s museum, or at their preschool. Participants were told the six short stories matching their condition in one of four, partially counterbalanced orders, with the only restriction being that the prosocial stories were always told second and fifth. For each story, the experimenter read the scenario while simultaneously acting out the events with the wooden figures (and props in the real condition). Two memory check questions were asked after each story concerning which character did what and/or what the characters did (e.g., “Which girl was the one who pretended to kick?”). If a participant did not answer these questions correctly, the experimenter repeated the story and memory check questions (no child needed a story repeated more than once).

Next, children were asked a series of interview questions about the scenario in a fixed order regarding the actions in the story. The categories and questions used were based on those in Smetana et al. (2012). The first question(s) assessed *permissibility*: “Was it okay or not okay for [child] to ____?”. If the subject answered “not okay”, the experimenter then followed up by asking the child to judge whether the action would be okay if a parent told the child it was okay, which assessed *authority independence*. The next question assessed *punishment*. All participants were asked to judge if the character should get in trouble. Lastly, children were asked to assess the characters’ emotional states with two open-ended questions: “How do you think [victim] feels after [transgressor] ____?” and “How do you think [transgressor] feels after he/she ____?”. The entire procedure took about 10–15 minutes to complete.

4. Results

4.1 Scoring

Two scores were calculated for each interview question (permissibility, authority independence, punishment, victim's emotion, and transgressor's emotion)—one for antisocial stories and one for prosocial stories. For the permissibility and authority independence questions, children were given one point for answering it was “not okay” for the transgressor in the story to perform the action. For the punishment question, they were given one point for saying the character should be punished. For the emotion questions, they received one point for thinking a character would experience a negative emotion (e.g., “sad”, or “mad”). All scores were then transformed into proportions to allow comparison between antisocial and prosocial scores; thus, all scores had a range of 0 – 1.

4.2 Analyses

Preliminary analyses indicated that gender was unrelated to any interview question score, so it was not considered further. Age was only correlated with *authority independence* scores for antisocial stories, $r = .35$, $p = .005$, indicating that older children were more likely to say the action in the story was “not okay” even if a parent said it was, a well-established finding (e.g., Smetana et al., 2012).

4.2.1. Permissibility and Authority Independence—A 3 (condition) $\times$ 2 (question) mixed ANOVA (Analysis of Variance) was conducted using children's *permissibility* and *authority independence* scores for antisocial stories. There was a significant main effect of condition, $F(2, 60) = 6.46$, $p = .003$, partial $\eta^2 = .18$ (see Figure 1 for means). Post hoc tests show that although there was no difference between the pretend and real conditions, $t(60) = 1.47$, $p = .15$, children in the fantastical condition rated the antisocial actions as significantly more permissible than children in the real, $t(60) = 3.59$, $p = .001$, or pretend, $t(60) = 2.12$, $p = .04$, conditions. There was also a main effect of question type, $F(1, 60) = 29.19$, $p < .0005$, partial $\eta^2 = .33$, such that children were more likely to say the characters' actions were “not okay” for the *permissibility* question than the *authority independence* question. There was no interaction between condition and question type, $F(1, 60) = 0.97$, $p = .39$, partial $\eta^2 = .03$.

Since *authority independence* scores were correlated with age, this analysis was re-performed adding age as a covariate to check whether the condition differences we noted above would hold after taking into account children's declining obedience to authority. As expected, age was a significant factor, $F(1, 59) = 5.94$, $p = .02$, partial $\eta^2 = .09$ and there was a significant age $\times$ question type interaction, $F(1, 59) = 5.77$, $p = .02$, partial $\eta^2 = .09$, such that age affected *authority independence* scores, not *permissibility* scores. There was still the same significant main effect of question type, $F(1, 59) = 10.41$, $p = .002$, partial $\eta^2 = .15$, and a significant main effect of condition, $F(2, 59) = 5.49$, $p = .007$, partial $\eta^2 = .16$. Post hoc tests revealed nearly the same pattern as previously described—scores in the real condition remained significantly greater than those in the fantastical condition, $t(59) = 3.32$, $p = .002$ and there was no difference between the real and pretend conditions, $t(59) = 1.63$, $p = .11$. However, unlike the previous analysis, there was no difference between pretend and fantastical conditions, $t(59) = 1.67$, $p = .10$. Together, these results suggest that both

children's growing understanding that immoral actions are wrong regardless of feedback from an authority figure and our manipulation influenced children's responses to this question.

A one-way ANOVA comparing *permissibility* scores across conditions for prosocial stories showed no differences, $F(2, 60) = 0.33, p = .72$. (Since so few children answered that it was "not okay" to the *permissibility* question for prosocial stories [$n = 7$], the follow-up *authority independence* question was too rarely asked to analyze.) However, *permissibility* scores for both story types were significantly different from chance in all conditions, all $t_s > 4.26$, all $p_s < .0005$, such that children considered moral transgressions unacceptable, whereas prosocial behaviors were considered acceptable. For *authority independence scores*, only scores from children in the real condition differed from chance, $t(20) = 4.79, p < .0005$.

4.2.2. Punishment—Two one-way ANOVAs were conducted to examine *punishment* scores, one for antisocial stories and one for prosocial stories. There was a significant difference in *punishment* scores among conditions for antisocial stories (pretend: $M = 0.71, SD = 0.42$, fantastical: $M = 0.35, SD = 0.35$, real: $M = 0.65, SD = 0.44$), $F(2, 59) = 5.01, p = .01, \eta^2 = .15$. There was no difference between scores in the real and pretend conditions, $t(59) = 0.46, p = .65$, which together were significantly above chance, $t(40) = 2.78, p = .01$. However, children in the fantastical condition judged the transgressions as less punishable than children in the other conditions (versus real: $t[59] = 2.50, p = .02$; versus pretend: $t[59] = 2.93, p = .01$); scores in this condition were below chance, $t(59) = 2.03, p = .056$. Punishment scores for prosocial stories did not significantly differ by condition (pretend: $M = 0.08, SD = 0.24$, fantastical: $M = 0.10, SD = 0.30$, real: $M = 0.07, SD = 0.24$), $F(2, 59) = 0.50, p = .95$. Unsurprisingly, these scores were significantly lower than chance, $t(61) = 12.74, p < .0005$, such that children responded that the actions should not be punished.

4.2.3. Emotional State—Children's evaluations of the victim's and transgressor's *emotional states* were analyzed using two 3 (condition) $\times$ 2 (character) mixed ANOVAs, one for antisocial stories and one for prosocial stories (see Figure 2 for means). For antisocial stories, there was a significant main effect of character, $F(1, 57) = 35.73, p < .0005$, partial $\eta^2 = .39$, such that the victim was judged as feeling worse than the transgressor. There was no main effect of condition, $F(2, 57) = 1.55, p = .22$, partial $\eta^2 = .05$, but there was an interaction between condition and character, $F(2, 57) = 5.13, p = .01$, partial $\eta^2 = .15$. To explore this interaction, one-way ANOVAs were used to explore condition effects for the characters separately. They revealed that children ratings of the transgressor's emotion did not vary by condition, $F(2, 58) = 1.78, p = .18$, but their rating of the victim's emotion did, $F(2, 58) = 6.75, p = .002$. Children in the fantastical condition rated the victim's affect as significantly more positive than children in the real condition, $t(58) = 3.67, p = .001$. In addition, the differences between the fantastical and pretend conditions as well as the pretend and real conditions approached significance, $t(58) = 1.74, p = .086$ and $t(58) = 1.91, p = .062$, respectively, such that the victim's affect in the pretend condition was rated as more negative than the fantastical condition but less negative than in the real condition. However, children's overall responses to the victim's and the transgressor's emotional state

for antisocial stories were significantly above chance, $t_s > 2.13$, $p_s < .04$, such that children clearly thought the both characters' affect would be negative.

For prosocial stories, there was no main effect of condition, $F(2, 60) = 1.13$, $p = .33$, partial $\eta^2 = .04$, nor an interaction between condition and character, $F(2, 60) = 0.31$, $p = .79$, partial $\eta^2 = .01$. However, there was a significant main effect of character, $F(1, 60) = 4.18$, $p = .05$, partial $\eta^2 = .07$, again showing that children rated the victim's affect as more negative than the transgressor's. Children's responses for the prosocial stories were also different from chance, but in the opposite direction, all $t_s > 4.38$, all $p_s < .0005$, such that children rated the affect of the characters as uniformly positive.

5. Discussion

The current experiment compared how children reason about others' antisocial and prosocial behaviors in pretend, fantastical, and non-pretend contexts in order to determine if children's real-world moral reasoning is maintained in pretense. Overall, children judged antisocial behaviors as unacceptable and prosocial behaviors as acceptable in *all* contexts, indicating that children maintain their real-world moral evaluation in the pretend world. This finding is further support of the hypothesis that children's pretense is "grounded" in knowledge about reality (Lillard & Woolley, 2015); however, this work expands on previous literature by showing that children are using more than just their general knowledge and understanding of physical and causal rules - they are additionally using their social knowledge - to construct and represent pretend worlds.

One possible interpretation of the finding that children viewed the antisocial behaviors as unacceptable in all scenarios is that children are reacting reflexively to the salient "wrongness" of the moral transgressions in the stories. Children have considerable experience with these common behaviors and their usual negative consequences in classrooms, play-groups, or at home. It is possible that the emphasis on the inappropriate nature of these actions from parents or teachers hinders children from ever considering cases in which these behaviors may actually be tolerable, such as when the actions are pretend. However, we view this possibility as unlikely since only children in the real condition continued to view the antisocial transgressions as immoral even after being told that a parent said it would be okay. Further, children did differentiate among contexts when it came to punishment judgments, such that antisocial actions in real and realistic pretend contexts were deemed punishable, but those in the fantastical context were not. Thus, there is evidence that children were making explicit judgments, not responding completely reflexively.

A more likely possibility is that children genuinely view pretending to commit antisocial actions as morally wrong, an interpretation that supports the social domain theory of moral development (Smetana, 2006; Turiel, 1983, 2006). According to social domain theory, young children make a distinction between moral and conventional transgressions, such that violations of the moral domain are considered to be universally wrong (not bound to rules or context) and related to the welfare of others, whereas social conventions are considered to be somewhat arbitrary rules that are culturally-bound and not relevant to others' welfare

(Smetana, 1981, 2006; Turiel 1983, 2002, 2006). Therefore, the tendency for children to evaluate pretend antisocial behaviors as impermissible, even though the pretend world is theoretically rule-less, indicates that they viewed those behaviors as moral transgressions. The act of pretending to hit a friend, even though it would not cause physical harm, might be seen as socially harmful. Following this logic, perhaps children would be more likely to say that violating a social-conventional rule while pretending (i.e., pretending to wear shoes to bed) is permissible. Future research could explicitly pit violations to the moral domain and violations to the conventional domain in order to examine this question and further support this theory of moral development. Moreover, it would be interesting to test whether stories of a child pretending antisocially by him/herself have resulted in higher permissibility judgments to determine whether children were focused on social harm when making their judgments.

Additionally, it would be important to ask whether children expect a person who pretends to act in antisocial ways would be more likely to perform real antisocial acts. It is possible that children are so unaccepting of pretend antisocial behavior because they expect it will predict future antisocial behavior in the real world. That is, perhaps children see pretend behaviors as manifestations of an individual's temperament, interests, and/or desires and infer that people who pretend antisocially might be more likely to display bad behavior more generally. Indeed, it is interesting to consider how children's judgments in this experiment would compare to their actual behavior. Children definitely perform antisocial actions in their everyday pretense, and not only when they are alone. Children pretend to break rules, pretend to injure each other while play fighting, and pretend to be mean or bossy, just to name a few examples. Yet, they do not usually act as if these pretend behaviors are morally wrong or deserving of punishment. It may be that if a child performed or was the "victim" of a pretend moral transgression, she would be more able to recognize its different moral status. This is another potential direction for future research.

A less central, yet intriguing, finding from this work is that participants judged pretend antisocial behaviors similarly to non-pretend antisocial behaviors when they were presented in realistic stories, but participants found pretend antisocial behaviors in fantastical stories to be more permissible. This suggests that children retain their moral reasoning when pretending more so for pretend contexts that are not far removed from reality. In other words, when the actions were set in plausible contexts, children found pretending to kick, steal, not take turns, and not share to be as equally unacceptable, punishable, and harmful as really committing these transgressions. On the other hand, when the pretend actions were set in fantastical worlds, like playing soccer with stars on the moon, children found these same antisocial behaviors to be more acceptable, less punishable, and less harmful.

This finding extends the work of Walker et al. (2015), which showed that children are more likely to generalize causal rules from realistic pretend worlds than from fantastical ones, by showing that proximity to reality matters not only for transfers from pretend worlds to reality, but it also matters for transfers in the opposite direction. Why might children have maintained their moral reasoning in the less fantastical pretend scenarios, but not the more fantastical pretend ones? After all, anything can be permissible in pretense, no matter the context. What was it about imagining the characters were on the moon or under the ocean

that made it more “okay” to pretend to commit an antisocial action? While we cannot answer this question conclusively with the current study, we suggest some possible explanations. First, perhaps changing many real-world rules gave children the idea or permission to change other rules, even though they were not necessary to the scenario. Second, it could be that children applied their own moral rules only in the non-pretend and pretend conditions because the characters were explicitly described as “like” the participants in those two conditions. Thus, perhaps children assumed those characters existed in the same real world as the child and so would be subject to the same moral rules. In the fantastical condition, the characters clearly existed in another world, so children were not prompted to make the same “like me” comparison. Without a reason to apply real-world moral rules, they might have been more open to the possibility that different worlds have different moral rules. To test whether including the “like you” phrase in the stories affected children’s answers, future research should address the case of characters who are explicitly said to exist in the real world but who engage in highly fantastical pretense.

Another possibility, which has some support from the current study, is that children assume the consequences of antisocial actions in more fantastical situations are less extreme. For example, perhaps they think that pretending to steal will “hurt” less when pretending to be in the ocean than when pretending to be in a classroom. In the current study, participants did treat the two pretend scenarios differently with respect to the victim’s emotional state. Children imagined the victim of pretend antisocial behaviors would feel more positively overall than the victim of non-pretend antisocial behaviors. Additionally, comparing the two pretend scenarios, children responded that the victim in the fantastical context would feel more positively than the victim in the realistic context. Thus, although children find all to be unacceptable, they judge antisocial behaviors as less harmful the further away from reality they seem. However, it must be noted that this difference was small, and overall, children rated the victim’s affect in pretend and non-pretend scenarios as highly negative, indicating that we cannot make a firm conclusion from these findings about what might have caused children to be less strict about moral rules in the fantastical condition. Further research should examine why proximity influences children’s tendency to apply real-world knowledge to pretend world. This second explanation would perhaps suggest there are different mechanisms for choosing whether to apply real-world knowledge to pretend worlds when reasoning about the social domain (e.g., how hurtful is the behavior), compared to reasoning about the physical domain.

Conclusion

Despite the fact that pretense is a context in which anything is possible, the results of this experiment clearly demonstrate that preschoolers do not *always* treat it as such (in line with other recent work, Lane et al. 2016; Van de Vondervoort & Friedman, 2017). Instead, they appear to believe one should adhere to the moral rules existing in the real world within pretend worlds. Interestingly, children are a bit more accepting of antisocial behavior in pretense that differs greatly from reality (i.e., fantastical pretense). These data add to a growing body of research showing that although young children do understand the separation between pretense and reality, the boundary they set up between the two domains is quite permeable – particularly in the direction of allowing reality into pretense. Further,

children do not view all pretend words uniformly – they can make nuanced distinctions between realistic and fantastical pretense. The current work raises questions concerning *why* children would treat pretend worlds differently based on their proximity to the real world and whether this mechanism is different for physical versus social knowledge. Additionally, determining whether children would judge pretend antisocial actions as moral violations in their own pretend play and whether children would “learn” a moral rule encountered in pretense (i.e., accept it as true and bring it back into reality) are other intriguing directions for future research inspired by this work.

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Highlights

- Preschoolers evaluated real or pretend antisocial behaviors.
- Pretend and real antisocial behaviors were believed to be equally impermissible.
- Antisocial behavior occurring in fantastical pretense settings was deemed more permissible.
- Children extend real-world moral evaluations into non-fantastical pretense contexts.
- Real-world moral evaluations are less likely to be applied to behavior in fantastical contexts.

Figure 1.

Mean total permissibility and authority independence scores converted into proportions by story type and condition. Bars represent standard errors and the dashed line represents chance responding.

Figure 2.

Mean proportion of ratings of victim's and transgressor's emotional state scores by story type and condition. Bars represent standard errors and the dashed line represents chance responding.

Table

Description of pretend, real, and fantastical actions in vignettes presented to children by type.

	Pretend and Real Conditions	Fantastical Condition
Antisocial	pretend/really kicked a friend while pretending/really playing soccer to score a goal	pretend to kick friend while playing star soccer to score a goal on the moon
	pretend/really did not give friend any turns while pretending to/really building a block tower	pretend to not give friend any turns while pretending to build a chocolate tower in Candy Land
	pretend/really took spoon from friend while pretend/really making soup	pretend to take spoon from friend while pretending to stir a magic potion on a flying carpet
	pretend/really grabbed and ate all the cookies while pretend/really eating a snack with friend	pretend to grab and eat all the bubbles while pretending to eat bubbles under the sea
Prosocial	pretend/really helped friend find leash in order to pretend/really walking a puppy	pretend to help friend find a leash in order to pretend to walk a unicorn in an enchanted forest
	pretend/really handed friend crayons while pretending/really drawing pictures	pretend to hand friend enchanted crayons while pretending to be magical artists drawing pictures that come to life