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The Self as a Moral Agent: Preschoolers Behave Morally but Believe in the Freedom to Do Otherwise

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Recent work suggests a strong connection between intuitions regarding our own free will and our moral behavior. We investigate the origins of this link by asking whether preschool-aged children construe their own moral actions as freely chosen. We gave children the option to make three moral/ social choices (avoiding harm to another, following a rule, and following peer behavior) and then asked them to retrospect as to whether they were *free to have done otherwise*. When given the choice to act (either morally or immorally), children avoided harm and abided by rules, but they endorsed their freedom to have done otherwise. When choice was restricted by adult instruction, children did not endorse their free choice and indicated feeling constrained by moral obligation in their explanatory responses. These results suggest that children believe that their moral actions afford free will, but this belief is dependent on their experience of choice.

Recent work documents a strong bidirectional link between adults' moral reasoning and their belief in free will. In one direction, our desire to assign moral responsibility can affect our endorsements of the existence of free will (Baer, Kaufman, & Baumeister, 2008; Malle & Guglielmo, 2011; Nichols, 2011; Nichols & Knobe, 2007; Phillips & Knobe, 2009; Pizarro & Helzer, 2010). In the other direction, manipulating beliefs in free will causes changes to moral behavior (Vohs & Schooler, 2008). The strength of this connection suggests the possibility that beliefs about free will and morality are linked early in development. Here, we examine the origins of this link by investigating preschoolers' beliefs about a concept central to free will: choice. In particular, we asked whether preschoolers' judgments about their own freedom to make choices are influenced by the presence of moral and social obligations.

In asking whether preschoolers reason about freedom of choice in a moral context, it is important to bear in mind that for adults, notions of choice and moral responsibility often conflict. On the one hand, belief in free will is culturally universal (see Baer et al., 2008; Sarkissian et al., 2010) and critical to the functioning of law in our society (Hart & Honore, 1985). However, we understand that everyday actions are influenced by external forces, including social and moral obligations, and therefore, such obligations influence our choices. Thus, notions of personal freedom and social obligation are often in direct competition as candidate causes of our own and others' actions, and our causal attributions depend on understanding how they interact (e.g., Jones & Nisbett, 1971; Ross & Nisbett, 1991; Weber, 1978).

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Recent evidence suggests that by preschool, children share some of our adult intuitions about choice: Some actions are free (and could have been otherwise) and some are constrained (thus must have occurred as they did). Preschool-aged children, like adults, entertain alternative possibilities for human behavior (Harris, German, & Mills, 1996; Nichols, 2004; Sobel, 2004), but they also understand that people's actions cannot violate physical laws such as gravity, object solidity, and biological change (Paulus & Moore, 2011; Schult & Wellman, 1997). Importantly, they also understand that the ability to choose alternative courses of action cannot surpass physical and mental limitations (Chernyak, Kushnir, Sullivan, & Wang, 2013; Kushnir, Wellman, & Chernyak, 2009).

Children's judgments about choice in the face of social (and, by extension, moral) obligations are less clear. On one hand, a wealth of work in social domain theory (see Smetana, 2006, for a review) has documented that preschoolers are generally rigid in their endorsements in the lack of freedom to break moral rules. For example, preschoolers state that moral rules are obligatory, even when they are endorsed as ''being OK'' to break by revered authority figures (e.g., Smetana, 1981). Therefore, with respect to moral rules, preschoolers may believe in a *lack* of freedom of choice. There is suggestive evidence from other studies that the same may hold true for rules of social convention: Children rigidly enforce actions presented as normative (Rakoczy, Warneken, & Tomasello, 2008), state that following rules makes one happier (Lagattuta, 2008), and predict that people's behavior will conform to rules (Kalish & Shiverick, 2004). Thus, moral and social obligations might act as constraints for children similar to physical limitations.

In some cases, however, preschool children show a surprising flexibility with respect to moral and social rules. For example, according to social domain theory, although moral rules may be rigidly enforced, preschoolers endorse notions of flexibility in social behavior; they believe in the ability to choose everyday actions such as in which activities to engage (e.g., Killen & Smetana, 1999; Nucci & Weber, 1995), and they understand that rules of social convention are arbitrarily imposed and therefore they can act against them (Smetana, 1981). Recent work on children's prosocial behavior finds similar flexibility in children's understanding of *moral* rules: Infants generally dislike those who harm others (Hamlin, Wynn, & Bloom, 2008) but are more positive toward those who harm unliked others (Hamlin, Mahajan, Liberman, & Wynn, 2013). Similarly, toddlers selectively help those who have helped the child in the past (Dunfield & Kuhlmeier, 2010) or who are in need of help (Vaish, Missana, & Tomasello, 2011; Warneken & Tomasello, 2006), and they understand that normative rules apply only in specific contexts (Rakoczy, Brosche, Warneken, & Tomasello, 2009). Prior research is thus inconclusive with respect to whether children evaluate their own moral and social behavior as freely chosen.

One possibility for this inconsistency is that early in life, children only reason about freedom of choice in situations that are morally neutral. Another possibility, however, is that the experience of making moral choices changes children's evaluations of choice in moral contexts. We thus hypothesized that children who are able to choose their own course of action will behave in accordance with moral principles but would retrospectively endorse the freedom to have acted against them. In contrast, when children lack the ability to choose (e.g., when *obligated* to act morally by someone else), children will instead judge themselves to be *unfree*. Put another way, the same behaviors, differently caused, could lead children to different intuitions about freedom of choice in moral contexts.

In the following experiments, we presented preschool-aged children with the task of drawing simple shapes in social scenarios involving a puppet. In Experiment 1, two trials were designed

such that one course of action (i.e., one type of drawing) led to a less favorable moral outcome (i.e., would make the puppet cry or would break the puppet's stated rule) than would another course of action. We allowed children to choose either the ''moral'' or ''immoral'' outcome and later asked whether they were free to have done otherwise. We contrasted this with control trials in which the outcomes were morally neutral. Experiment 2 involved a set of similar scenarios, but instead of choosing their own course of action, children were instructed to act morally. We predicted that only when children were given the opportunity to choose their own course of action would they endorse their freedom of choice in moral contexts.

EXPERIMENT 1

In Experiment 1, we asked whether children 1) act morally, and 2) retrospect on their own moral actions by endorsing the freedom to do otherwise.

Method

Participants

Participants were thirty-two 4- and 5-year-olds (22 boys; $M_{age} = 4;8$; $SD = 5$ months) recruited from a midsized rural town and a midsized university town.

Materials

Materials were 6 colored placemats, markers, 12 predrawn shapes (dot, straight line, circle, triangle, square, X, wavy line, semicircle, curly line, zig zag, spiral, and raindrop), and 4 puppets (cat, pig, dog, elephant).

Procedure

Children were given a marker and a piece of paper on a colored placemat. In each trial, the experimenter placed two predrawn shapes (randomly chosen from the set) in front of the child and asked the child to identify them. The child's label for the shape was used throughout, and the experimenter provided a label if the child could not identify the shape. Each child then completed the following sequence of trials.

Free choice 1.   The experimenter first introduced the game by stating, ''In this game, you get to choose what you want to draw! So you can draw whichever one of these you want to draw.'' The experimenter then prompted the child to draw one of the shapes in front of them. After drawing and before beginning the next trial, the experimenter asked for a *free-choice judgment* as follows: ''Last time on the [red] mat, when you drew the [circle], could you have drawn the [alternate shape (e.g., square)]?'' She then asked children to explain their response (''How could you do that?'' or ''Why not?'').

After Free Choice 1, each child completed four social trials presented in a counterbalanced Latin square design. In each trial, the experimenter introduced a new puppet along with a

statement about the puppet. On two of the trials, the statement presented a moral reason against drawing one of the shapes. Each moral trial presented an explicit rule: One of the moral trials presented a rule justified by harm to others, and the other presented a rule justified by authority mandates. The other two trials did not present any rules and thus served as controls. The language presented in each trial was as follows:

Harm constraint (moral trial).   ''[Kitty] hates [squares]. Every time [Kitty] sees [a square], it reminds her of something *really* sad, and sometimes she even cries!''

Rule constraint (moral trial).   ''[Ellie] says the rule is you have to draw a [circle]. She says that's the rule and everybody has to do it.''

Prescriptive behavior (control trial).   ''[Doggie] just played with lots of boys and girls and all of them drew a [circle]. Every single one of them drew a [circle].'' This trial controlled for the prescription to behave a certain way (in Trials 1 and 2) but did so in a morally neutral context.

Harm language (control trial).   ''[Piggy] hates Clifford the Big Red Dog. Every time [Piggy] sees Clifford the Big Red Dog, it reminds her of something *really* sad, and sometimes she even cries!'' This trial posed no constraint but served as a control for morally valenced language.

The puppets, shapes used, and side of ''constrained'' shape (child's left or right) in each trial were randomly selected. After each trial, the experimenter asked the free-choice judgment question in a similar manner to the Free Choice 1 trial but added a reminder that the puppet was present (''Last time, on the [blue] mat, when [Kitty] was right here, could you have drawn the [square]?''). The experimenter then prompted children to explain their response.

Free choice 2.   At the end of all four puppet trials, there was one final free-choice drawing trial identical to the first (Free Choice 2), which allowed us to assess for either stability or change in children's endorsements of freedom of choice *after* undergoing social constraint.

Coding

Each session was videotaped. Only first answers and explanations to each question were coded. Videos were coded by the first author. A condition-blind coder then coded 25% of the videos for shape drawn and free-choice judgment (reliability $= 97\%$, $\kappa = .91$, $p < .001$).

Explanations were coded into the following categories: references to harm (e.g., ''it would make doggie cry''); rules (''because that was the rule''); prescriptive behavior (''because everyone else drew circles''); agency (''I know how to draw lines''; or verbal and action-based descriptions of *how* to draw); other limitations (''I didn't want to''; ''I don't know how to draw triangles''); and other explanations (statements of outcome such as ''because I just drew the dot''; ''I don't know''). Explanations were transcribed and coded by the first author and then were separately categorized by a condition-blind coder (reliability $= 89\%$, $\kappa = .79$, $p < .001$).

Results and Discussion

We first examined children's moral behaviors (see Figure 1). Results showed that the overwhelming majority of children behaved morally—avoided drawing the shapes that harmed the
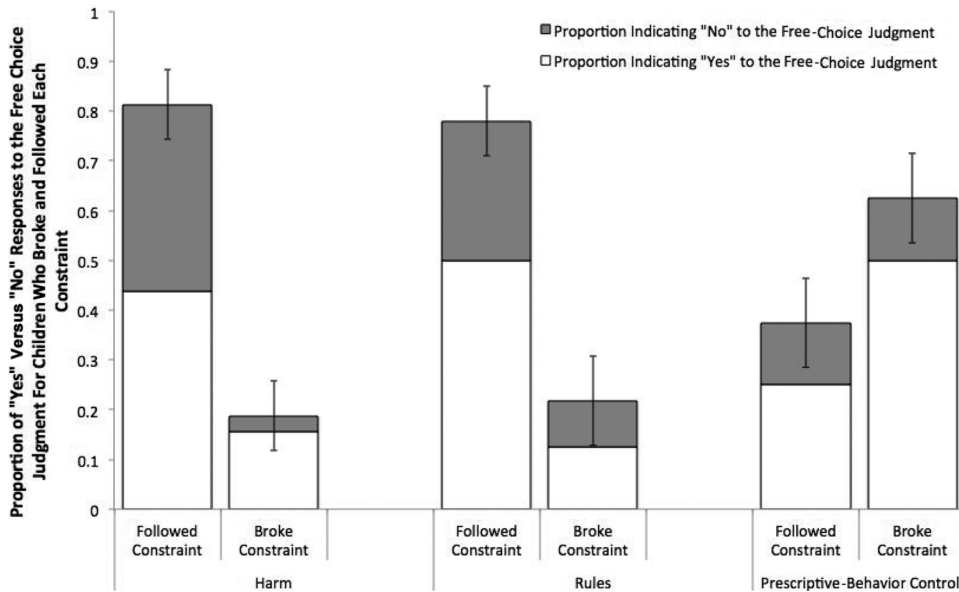
Note.   Bars represent +/1standard error.

FIGURE 1 Experiment 1: Proportion of ''yes'' responses (shown in white) to the free-choice judgment for children who did versus children who did not follow each constraint (harm, rules, and prescriptive-behavior control).

puppet (26/32; 81%) or drawing shapes that broke the rule (25/32; 78%), providing evidence that children interpreted these trials as morally imperative. Direct within-subject comparisons showed that children were equally likely to avoid harm and follow rules (McNemar's *ns*). We therefore summed their responses so that each child received a moral behavior score of 0 to 2, with 2 indicating that the child both avoided harm and followed the rules, a score of 0 indicating that the child did neither of the two, and a score of 1 indicating that the child performed one moral behavior but not the other. A chi-squared analysis revealed that more children (21/32) received a score of 2 (behaved morally in both trials) than would be expected by chance, $\chi^2(2, N = 32) = 28.69$, $p < .001$, $\varphi = .95$.

We then contrasted behaviors in the moral trials with the trial in which the outcome was suggested but which was morally neutral (prescriptive-behavior control). In contrast to the harm and rules trial, only a minority of children (12/32; 38%) chose to draw the shape that followed peer behavior. Direct within-subject comparisons showed that children were more likely to avoid harm (McNemar's $p < .01$, $g = .39$)[1] and follow the rule (McNemar's $p < .01$, $g = .38$) than they were to follow peer behavior. Therefore, children's moral behavior in the two moral trials was not driven by a tendency to follow any and all behavioral prescriptions.

Our next question concerned whether children endorsed their freedom of choice. We first analyzed their ''yes'' responses to the free-choice judgment in morally neutral scenarios. In these scenarios, children generally indicated high beliefs in choice: The majority (21/32; 66%)

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[1]Calculated using binomial distribution. Effect size represents observed minus expected probability.

TABLE 1
Free-Choice Judgment Scores (0–2) in Experiments 1 and 2

Response type (0, 1, 2)	Experiment 1			Experiment 2	
	Moral trials harm constraint + rule constraint	Control trials prescriptive-behavior control + harm-language control	Free-choice trials free choice 1 + free choice 2	Moral trials harm constraint + rule constraint	Control trials prescriptive-behavior control + own-desire control
0	11	6	5	<u>13</u>	<u>14</u>
1	3	6	11	8	6
2	<u>18</u>	<u>20</u>	<u>16</u>	12	12

Note. Free-choice judgments were assigned a score of "1" if the child answered "yes" and "0" if he/she answered "no." Children's scores for each trial type category were summed. See the text for details. Modal responses are underlined.

indicated a belief in freedom of choice in the Free Choice 1 trial, as well as in the Free Choice 2 trial (22/32; 69%), and there were no differences between the two (McNemar's *ns*). We thus summed the number of "yes" responses such that each child received an overall free-choice trial score of 0 to 2 (see Table 1). A chi-squared analysis indicated that children indicated higher endorsements of freedom of choice, $\chi^2(2, N = 32) = 10.69$, $p < .01$, $\varphi = .58$, than would be expected by chance.

Having established that children behave morally and endorse free will in morally neutral scenarios, we asked the critical question of whether children's endorsements of their own free choice look different in the moral trials. Overall, the majority of children said that they were free to harm the puppet (19/32; 59%) and break the puppet's stated rule (20/32; 63%), and combined responses differed significantly from chance, $\chi^2(2, N = 32) = 24.19$, $p < .001$, $\varphi = .87$.

The analysis of free-choice judgments in the moral trials remained the same when considering only the subset of children who initially behaved in accordance with the constraints. Figure 1 shows children's "yes" responses to the free-choice judgment as a function of their actions on all three trials in which there was a behavior suggested by the puppet (harm constraint, rule constraint, prescriptive-behavior control). A chi-squared analysis on the summed scores revealed that of the children who both avoided harm and followed rules, a significant majority was more likely to answer "yes" to the free-choice judgment in both trials than would be expected by chance, $\chi^2(2, N = 21) = 12.29$, $p < .01$, $\varphi = .77$. Thus, the majority of children who acted morally believed that they had the freedom to do otherwise.

Additionally, neither prescriptive behavior nor valenced language influenced children's free-choice judgments. The majority of children answered "yes" to the free-choice judgment in both the prescriptive-behavior (24/32; 75%) and the harm-language control trials (22/32; 69%). There were no differences between the two (McNemar's *ns*), and the combined responses differed significantly from chance, $\chi^2(2, N = 32) = 24.75$, $p < .001$, $\varphi = .88$. Thus, as with situations posing no constraint, children endorsed their freedom in situations involving prescriptive behavior and valenced language.

An analysis of children's explanations lends support to the idea that children were in fact reasoning about their agentic capabilities in their judgments. The majority (16/19; 84%) of children in the harm trial, $\chi^2(2, N = 19) = 22.23$, $p < .001$, $\varphi = 1.08$, and rule trial (19/20; 95%), $\chi^2(1, N = 20) = 16.20$, $p < .001$, $\varphi = .90$, made references to agency following a "yes" response

to the free-choice judgment. Children in the control trials and free-choice trials followed a similar pattern (all $\chi^2 < .01$). Conversely, ''no'' responders in the two moral trials did not show a preference for explanation type (χ^2 *ns*), suggesting that ''no'' responders did not necessarily feel constrained by harm or rules.

EXPERIMENT 2

In Experiment 1, the majority of children avoided harm and followed the rules but nonetheless judged themselves free to have acted otherwise. These findings are consistent with previous studies showing early-developing intuitions about freedom of choice (Kushnir, 2012; Nichols, 2004).

In Experiment 2, we asked what happens to children's free-choice judgments when children's choices are restricted. We presented children with three of the scenarios from Experiment 1 (harm constraint, rule constraint, prescriptive-behavior control), but this time, we instructed children to only draw the shape that produced the designated moral or prescriptive outcome. Because children's responses to the three free-choice scenarios in Experiment 1 were the same, we included only one free-choice trial: Children were asked to follow their own personal desire and to draw ''whichever shape [they] like best.''

Because children were highly likely to act in accordance with the puppets' wishes in Experiment 1, instructing them to do so in Experiment 2 did not significantly alter the actual responses children made. However, we predicted that restricting choice would alter children's judgments, and that this time, children would be less likely to say they were free to have acted immorally. These different judgments should therefore be followed by different explanations; specifically, we expected children's explanations for feeling unfree to refer to moral considerations such as avoiding harm and following rules.

Method

Participants

Participants were thirty-two 4- and 5-year-olds (17 boys; $M_{age} = 4;8$; $SD = 5$ months) recruited from a midsized rural town, a midsized university town, and a large city.

Materials

Materials were 4 colored placemats, markers, 8 predrawn shapes (a dot, a straight line, a circle, a triangle, a square, an X, a semi-circle, and a squiggly line) and 4 puppets (as in Experiment 1).

Procedure

Each child completed four trials: harm, rules, prescriptive-behavior control (all identical to Experiment 1), and an own-desire (free-choice) control. All four trials were counterbalanced using a Latin square design. After being presented with the shapes, puppet, and puppet's story, the child was asked to draw the shape that avoided harming the puppet in the harm trial; the

shape that followed the rule in the rule trial; and the shape that everyone else drew in the prescriptive-behavior control trial (e.g., ''Can you draw the [circle]?''). In the own-desire trial, the experimenter instructed the child to draw the shape that he/she liked best (''Can you draw the one that you like the best?'').

Free-choice judgments and explanations coding was identical to Experiment 1. A condition-blind coder coded 25% of the videos for free-choice judgment (reliability $= 94\%$, $\kappa = .87$, $p < .001$) and all of the transcribed explanations (reliability $= 92\%$, $\kappa = .90$, $p < .001$).

Results and Discussion

Our main hypothesis was that children would not judge themselves to be free to choose when their choices were restricted by experimenter instruction. First, free-choice judgments between the two moral trials in Experiment 2 revealed that children felt less free to harm than to break rules (McNemar's $p < .05$, $g = .50$). Therefore, when choice was restricted, we found a difference in responding to empathic versus rule-based moral contexts. As such, we analyzed the
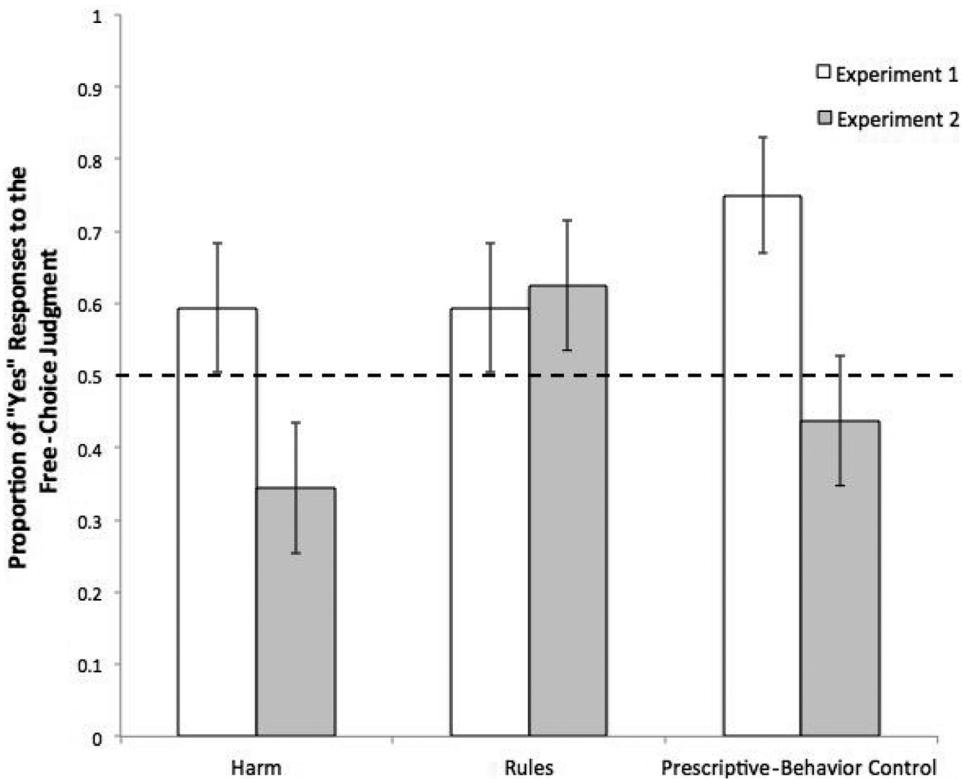
Note. Bars represent +/1standard error.

FIGURE 2 Proportion of ''yes'' responses to the free-choice judgment in Experiment 1 versus Experiment 2 across trials (harm, rules, and prescriptive-behavior control).

two trials separately. To address our main hypothesis, we compared free-choice judgments across the two experiments (Figure 2). Endorsements of free choice were significantly lower in the harm trial of Experiment 2 than they were in Experiment 1, $\chi^2(1, N = 64) = 4.01$, $p < .05$, $\varphi = .25$. Therefore, children were less likely to endorse their free choice to harm the puppet when they were instructed to act morally. However, children's endorsement of free choice in the rules trial was similar across the two experiments (χ^2 ns).

Explanations confirm this difference between the harm-constraint trial and the other trials. Of the ''no'' responders in the harm trial, 17/21 (81%) explained their lack of free choice by making references to harm as a constraint on their actions, $\chi^2(2, N = 21) = 21.71$, $p < .01$, $\varphi = 1.02$, suggesting that children interpreted the harm constraint as morally obligatory. However, ''no'' responders in the other three trials did not show a preference for any explanation type (all χ^2 ns).

We then analyzed children's responses in morally neutral contexts. The two control trials (prescriptive-behavior and own-desire) did not differ from one another in proportion of ''yes'' responses (McNemar's ns). The combined responses differed from chance, $\chi^2(2, N = 32) = 12.75$, $p < .01$, $\varphi = .63$, due to a large number (14/32) of ''no'' responses across both trials. This analysis stands in contrast to Experiment 1 in which only a minority of children (6/32) answered ''no'' to both of the morally neutral trials (prescriptive-behavior and harm-language controls); see Table 1. To compare the neutral trials directly, we averaged the four morally neutral trials in Experiment 1 and the two morally neutral trials in Experiment 2. An independent t test revealed that average responses were overall lower in Experiment 2, when children were instructed to act in a specific manner, than they were in Experiment 1, in which children were allowed to act however they wished, $t(62) = -2.25$, $p < .05$, $d = 0.57$. Thus, when choice was restricted, children were less likely to endorse freedom of choice even in morally neutral scenarios.

GENERAL DISCUSSION

When given the choice to act either morally or immorally, children generally behaved morally, avoiding harm and abiding by rules, but they endorsed their freedom of choice to do otherwise. When choice was restricted by adult instruction, however, children did not endorse their free choice and instead indicated feeling constrained by moral obligation. These results suggest dependence between young children's experience of *moral agency*, or the ability to bring about a positive moral outcome, and their intuitions about their own free choice in moral contexts.

These findings are consistent with previous work showing that free-will intuitions develop in the preschool years and begin with the ability to distinguish between freely chosen and constrained actions (Chernyak et al., 2013; Kushnir, 2012; Nichols, 2004). Here we show that these early intuitions about choice are also linked to children's developing moral understanding. Moreover, we show that judgments about choice in moral contexts are not driven solely by the experience of effectuating a moral outcome. We found differences in endorsements of choice across studies even though the experience of bringing about moral outcomes was equivalent. Interestingly, instruction to behave morally led to differences in endorsements across categories of moral action as well. In Experiment 2, children were more likely to feel unfree to break harm-based rather than rule-based constraints, and they were more likely to reference harm in their explanations. This is consistent with work in social domain theory suggesting that children are less flexible in their treatment of harm-based rather than authority-based rules (see Smetana, 2006; Turiel, 1983).

Our findings leave open interesting questions about the mechanisms by which experiencing moral agency influences children's judgments of choice. One possibility is that preventing children from making the moral choice on their own (in Experiment 2) affected children's interpretation of the free-choice judgment question. Children may have interpreted our stated "*could you have . . .*" as "*would you have . . . ,*" thus affirming that, given a choice, they *would* have done the right thing. Another possibility is that the additional experimental instruction to follow the constraint (in Experiment 2) caused children to interpret the instructions themselves as containing a rule. These instructions may have thus exerted an influence on children's judgments across all trials, albeit to different degrees. Yet another possibility is that experiencing choice (in Experiment 1) influenced judgments of choice by affecting children's episodic memory. This explanation is consistent with studies showing that preschoolers have systematic agency biases in their memory for past events (Foley & Ratner, 1998), are more likely to endorse choice over events that are under their own personal control (Nucci & Weber, 1995), and are more likely to remember episodes over which they have control (Quon & Atance, 2010).

Investigating the developmental origin of these beliefs about choice may also help us better understand the basis for our adult intuitions about free will. Our results are consistent with prior work finding a link between moral cognition and free-will beliefs. However, they are also consistent with prior work that finds that our notion of choice, a concept central to free will, is subject to variability across situations, across development, and across cultures (Chernyak et al., 2013; Iyengar & Lepper, 1999; Miller, Das, & Chakravarthy, 2011; Savani, Markus, Naidu, Kumar, & Berlia, 2010). Although further developmental evidence is needed to shed light on the types of early experiences that give rise to different ideas about choice, our findings suggest that the experience of moral agency plays a critical role.

ACKNOWLEDGMENTS

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