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Children's Developing Understanding of the Conventionality of Rules

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ABSTRACT

Much research has investigated how children relate to norms taught to them by adult authorities. Very few studies have investigated norms that arise out of children's own peer interactions. In two studies, we investigated how 5- and 7-year-old children teach, enforce, and understand rules that they either created themselves or were taught by an adult. Children ($N = 240$) were asked to either invent game rules on their own or were taught these exact same rules by an adult (yoked design). Children of both ages enforced and transmitted the rules in a normative way, regardless of whether they had invented them or were taught the rules by an adult, suggesting that they viewed even their own self-made rules as normatively binding. However, creating the rules led 5-year-old children to understand them as much more changeable as compared with adult-taught rules. Seven-year-olds, in contrast, regarded both kinds of rules as equally changeable, indeed allowing fewer changes to their self-created rules than 5-year-olds. While the process of creating rules seemed to enlighten preschoolers' understanding of the conventionality of the rules, school-aged children regarded both self-created rules and adult-taught rules in a similar manner, suggesting a deeper understanding of rule normativity as arising from social agreement and commitment.

Children are born into a social world structured by preexisting norms and rules. Such guidelines are an intricate part of human life as they prescribe and proscribe behaviors for virtually every social interaction (e.g., Cialdini & Trost, 1998). There are three key aspects of social norms: They are creatable (e.g., by mutual agreement), enforceable (e.g., when they are violated), and also changeable (in contrast to immutable physical laws).

From their 2nd year of life, children already start conforming to social norms that are issued by an adult authority (e.g., Gralinski & Kopp, 1993). At this early age, conformity to norms may be mostly a matter of compliance, and thus, the force of norms derives mainly from adult authority. This authority-based understanding of norms makes them "objective" and immutable—as opposed to social and alterable—facts of life, which is why Piaget (1932) termed preschool children "moral realists." Even though norms are social creations and only exist because we take them to exist (e.g., Bicchieri, 2006; Searle, 1995), young children seem oblivious to this social dimension of norms. Importantly though, children do not treat every kind of social norm alike. Indeed, research in social domain theory has revealed that

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preschoolers do in fact consider norms changeable but only if they are conventional (not moral) norms and only if the changes are licensed by a legitimate authority (Turiel, 1983). For example, if a teacher says it is OK to wear a bathing suit to kindergarten, then children view it as perfectly fine (e.g., Smetana et al., 2012; Tisak, 1995). While school-aged children already seem to understand the more general alterability and flexibility of conventional norms (e.g., Helwig, Tisak, & Turiel, 1990; Levy, Taylor, & Gelman, 1995), preschool children believe that only adults have the authority to change conventional norms (Nobes, 1999).

A number of recent studies have shown that from 2 to 3 years of age, young children also start to actively enforce conventional norms on others by protesting against a norm transgressor (Rakoczy, Warneken, & Tomasello, 2008; Schmidt, Rakoczy, & Tomasello, 2012; Wyman, Rakoczy, & Tomasello, 2009). This enforcement even occurs in solitary play situations in which an actor performs a wrong game action[1] by which the child is not affected in any way. Importantly, in enforcing norms, children use generic normative language such as, "This is not right" or, "One mustn't do it like this" (Göckeritz, Schmidt, & Tomasello, 2014; Köymen et al., 2014; Köymen, Schmidt, Rost, Lieven, & Tomasello, 2015). This language is particularly telling because it suggests that children grasp that the norms apply universally to anyone who participates in a certain practice—past, present, and future.

A key characteristic of these previous enforcement studies is that children were enforcing norms that were preexisting and introduced by an authority (i.e., an adult experimenter). This important approach relates to the reality of children's lives, as they are confronted with the rules of the adult world constantly. However, solely investigating children's understanding of preexisting rules cannot fully answer the question of whether children understand norms as social constructs that are creatable, enforceable, and changeable, independent of adult authority. Thus, a different perspective on children's norms can be found in another important reality of children's lives, which is their mutual peer relationships in which children *construct* their own routines, rules, and "microcultures" (Cobb-Moore, Danby, & Farrell, 2009; Corsaro & Eder, 1990; Flynn & Whiten, 2012; Hartup, 1970). Investigating such norms that children negotiate for themselves provides a second important perspective.

Only a few studies have investigated children's understanding of self-created rules. First, Nobes (1999) asked groups of 5- to 7-year-olds to build a bridge together. He found that children came up with their own rules and imposed these rules on others very rigidly as if they were non-negotiable. In a more recent study, Göckeritz et al. (2014) gave children the opportunity to create rules themselves for an instrumental task (i.e., retrieving marbles from an apparatus with several parts). They found that 5-year-old children readily created rules together with peers when they needed to coordinate toward this mutual goal. Additionally, children even taught these rules in a generic normative way to naïve peers as in, "This is how the game goes," indicating that they also treat their own rules as objective and normatively binding (see also Merei, 1949). Most recently, Riggs and Young (2016) used a game with the instrumental goal of transporting a marble and either taught children the rules of how to transport the marble or had them chose a rule out of several equally efficient ways. When asked about the correct way to play the game, children were

[1]For the purpose of this article, we use game rules as a way to operationalize conventional social norms. Thus, here we use the terms "rules" and "norms" interchangeably assuming that how children relate to game rules is a reflection of how they relate to conventional norms in general.

able to answer accurately after they had been explicitly taught the rules by an adult, but they accepted several ways of playing as correct when they had decided on the rules themselves.

In these previous peer studies, however, children were given an instrumental task that led to the creation of mostly instrumental rules (e.g., how to best build a bridge or how to handle an apparatus effectively to get rewards). These instrumental rules are different from purely conventional and arbitrary rules because in addition to a normative force emanating from mutual consent, they also carry a rational force as they provide a solution to an instrumental problem (Schmidt, Rakoczy, Mietzsch, & Tomasello, 2016). Conventional rules focus more strongly on the social constructivist aspect of norms as there is no objective reason to follow them but only a social reason, namely that we as a group have agreed to do so (Schmidt & Rakoczy, in press; Schmidt & Tomasello, 2012). Thus, following instrumental norms is due in part to the rational, causal structure of the task, but following arbitrary conventional norms is mainly due to social commitments presumably based on a desire to belong to the group that follows this convention (Kenward, 2012; Kenward, Karlsson, & Persson, 2011). The point is that to understand how children conceive of the social world, we need to go beyond merely instrumental rules and look at children's understanding of arbitrary norms based solely on social convention.

It is also not clear in these previous studies whether children thought that they themselves had created the norm or rather believed they merely *discovered* the pre-existing "correct" and unchangeable rules of the game as intended by adult authorities. Especially in the study by Riggs and Young (2016), there was only a very limited number of ways the game could efficiently be played and they had all been licensed by an adult authority previously, therefore indicating that either way would be correct from the adult's stance, which might have driven children's responses. It also remains uncertain from these previous studies whether children understand their self-created rules to be different from the rules provided by adults with regard to their normative force and changeability.

In the current study, therefore, we sought to investigate children's understanding of the *normativity* and *binding* character of their self-created arbitrary game rules in a context free from any instrumental pressure to reach a goal, as measured in the way they teach these rules and enforce them on others. While Göckeritz et al. (2014) investigated only the transmission of self-created rules, the enforcement and protest against violations of self-created rules has not been previously investigated. We also directly compared children's enforcement of their own rules versus their enforcement of adult-given rules. Finally, we also compared children's understanding of the changeability of self-created versus adult-given rules, as changeability would suggest an understanding of the rules as flexible social constructs. While young children's understanding of the conventionality of preexisting norms seems to be rather limited (Kalish, 2005; Kalish, Weissman, & Bernstein, 2000), we hypothesized that the interactive *process* of self-creation enables children to conceive of their self-created rules as more flexible. In this study, then, the children's task was to invent a game and its rules all on their own from scratch. In a yoked control, an adult presented these exact same child-created rules to other children and thus taught them as adult-given rules.

We focused on 5-year-old preschoolers as they are reliable norm enforcers and creators (Göckeritz et al., 2014; Schmidt & Tomasello, 2012), and they are already quite

accomplished in problem-solving tasks (Carlson, Zelazo, & Faja, 2013; Moriguchi, 2014) and engage in complex peer play (Howes & Matheson, 1992). We ran a pilot study with five triads of 3-year-olds, but the task of inventing a game together was too demanding for them. As a bonus, the current procedure also allowed us to note the kinds of games that children invent on their own.

Study 1

Method

Participants

Children came from mixed socioeconomic backgrounds of a midsized German city and participated as same-sex triads[2] in their respective day care centers. Consent for testing was given by their parents and children were familiar with each other as reported by kindergarten teachers. One triad was excluded from data collection due to unwillingness to engage in the task. Overall, 40 triads (M_{age} = 5;4, age range = 4;11–5;10) were included in the data set (20 triads per condition; 10 male and 10 female). However, 5 individual children (1 boy, 4 girls), each from a different triad, were excluded from data analyses because they refused to participate in the test phase (n = 3), were uncooperative (n = 1), or had forgotten the game during the test phase (n = 1). In total, 115 children were included in the sample that was analyzed.

Materials

Materials included a life-sized hand puppet that was played by Experimenter 2 (E2) and a cardboard box with the following objects: 3 ropes, 2 large wooden cubes, 3 small wooden cubes, 16 colored wooden marbles, and 1 wooden triangle with round colored tips.

Design

Children were tested in a yoked between-subjects design, and each triad of children was either asked to invent a game (i.e., invention condition) or discover a preexisting game, which was then taught to them later (i.e., discovery condition). Each triad in the discovery condition was matched to a triad in the invention condition and was taught the game rules that their matched group had invented before. The reason for this design was to control for the manifold games children invented, which varied in complexity, difficulty, etc.

Procedure

After Experimenter 1 (E1) had introduced the three children to the puppet operated by E2, they all played two warm-up games together (rolling a ball toward each other and solving a puzzle together by taking turns). The puppet behaved childishly and clumsily so that the children would feel comfortable in interacting with and correcting her. After these games, the puppet left the room, and E1 told the children that she had forgotten to bring more games for other children who would visit her later. She then accidentally discovered

[2]We investigated triads, as opposed to dyads, to tap into norm creation as a group process that goes beyond the scope of mere dyadic commitments. Additionally, for some insight into the debate in social psychology as to whether dyads can be understood as groups, see Moreland (2010) and Williams (2010), but this question goes beyond the scope of this article.

the cardboard box in the room and the objects inside. In the *invention condition*, E1 asked the children to help her by inventing a game with the objects that she could later play with the other children. In the *discovery condition*, E1 described the box with the objects as "a game" that she did not know and asked the children to help her by finding out how the game goes so that she could play it with the other children. In both conditions, E1 then introduced an hourglass to the children to visualize how much time they had to invent/discover the game together and left them on their own (see Appendix A for the detailed procedure). In the discovery condition, E1 returned after approximately 5 min and told the children that someone had just told her how the game goes and then she went on to explain the "correct" (yoked) game to the children. Children in both conditions were then given about 2 min on their own to practice either their self-invented game or the adult-instructed game. Importantly, E1 did not ask children in the discovery condition what they had found out about the game or what they thought of how the game goes. Thus, this intervention was not framed as a direct enforcement of the rules or a correction of what children had already discovered on their own, but rather, it was framed as naïve teaching.

Throughout the procedure, E1 could watch the children on a monitor outside the room and see whether they had already reached agreement on a game. In the invention condition, children were given about 7 min to invent a game. However, some children finished more quickly (5 min 18 s for the fastest group) or needed more time (9 min 19 s for the slowest group) such that E1 would shorten or extend the invention phase for these groups, respectively. Due to this variation, children in the discovery condition were matched to the exact times of the invention condition to control for the time spent with the objects, which was therefore not different between conditions.

After the manipulation phase, the puppet returned and the test phase started. During that time, the puppet interviewed each child of one triad separately in an interactive way while E1 and the other children waited outside the room (see Appendix A for all interview questions). First, the puppet asked the child to show her the game. During this teaching phase, we assessed children's use of normative language as an indicator of their understanding of the game rules as binding. Afterward, children were asked how they knew about the game and who had invented the game to assess children's knowledge about the origin of the game as a manipulation check. Then the puppet went on to play the game and violated a game rule. Here, children's protest behavior was measured to assess whether they enforced the game rules in a normative way. Finally, children's flexibility regarding rule changes was investigated to assess their understanding of the conventionality of the rules. For this purpose, children were asked four questions about their willingness to allow rule changes for which the puppet would suggest and enact a specific rule change. To tap into different degrees and motivations for rule changes, we varied the extent to which the game was changed (i.e., one minor addition vs. changing the goal of the game) and the necessity to change the game (i.e., it is just someone's spontaneous idea vs. a person is physically not able to play according to the rules). In detail, the first flexibility question concerned a minor rule change by adding a nonfunctional action to the game (i.e., tapping an object on the floor twice before actually playing with it). The second and third question suggested a major rule change by changing the goal of the game. The third question was based on the work of Turiel (e.g., 1983, p. 82) and asked the children whether the rule can be changed if other children (in Turiel's case, people from another country) decided to play the game differently. Finally, the fourth question

addressed a highly needed rule change due to someone's physical inability to play the "right way" (i.e., someone has broken his arms and can only play the game with his feet). After each answer, the puppet also asked the children about the reasoning for their judgment to (not) change the rule. The puppet's specific protest actions and rule change suggestions varied slightly depending on the specific game but were the same for all children in the same triad and the respective matched triad.

Coding and reliability

The full procedure was recorded on videotape from which the coding was done (see Appendix B for the detailed coding scheme). A second independent coder, who was blind to conditions, repeated coding for 20% of the data to determine reliability (Cohen's kappas in parentheses).

Teaching. For the transmission of rules, children's utterances were coded for the use of normative language. This coding encompassed the use of normative vocabulary (must, ought, should, have to, right, wrong), normative phrases (e.g., "The game goes like this"), and normative references to objects (using the words "count," "belong," or "go"; e.g., "The marble belongs on the block"). Of particular relevance is the use of generic normative language, which most clearly expresses that a normative attitude reaches beyond here and now. Generic normative language is marked by the use of normative language in reference to a generic agent or object (as opposed to a specific one)—for example, by referring to "one" instead of "you" and "marbles" instead of "this marble." Two binary variables (observed/not observed) were created that coded whether each child used normative language overall ($\kappa = .75$) and generic normative language in particular when teaching the game to the puppet ($\kappa = .75$).

Enforcement. Children's protest responses to the puppet's mistake were also coded for the use of normative language (binary variable; $\kappa = 1$), which most clearly expresses an objection due to a normative concern rather than just a personal preference. Imperative protest was also coded and expresses another form of protest against the puppet's action, but the relation to a normative understanding is less clear ($\kappa = .75$). This binary (instead of count) coding for teaching and enforcement helped us to control for individual differences in children's verbal abilities and talkativeness. Additionally, it directly addressed our main question, which was whether children use normative language to teach and enforce at all rather than how much normative language children use.

Flexibility. For each of the four flexibility questions asking whether changing the rules was allowed, children's answers were coded on a scale from −2 ("no"/inflexible) to 2 ("yes"/flexible), whereby 0 means "I don't know" and 1/−1 indicate a tendency toward "yes" or "no"—for example, "I think so" (weighted $\kappa = .88$).

Reasoning. We adapted the coding scheme of Davidson, Turiel, and Black (1983) to classify children's justifications for why the rules could or could not be changed. The categories included: custom/tradition, authority, rule, prudential reasons, personal choice, others' welfare, appeal to fairness, social organization, and obligation. We decided to split the authority category into authority and rule indicating whether children referred to an authority person or a rule as it seemed relevant to the present study context in which

children were given the rules by an authority in the discovery condition but were the authorities themselves in the invention condition (κ = .62).

Results

Qualitative data

Types of games. Overall, children invented 20 games and almost all of these games' outcomes were determined by physical skill (n = 18)—for example, knocking down a tower of blocks with marbles. Only two groups invented games in which the outcome was determined by chance—for example, by guessing where a certain block was hidden. Furthermore, most of the games invented by children in this study were solitary pursuits (n = 16) as they were tasks that each child had to accomplish individually (e.g., rolling a marble successfully through a marble track built out of blocks). The comparison to the other children was not made explicit in these games, and thus, there was at least no obvious competition. Only one group devised a clearly competitive game, and three groups came up with a cooperative game in which children tried to achieve a goal together (e.g., trying to stack all marbles into the triangle shape).

Game invention process. The analysis of the negotiation process in the invention condition was not the main focus of the current study, but we may note that all 20 groups in the invention condition negotiated the game rules together, and each child of a triad took part in that process either by making suggestions or by explicitly or implicitly agreeing to or rejecting suggestions made by others. Interestingly, in 16 groups, at least one child asked explicitly for agreement to the suggested game or rules from the other participants, indicating an understanding of this procedure as a collective endeavor that required agreement.

Quantitative data

All statistical analyses were performed using R (R Core Team, 2015) Version 3.2.2. For the Wilcoxon exact test, we used the package exactRankTests (Hothorn & Hornik, 2013), and for the generalized linear mixed models (GLMMs), we used the package lme4 (Bates, Maechler, Bolker, & Walker, 2014). The results of the likelihood ratio tests as well as the beta estimates, standard errors, and 95% confidence intervals are provided in parentheses. Descriptive results on all dependent variables can be found in Table 1.

Knowledge of origin and inventor of the rules. As a manipulation check, children were asked how they knew about the game rules and who had invented them. While most children in the invention condition spontaneously indicated their own invention of the game (54%) as their source of knowledge and all children named either "me"/"we" (72%) or someone from their group (28%) when specifically asked about the inventor, most children in the discovery condition spontaneously referred to "someone" or E1 who showed them the game (51%) as their source of knowledge and named E1 or her friend on the phone (40%) as the inventors or simply did not know (44%). Thus, children in the invention condition seemed to be aware that they themselves had created the game, whereas children in the discovery condition mostly did not know about the origin of the rules.

Table 1. Descriptive results for 5-year-olds.

Measure	Coding Category	Proportion of Children in %	
		Discovery	Invention
Teaching	Use of normative language	81.8	73.3
	Use of generic normative language	58.2	51.7
Origin of Rules	0 = no indication	9.3	8.8
	1 = familiarity through own experience	24.1	19.3
	2 = familiarity through third party	**51.9**	3.5
	3 = reference to group members	13.0	14.0
	4 = self-creation	1.9	**54.4**
Inventor of Rules	0 = no indication	**43.6**	0.0
	1 = other person not related to experiment	5.5	0.0
	2 = experimenter/person on the phone	**40.0**	0.0
	3 = other group member	0.0	**28.3**
	4 = self	1.9	**71.7**
Enforcement	Protest overall (imperative + normative)	58.2	46.7
	Protest normative only	36.4	35.0
Flexibility 1 (minor)	2 = flexible	45.5	71.7
	1 = rather flexible	7.3	1.7
	0 = undecided	12.7	3.3
	−1 = rather inflexible	10.9	6.7
	−2 = inflexible	23.6	16.7
Flexibility 2 (major)	2 = flexible	41.5	71.7
	1 = rather flexible	0.0	3.3
	0 = undecided	13.2	5.0
	−1 = rather inflexible	9.4	1.7
	−2 = inflexible	35.8	18.3
Flexibility 3 (major, others)	2 = flexible	46.3	86.4
	1 = rather flexible	3.7	0.0
	0 = undecided	13.0	1.7
	−1 = rather inflexible	11.1	3.4
	−2 = inflexible	25.9	8.5
Flexibility 4 (need)	2 = flexible	45.5	79.7
	1 = rather flexible	5.5	3.4
	0 = undecided	18.2	6.8
	−1 = rather inflexible	3.6	0.0
	−2 = inflexible	27.3	10.2

Reasoning 1 (minor)	0 = unspecified	48.1	62.7
	1 = custom/tradition	1.9	3.4
	2 = authority	9.3	6.8
	3 = rule	14.8	11.9
	4 = prudential reasons	11.1	13.6
	5 = personal choice	14.8	1.7
Reasoning 2 (major)	0 = unspecified	49.1	52.6
	1 = custom/tradition	1.9	3.5
	2 = authority	9.4	7.0
	3 = rule	22.6	10.5
	4 = prudential reasons	11.3	10.5
	5 = personal choice	5.7	15.8
Reasoning 3 (major others)	0 = unspecified	49.1	61.4
	1 = custom/tradition	1.9	0.0
	2 = authority	7.8	3.5
	3 = rule	17.6	3.5
	4 = prudential reasons	9.6	7.0
	5 = personal choice	9.6	19.3
	6 = others' welfare	0.0	3.5
	7 = appeal to fairness	0.0	1.8
	9 = punishment avoidance	3.8	0.0
Reasoning 4 (need)	0 = unspecified	27.8	33.9
	2 = authority	1.9	0.0
	3 = rule	14.8	1.7
	4 = prudential reasons	42.6	54.2
	5 = personal choice	5.6	5.1
	6 = others' welfare	7.4	3.4
	7 = appeal to fairness	0.0	1.7

Teaching of self-invented versus preexisting rules. To investigate the normativity that underlies children's conception of these differently originated rules, the occurrence of (generic) normative language during children's teaching of the game rules was analyzed using a GLMM with a binomial error structure (Baayen, 2008). We included experimental condition and sex as fixed effects, children's group and the games they invented/discovered as random effects, and the random slope for the effect of condition within groups playing the same game. To test the effect of experimental condition, we compared this full model to a reduced model not including experimental condition using a likelihood ratio test (Dobson, 2002). We found that the majority of children taught the game normatively (in the invention condition, 73.33% of children; in the discovery condition, 81.81%), and there was no significant difference in children's likelihood to use normative language to teach either a self-invented game or a preexisting game (χ^2 = 0.40, df = 1, p = .53, b = −0.44, SE = 0.70, CI [−1.63, 1.01]). We applied the same analysis to investigate the use of generic normative language and again found no difference between conditions (invention, 51.67%; discovery, 58.18%; χ^2 = 0.39, df = 1, p = .53, b = −0.26, SE = 0.41, CI [−1.15, 0.51]). Thus, children used normative and generic normative language to a similar degree regardless of whether they invented the rules themselves or were taught the rules by an adult.

Enforcement of self-invented versus preexisting rules. An important aspect of children's understanding of normativity is their enforcement of rules when third parties violate them. Therefore, we analyzed whether children's general tendency to protest (imperatively or normatively) and their specific tendency to protest normatively was different depending on whether the violated rules were self-invented or preexisting. We applied the same approach as earlier described using a GLMM with a binomial error structure and likelihood ratio tests. Results revealed no significant difference between conditions, neither in the likelihood to protest at all (invention, 46.67%; discovery, 58.18%; χ^2 = 0.74, df = 1, p = .40, b = −0.55, SE = 0.61, CI [−1.46, 1.32]) nor in the likelihood to protest normatively (invention, 35.00%; discovery, 36.36%; χ^2 = 0.04, df = 1, p = .84, b = −0.08, SE = 0.40, CI [−0.91, 0.91]).

Flexibility regarding changes to self-invented versus preexisting rules. Even though we suspected children might treat rule changes differently regarding their extent (minor vs. major) and necessity, we found that children's responses to the different flexibility questions showed highly similar patterns for both conditions (see Table 1 for descriptive data on the individual questions), which is why we collapsed them into an average for each child to get a more robust score (Cronbach's alpha = .72). A GLMM with a Gaussian error structure revealed no interaction of condition and age but a main effect of condition (χ^2 = 18.17, df = 1, p < .001, b = 0.97, SE = 0.20, CI [0.58, 1.37]), such that children in the invention condition were significantly more flexible ($M_{\text{Invention}}$ = 1.28, SD = 0.94) than children in the discovery condition ($M_{\text{Discovery}}$ = 0.29, SD = 1.27; see Figure 1) indicating that they were more willing to allow changes to self-invented rules compared with preexisting rules. We ran one-sample t tests for both conditions to test whether these mean flexibility scores were significantly different from 0, which was indeed the case for children in the invention

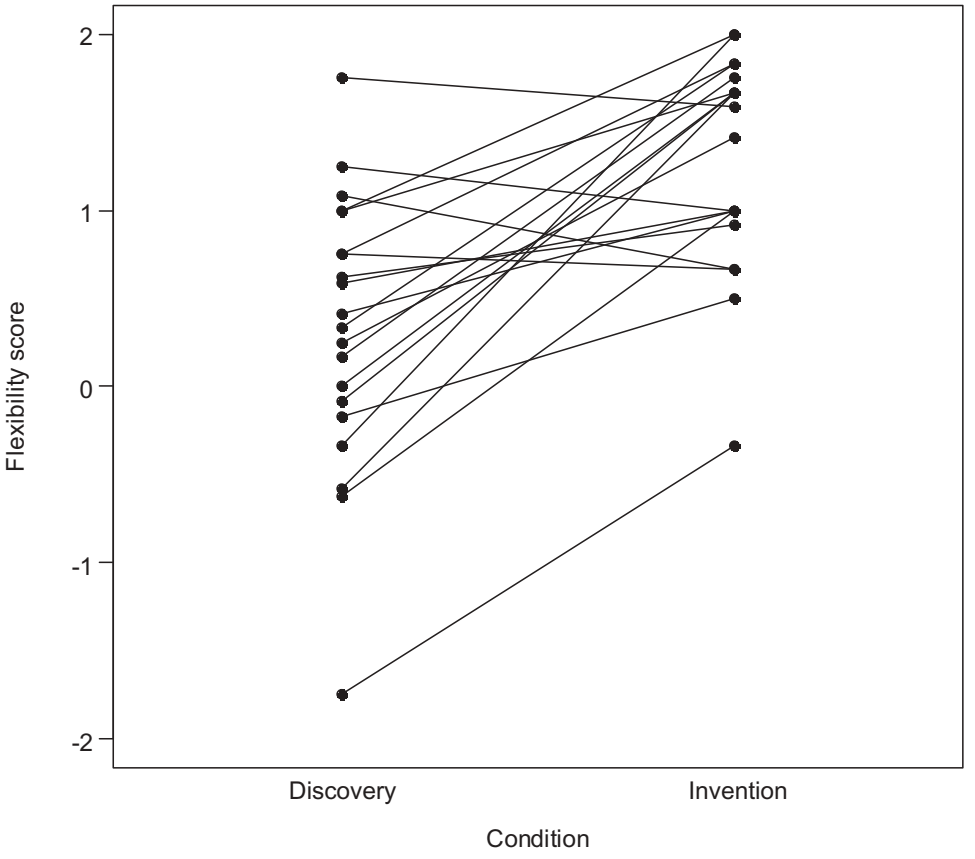

Figure 1. Average flexibility scores for each group of 5-year-olds in each condition (lines indicate the yoked experimental groups matched for game rules).

condition (t = 9.40, df = 19, p < .001) but not for the children in the discovery condition (t = 1.81, df = 19, p = .09).

An additional interesting question is whether children in the invention condition differed in their flexibility depending on whether they were the main inventors of the game or merely following what another child had suggested. We could identify 17 out of the 20 groups in the invention condition in which there was a clear structure of one main inventor who suggested the game rules that were finally agreed upon by the group. In the remaining three groups, children were cocreating the game in such an equal and cumulative way that no main inventor could be identified. For the 17 groups, we compared the flexibility score of the inventor with the mean flexibility score of the two remaining children in their group using an exact Wilcoxon test for paired samples. We did not find a significant difference between inventors ($M_{\text{Inventors}}$ = 1.54, SD = 0.86) and noninventors ($M_{\text{Noninventors}}$ = 1.15, SD = 0.90; exact Wilcoxon test, T^{+} = 77.5, N = 14 [3 ties], p = .12) regarding their flexibility to change the rules.

Reasoning about the changeability of rules. Table 1 shows the descriptive results for children's reasons for all of the flexibility questions depending on condition.[3] As can be seen, in almost half of the cases, children did not provide any reason at all and thus created a large amount of missing data. Additionally, the reliability for this measure was rather low ($\kappa = .62$). For these reasons, we do not provide a statistical analysis of these measures. However, it may be noted that the descriptive data indicate that children's reasoning seemed to be somewhat influenced by how they encountered the rules. Particularly, if children were taught the game by an adult, their reasoning referred more to the existence of a rule or the dictates of authority compared with when they made up the game themselves.

Discussion

The present study investigated 5-year-olds' understanding of game rules (i.e., conventional norms) that they either constructed themselves together with peers or were taught by an adult. We found that children treated both types of rules as enforceable as they even used (generic) normative language to a similar degree for teaching and enforcing their self-created and the preexisting rules. This finding indicates that although children were aware that they themselves just had created the norms, they understood them as normatively binding for all participants and thus as legitimate game rules just like rules that are taught to them by adults.

However, when children were asked to judge the alterability of these norms, they were much more flexible regarding their own norms as compared with adult-given norms even though the specific norms were exactly the same due to the yoked study design. This finding suggests that children cannot only establish binding and enforceable conventional norms together with peers, but by experiencing the social construction of norms themselves, they judge and understand these norms also as more changeable and thus conventional. These findings are important because they suggest that children will extend the normative scope of arbitrary rules they create themselves to third parties. Importantly, in the current study, we ruled out the possibility that the children who created the rules might have thought they were only discovering preexisting rules by explicitly telling them to invent the games themselves.

Interestingly, children who were mainly responsible for the invention of the specific rules of a group were not significantly more flexible than children who were merely following the inventor. This finding suggests that the mere experience of participating in this invention process and mutual agreements might be sufficient to spur children's understanding of the conventionality of the rules.

Curiously, children in the present study who received the norms from an adult showed more flexibility than we had predicted. We believe there are two aspects of the study that might encourage children to be this flexible with adult-given rules. First, the experimenter presented herself as ignorant of the game in the beginning. From previous research, it is known that children prefer to learn from reliable, knowledgeable, confident, and accurate experts rather than from unreliable and ignorant adults (Birch, Vauthier, & Bloom, 2008;

[3]Note that the categories for obligation and social coordination are not listed in the table as they never occurred in children's reasoning.

Koenig & Sabbagh, 2013; Rakoczy, Warneken, & Tomasello, 2009; Schmidt, Rakoczy, & Tomasello, 2011). Secondly, the objects children played with were highly familiar with already-known functions and not unknown artifacts with opaque functions for which the children would have had to rely on adults' instructions.

The focus of our study was on conventional norms (operationalized as game rules) as opposed to moral norms. Even though we cannot exclude the possibility that issues of fairness might have influenced children's rule creation, our dependent measures all focused on arbitrary rules that the puppet transgressed, suggested, and enacted. If we had tapped into moral issues, we would have expected to find a general inflexibility concerning rule changeability regardless of condition (in line with social domain theory; Turiel, 1983), which was not the case, as children were even relatively flexible concerning adult-given rules (a little less than half of the children allowed changes to adult-given rules). Additionally, children's reasoning almost never referred to issues of fairness or others' welfare, which should have been the case for moral norms (Davidson et al., 1983). This finding suggests that our study investigated conventional norms rather than moral norms, even though it would be interesting for future research to target children's creation of moral norms, if that is even possible.

From the current study, however, it remains unclear which particular aspect of children's own norm creation compared with being instructed about preexisting norms enabled their flexibility. It might be due to their direct participation in creating a norm or it might be something simpler like the fact that they are knowledgeable about these norms' origins, whereas for the usual conventional norms that they are taught, they remain ignorant of how these norms came into existence. It might also be the case that because children in the invention condition spent a little bit more time with the game as they were inventing it compared with the discovery condition, they became more flexible with these rules as they were more familiar with them. Additionally, it would be interesting to test whether children's lower flexibility with preexisting rules is due to the fact that the rules have merely been in existence previously or the fact that an authority figure was involved in teaching them. Would we still find a difference between conditions if children are taught preexisting rules by a peer? Furthermore, children's responses might have been different regarding the changeability of preexisting rules if they had been asked whether a legitimate authority (e.g., E1) may change the game rules. As is known from previous research, children do recognize the legitimacy of (conventional) rule changes made by an appropriate authority, which might have made children as equally flexible as the children who had created their own rules. The question we used was ambiguous as to who was actually performing the rule change, and thus, it remains an empirical question who children understand as having the authority to change game rules in general (i.e., whether it is also a teacher or an adult as for conventional kindergarten rules or whether it is the inventor of the game, etc.). Interestingly, Turiel (1983) had interviewed older children aged 6 to 17 years old about the issue of the changeability of game rules, and he found that these older children were generally flexible when asked whether a game rule could be changed. Therefore, school-aged children might already recognize that game rules can in principle be changed, whereas preschoolers might rely on an authority for changing game rules.

A hypothesis within the current study setup was thus that older school-aged children might be generally flexible in changing game rules such that it becomes irrelevant whether they had created the rules or were taught the rules by an adult. To investigate this question further, a second experiment was conducted with the exact same design and procedure as in Study 1 but with 7-year-old children.

Study 2

Method

Participants

Children came from the same city and background as children in Study 1 and participated in their afterschool care center as same-sex triads. A total of 40 triads (M_{age} = 7;6, age range = 6;11–8;0) was included in the sample; however, one child had to be excluded from the test phase because she had forgotten the game, and another child could not proceed to the test phase because she was picked up by her parents after the manipulation phase (N = 118).

Materials

The same materials were used as in Study 1.

Design and procedure

Testing was done exactly as in Study 1 using a yoked design.

Coding and reliability

Coding was done from video recordings of all test sessions using the same coding scheme as in Study 1 (see Appendix B). A second independent coder blind to conditions coded 20% of the data to provide measures of reliability for normative (κ = .75) and imperative protest (κ = .78), normative (κ = .78) and normative generic teaching (κ = .91), as well as flexibility (κ = .90).

Results

Qualitative data

Types of games. Very similar to the 5-year-olds, 7-year-olds mostly invented games in which the outcome was determined by physical skill (n = 19), and only one group invented a game in which the outcome was determined by chance (i.e., the triangle had to be spun, and depending on the color that pointed to a player, he had to give up a marble). Additionally, just like the 5-year-olds, 7-year-olds mostly invented games in which the game action was a solitary pursuit (n = 15), which each child had to complete on her own. Four groups invented clearly competitive games that required each player to be better than the others, and one group invented a cooperative game with a joint goal.

Game invention process. Children negotiated the game rules together, and every child took part in the process, which was also the case in Study 1. In 16 of the 20 groups, at least one child requested explicit agreement for a rule suggestion.

Quantitative data

All statistical analyses were conducted in the same way as in Study 1 using R (R Core Team, 2015) Version 3.2.2 as well as the packages exactRankTests (Hothorn & Hornik, 2013) and lme4 (Bates et al., 2014). Descriptive results on all dependent variables are displayed in Table 2.

Table 2. Descriptive results for 7-year-olds.

		Proportion of Children in %	
Measure	Coding Category	Discovery	Invention
Teaching	Use of normative language	88.1	82.5
	Use of generic normative language	55.9	57.9
Origin of Rules	0 = no indication	13.3	3.6
	1 = familiarity through own experience	8.3	10.7
	2 = familiarity through third party	**60.0**	17.8
	3 = reference to group members	15.0	17.8
	4 = self-creation	3.3	**82.1**
Inventor of Rules	0 = no indication	**76.7**	0.0
	1 = other person not related to experiment	0.0	1.8
	2 = experimenter/person on the phone	8.3	0.0
	3 = other group member	0.0	12.5
	4 = self	15.0	**85.7**
Enforcement	Protest overall (imperative + normative)	59.6	58.6
	Protest normative only	54.3	48.3
Flexibility 1 (minor)	2 = flexible	66.7	82.8
	1 = rather flexible	6.7	1.7
	0 = undecided	11.7	3.4
	−1 = rather inflexible	3.3	3.4
	−2 = inflexible	11.7	8.6
Flexibility 2 (major)	2 = flexible	28.8	37.5
	1 = rather flexible	10.2	0.0
	0 = undecided	3.4	5.4
	−1 = rather inflexible	13.6	12.5
	−2 = inflexible	44.1	44.6
Flexibility 3 (major, others)	2 = flexible	50.9	63.2
	1 = rather flexible	1.7	1.8
	0 = undecided	11.9	3.5
	−1 = rather inflexible	6.8	0.0
	−2 = inflexible	28.8	31.6
Flexibility 4 (need)	2 = flexible	75.0	56.9
	1 = rather flexible	5.0	13.8
	0 = undecided	8.3	3.4
	−1 = rather inflexible	1.7	3.4
	−2 = inflexible	10.0	22.4

(*Continued*)

Table 2. (Continued).

Measure	Coding Category	Proportion of Children in %	
		Discovery	Invention
Reasoning 1 (minor)	0 = unspecified	56.9	36.2
	1 = custom/tradition	0.0	0.0
	2 = authority	0.0	3.4
	3 = rule	12.1	6.9
	4 = prudential reasons	13.8	15.5
	5 = personal choice	17.2	37.9
Reasoning 2 (major)	0 = unspecified	15.8	17.0
	1 = custom/tradition	0.0	0.0
	2 = authority	3.5	0.0
	3 = rule	36.8	26.4
	4 = prudential reasons	22.8	32.1
	5 = personal choice	19.3	22.6
	6 = others' welfare	0.0	1.9
	9 = punishment avoidance	1.8	0.0
Reasoning 3 (major others)	0 = unspecified	41.5	29.6
	1 = custom/tradition	0.0	1.9
	2 = authority	1.9	1.9
	3 = rule	18.9	20.4
	4 = prudential reasons	7.5	9.3
	5 = personal choice	28.3	29.6
	6 = others' welfare	0.0	7.4
	9 = punishment avoidance	1.9	0.0
Reasoning 4 (need)	0 = unspecified	18.3	13.8
	2 = authority	0.0	0.0
	3 = rule	6.7	12.1
	4 = prudential reasons	53.3	55.2
	5 = personal choice	5.0	8.6
	6 = others' welfare	8.3	6.9
	7 = appeal to fairness	0.0	1.7
	9 = punishment avoidance	1.7	0.0

Knowledge of origin and inventor of the rules. The large majority of 7-year-olds in the invention condition (82%) spontaneously referred to themselves as inventors of the game when asked how they knew the game. Most children in the discovery condition indicated that they knew from the experimenter or the person on the phone (60%). When asked specifically about who invented the game, almost all children in the invention condition indicated themselves/their group (86%) or a specific member of their group (13%), whereas in the discovery condition, most children (77%) indicated not knowing. Thus, also for the 7-year-olds, the manipulation seemed to be effective.

Teaching of self-invented versus preexisting rules. A GLMM with binomial error structure and the same fixed- and random-effects structure as for the 5-year-olds (see above) was fitted to investigate to what degree 7-year-olds used normative and normative generic language to teach their self-invented and preexisting rules.

The fit of a full and a null model not comprising the fixed effect of condition revealed that children's likelihood to use normative (invention, 82.46%; discovery, 88.12%; $\chi^2 = 0.18$, $df = 1$, $p = .67$, b = 0.45, SE = 0.75, CI [−2.16, 6.26]) and normative generic language (invention, 57.89%; discovery, 55.93%; $\chi^2 = 0.10$, $df = 1$, $p = .75$, b = 0.14, SE = 0.42, CI [−0.87, 0.90]) was not different for self-created and preexisting rules; thus, inventing or being taught the rules did not have a significant effect on how children transmitted the rules.

Enforcement of self-invented versus preexisting rules. To investigate children's understanding of the normativity of rules, we analyzed children's overall and specifically normative protest against the violation of a self-created or preexisting rule also using a GLMM with binomial error structure. As for the 5-year-olds, children's general tendency to protest (invention, 58.62%; discovery, 59.65%; $\chi^2 = 0.01$, $df = 1$, $p = .92$, b = −0.04, SE = 0.38, CI [−0.85, 0.74]) as well as their tendency to protest normatively (invention, 48.28%; discovery, 54.39%; $\chi^2 = 0.42$, $df = 1$, $p = .52$, b = −0.24, SE = 0.37, CI [−0.81, 0.71]) was not affected by the origin of the rule. Hence, 7-year-old children also enforced their self-created and preexisting rules in a similar manner.

Flexibility regarding changes to self-invented versus preexisting rules. We applied the same approach as for the 5-year-olds and created an average flexibility score for each child across the four flexibility questions (Cronbach's alpha = .67), which was fitted with a GLMM with Gaussian error structure. Interestingly, as opposed to the 5-year-olds, children's willingness to change the rules was not affected by the manipulation of self-created or preexisting rules ($\chi^2 = 0.01$, $df = 1$, $p = .93$, b = 0.02, SE = 0.23, CI [−0.44, 0.49]). Thus, children who invented the rules were just as flexible ($M_{\text{Invention}} = 0.66$, $SD = 1.18$) as children who were taught the rules by an adult ($M_{\text{Discovery}} = 0.64$, $SD = 1.12$; see Figure 2). We also ran one-sample t tests to test whether flexibility scores were different from 0, which was true for children in the invention condition ($t = 3.67$, $df = 19$, $p < .001$) as well as those in the discovery condition ($t = 4.19$, $df = 19$, $p < .001$). Thus, in both conditions, children were rather flexible with the rules.

Additionally, as was found for the 5-year-olds, children who were the main inventors of a game ($M_{\text{Inventors}} = 0.71$, $SD = 1.20$) did not differ in their flexibility from other children

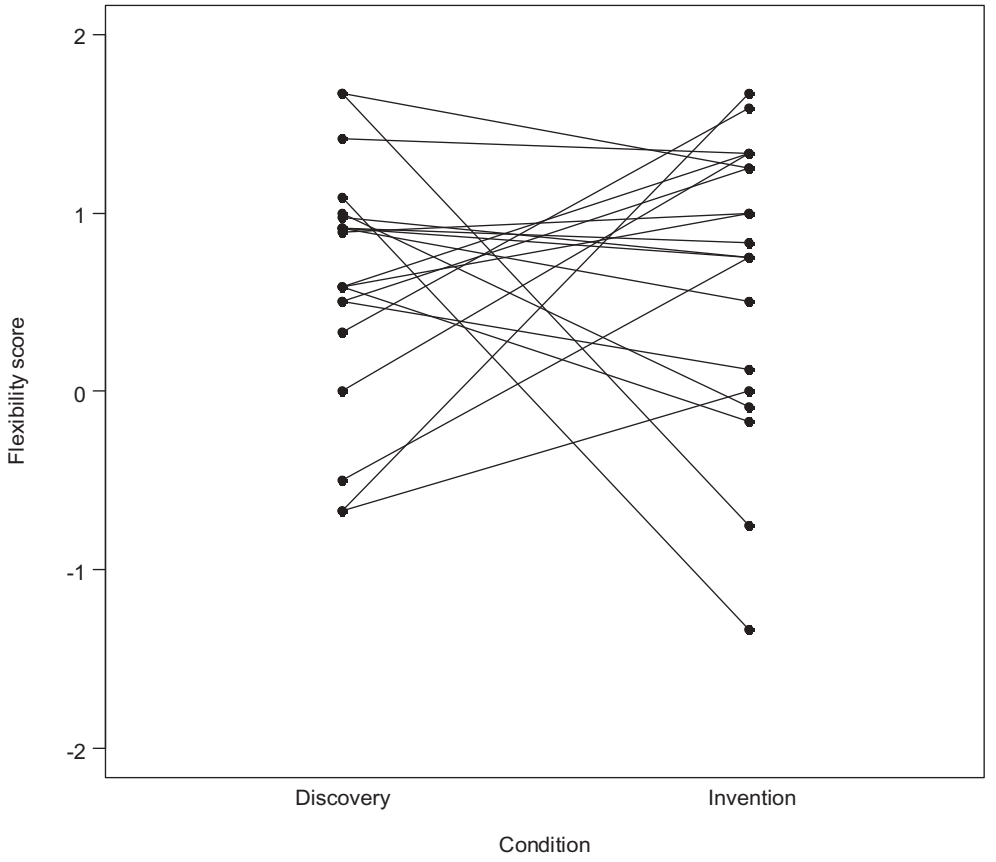

Figure 2. Average flexibility scores for each group of 7-year-olds in each condition (lines indicate the yoked experimental groups matched for game rules).

in the invention condition ($M_{\text{Noninventors}} = 0.62$, $SD = 0.95$; exact Wilcoxon test for paired samples, $T^{+} = 68.5$, $N = 16$ [1 tie], $p = .99$).

As an additional analysis, we compared flexibility scores of the 5-year-old children in Study 1 to flexibility scores of the 7-year-olds in Study 2 per condition to illuminate the difference between age groups. Independent-samples t tests revealed that 5- and 7-year-old children did not differ in their flexibility regarding preexisting rules, $t_{\text{Discovery}}(37.1) = -1.35$, $p = .19$, but 7-year-olds were less flexible with their self-created rules as compared with 5-year-olds, $t_{\text{Invention}}(35.4) = 2.76$, $p < .01$.

Reasoning about the changeability of rules. Descriptive results for children's reasoning are provided in Table 2. Interestingly though, inspecting the frequencies of responses indicates that 7-year-old children might not discriminate as much in their reasoning between conditions as did 5-year-olds. For example, children referred to the existence of rules and dictates of an authority to a similar degree in both conditions.

Discussion

As shown for 5-year-old children in Study 1, 7-year-old children in Study 2 taught and enforced game rules in the same normative way regardless of whether they had invented the game themselves or were taught the game by an adult. Again, this finding provides evidence that children understand these rules as normatively binding and enforceable—even the rules they had created on their own. In contrast to Study 1, however, children's flexibility in changing the rules was not affected by creating the rules or being taught the rules. Based on Turiel's findings (1983), we had hypothesized that this might be the case because school-aged children have been shown to be already quite flexible in changing preexisting game rules, and thus, creating the rules might not make a strong difference to their flexibility. Interestingly, for their self-created as well as preexisting rules, 7-year-old children were rather flexible; however, they actually allowed fewer changes to their self-created rules as compared with 5-year-olds. Thus, 7-year-olds, despite understanding the conventionality of both kinds of rules, were actually stricter with their self-created rules than were 5-year-olds and just as strict with their self-created rules as with preexisting rules. Thus, older children seemed to take their self-created rules more seriously and thus regarded changing any rule as somewhat less acceptable than did preschoolers, who were almost at ceiling in allowing changes to their self-created rules. We can only speculate about why this is the case. On the one hand, older children might have more appreciation for their own creative ideas than do younger children. For example, Li, Shaw, and Olson (2013) found that 6- but not 4-year-old children valued their intellectual property more than their mere preferences (see also Shaw, Li, & Olson, 2012). Potentially, older children are prouder of their own creations than are younger children and want them to be taken more seriously. On the other hand, older children might actually take the mutual commitments that they entered into when creating the game together more seriously. Thus, children's mutual agreements on their created game rules might lead them to elevate their assessment of these rules to the same level as preexisting rules. In the children's eyes, these rules they made are to be treated just like any other rules.

General discussion

Social norms are an intricate part of the human social world to which children need to adapt as soon as they enter this world. Most previous research only investigated children's understanding and enforcement of preexisting adult-given norms (e.g., Schmidt & Tomasello, 2012), thereby neglecting children's peer interactions, which are another important facet of the social world of children. Thus, the aim of the present research was to investigate how children treat norms that they have created together with peers compared with norms that they have been taught by an adult. Taken together, Study 1 and Study 2 revealed that 5- and 7-year-old children created norms, which they treated as normatively binding when they taught and enforced them to a third party. They even did so to the same degree as they taught and enforced preexisting norms. Moreover, these norms were not mere instrumental coordination norms (as in Göckeritz et al., 2014; Nobes, 1999), but arbitrary game rules that could have easily been different and are solely based on mutual agreements as opposed to objective facts—for example, efficiency.

Interestingly, the process of creating norms with peers changed 5-year-old children's understanding of the conventionality of these norms (i.e., the possibility to change them). Preschoolers allowed changes to their self-created rules much more often than they allowed changes to preexisting rules. Thus, the process of creating norms enabled them to have a more flexible understanding of the social construction of these rules. In contrast, 7-year-old children did not discriminate between self-created and preexisting rules and treated them as equally flexible and conventional. This finding aligns with previous interview studies that have shown school-age children to generally understand game rules as changeable (Turiel, 1983). Compared with the 5-year-olds, however, 7-year-olds were less flexible with their self-created rules. This finding might actually reveal an interesting developmental pathway starting with children in the preschool years who recognize they can create enforceable rules but also do understand these rules as different from rules that adults teach them such that they regard them more as changeable conventions. Thus, while they are more lenient with changes to their own rules, they do respect the rules of adults much more and evaluate changes to these rules as less permissible. By a young school age, however, it seems that children come to treat their self-created and adult rules in a very similar way such that they understand them both as flexible conventions but take their self-created rules in a sense more serious than do preschoolers. On the other hand, for 5-year-olds, the process of self-creating rules might enlighten their understanding of these rules, which, even though they teach and enforce them just like preexisting rules, can be easily changed and overridden. However, 7-year-olds might take their self-created rules as more binding and the normative force arising out of their mutual commitments as equally strong as the normative force arising out of adults' instructions.

Overall, it seems that normativity for children may result from two different social sources; on the one hand, preexisting norms are handed down from adults and children understand that they provide a normative standard that applies to anyone in their group. On the other hand, they understand that normativity can result from collective negotiations and mutual agreements among equal peers and can lead to a similar normative standard that originates out of their own interactions. At this point, we can only speculate about the commonalities and differences between these two routes to normativity. However, it seems that the binding character of self-created norms with all of the agreements and commitments within them increases from preschool to school age.

In general, children's normative understanding of their self-created rules might benefit from their conception of their peers as equals—and thus, norms as emanating from "us" (i.e., equivalent participants of a social practice that deserve mutual respect; Darwall, 2006). Additionally, it might suggest that the agreements and negotiations among the children themselves reflect their deeply rooted capacities for shared intentionality (Tomasello & Carpenter, 2007). This might lead to their understanding of mutual agreements as commitments that can build social constructs endowed with a force reaching beyond the specific inventors of the rules. In contrast, however, when children merely receive these norms from an adult, they might view the normativity that emanates from such rules mostly as the result of their respect for the power and authority of adults (Piaget, 1932).

Finally, this study provides evidence that children's understanding of normativity is not bound by or restricted to preexisting social norms from adults to which children merely have to conform. In fact, young children can establish their own social norms together

with peers, which they construe as equally binding and having normative force just like the norms of authorities. Thus, the normative force of these self-created rules does not stem from an authority enforcing these norms on the children but from their own negotiations, agreements, and decisions with peers, therefore already encapsulating the collective "we" on which the human social world is based.

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Appendix A

Overview of Procedure

Phase of Experiment	Invention Condition	Discovery Condition
Task Instruction	E1: "You are a team now and your task is to invent a game together!"	E1: "You are a team now and your task is to find out together how this game goes!"
Invention/Discovery Phase of About 2.5 Min (Children Alone)		
Incentive announcement (motivation to stay on the task and facilitate deciding on a single game as children would often invent several games)	E1: "You can each win a surprise if you invent a game together and show this game to the puppet later. But you all need to show the puppet the exact same game."	E1: "You can each win a surprise if you find out together how this game goes and show this game to the puppet later. But you all need to show the puppet the exact same game."
Invention/Discovery Phase of About 2.5 Min (Children Alone)		
Establishing the Game	E1: "Have you decided on a game? Oh, I forgot to finish something outside. You have time to practice the game now and then show me your game. Remember you can win a surprise later if you all show the puppet the exact same game."	E1: "I have just talked to a friend on the phone and she knows this game and told me how it goes. I will show you now! [E1 explains the game.] Oh, I forgot to finish something outside. You have time to practice the game now and then show me your game. Remember you can win a surprise later if you all show the puppet the exact same game."
Practice Phase of About 2 Min (Children Alone)		
Demonstration	E1: "Show me how you play the game!"	
Test Phase	*Puppet enters and interviews each child individually with the following questions (fixed order; open ended; child alone with puppet):* *Teaching* "Can you show me how the game goes? Can you explain it to me?" *Origin of Knowledge* "How do you know that the game goes like this?" *Inventor of Rules* "And who invented the game?" *Enforcement* "I am going to play now!" [Puppet performs wrong action] *Flexibility 1 (minor)* "I have an idea! Look, first one must tap the marble/rope/etc. twice on the floor and only then one may throw it. May one play it like this?" "Why may one (not) play it like this?" *Flexibility 2 (major)* "I have another idea! Look, one must [puppet makes suggestion for alternative goal]. May one play it like this?" "Why may one (not) play it like this?" *Flexibility 3 (major, others)* "If other children agreed that they want to play it like this then they must [puppet repeats major rule change]. May they play it like this?" "Why may they (not) play it like this?" *Flexibility 4 (need)* "I have a friend, 'Max,' who hurt both of his arms and he cannot play the game with his hands. May Max play it with his feet?" "Why may Max (not) play it like this?"	

Note. E1 = Experimenter 1.

Appendix B

Coding Scheme of the Different Measures

Measure	Codes	Examples
Origin of Knowledge	0 = no indication	"I don't know"; "Just like that."
	1 = familiarity through own experience	"I/we played it before."
	2 = familiarity through third party	"She (E1) showed it to me"; "We learned it like this."
	3 = reference to group members	"[Name of group member] showed it to me."
	4 = self-creation	"I/we/[name of group member] invented it"; "We found it out."
Inventor of Rules	0 = no indication	"Don't know"; "No one."
	1 = other person not related to experiment	"My mom"; "Santa Claus."
	2 = experimenter/person on the phone	"The lady on the phone."
	3 = other group member	"[Name of group member]."
	4 = self	"Me."; "We did."
Teaching	**Use of Normative Language:**	
	0 = no occurrence	
	1 = occurrence of either of the following:	"You *must* do it like this."
	normative vocabulary:	"That is the *wrong* marble."
	must, have to, should, ought, right, wrong	
	Normative Phrases:	
	"It goes like this"; "That's not how it goes"; "This is how one does it."	"The block *goes* here." "That doesn't *count*."
	Normative Object References:	
	count, belong, go	
	Use of Generic Normative Language:	
	0 = no occurrence	
	1 = occurrence of normative language that refers to a generic category of objects/persons/ situations beyond here and now:	"*One mustn't* do it like this." "*Marbles* always *go* here." "*That's wrong*."
	person: one, everybody, anyone	
	objects: marbles, ropes, they	
	situation: it, this, that	
Enforcement	**Use of Normative Protest**	
	0 = no occurrence	
	1 = occurrence of protest using normative language (see teaching) to correct the puppet	"It doesn't *go* like this." "You're doing it *wrong*."
	Use of Imperative Protest	
	0 = no occurrence	
	1 = occurrence of protest using imperatives to correct the puppet	"Not like this!"; "Stop this!" "Don't put it there!"
Flexibility (for all flexibility questions, see Appendix A)	**"May one/they/Max play it like this?"**	
	2 = flexible	"Yes"; "That's right."
	1 = rather flexible	"I believe so."
	0 = undecided	"I don't know."
	–1 = rather inflexible	"I don't think so."
	–2 = inflexible	"No"; "That's not allowed."

(*Continued*)

(Continued).

Measure	Codes	Examples
Reasoning (for all flexibility questions, see Appendix A)	**"Why may one/they/Max (not) play it like this?"**	
	0 = unspecified	"I don't know"; "Because one mustn't."
	1 = custom/tradition	"Because for other games one may do that, too"; "We have always played like this."
	2 = authority	"The woman (didn't) allow(ed) it";"Because he did (not do) it like this."
	3 = rule	"Because the game doesn't go like this"; "Because that's wrong."
	4 = prudential reasons	"Because that works better/is more fun"; "Because then it breaks"; "Because he has broken his arms and cannot play like this."
	5 = personal choice	"Everyone can play as they like.""Because you can choose how you play."
	6 = others' welfare	"Because then they won't have anything to play with."
	7 = appeal to fairness	"Because that's cheating."

Note. E1 = Experimenter 1.