

## Children's distributive justice: the role of gender norms in different settings

Clare Conry-Murray

Department of Psychology, Saint Joseph's University, Philadelphia, PA, USA

### ABSTRACT

Children ages 6, 8 and 10 ( $N = 66$ ) distributed resources to a boy and a girl when the proportion of feminine and masculine resources varied, when the preferences of the boy and the girl varied, and when the setting was public or private. Children used gender norms to sort the resources but they primarily sorted the resources equally, even when it required violating gender norms. When there was an atypical preference, participants provided more atypical resources to the children. However, when the setting was public, they provided fewer atypical resources. Overall the results indicate that gender norms are especially strong in public settings but explicit information about preferences can lead children to be flexible about gender norms.

**ARTICLE HISTORY** Received 20 October 2015; Accepted 4 February 2016

**KEYWORDS** Moral development; gender development; middle childhood

Is it better to treat people equally or to give them what they want, even if it is not equal? Research shows that children consider preferences as very important (Lagattuta, Nucci, & Bosacki, 2010), but research also shows that children sometimes assume that preferences are consistent with gender norms (Conry-Murray, 2015; Conry-Murray & Turiel, 2012). Assumptions that gender norms reflect true preferences could lead children to distribute resources unequally in order to be consistent with presumed preferences. The current research examines how children distribute gendered resources under several conditions: when there are unequal numbers of feminine and masculine items, when one child has an atypical individual preference such a boy's preference for a feminine item, and in different settings where pressure to adhere to gender norms can differ.

During early and middle childhood, children exhibit inflexibility regarding gender norms, sometimes called *essentialist* thinking (Conry-Murray, 2015; Conry-Murray & Turiel, 2012; Levy, Taylor, & Gelman, 1995; Taylor, 1996; Taylor,

---

**CONTACT** Clare Conry-Murray  [cconrymu@sju.edu](mailto:cconrymu@sju.edu)

© 2016 Informa UK Limited, trading as Taylor & Francis Group

Rhodes, & Gelman, 2009). This research indicates that children between the ages of 4 and 7 think about gender as internal, fixed and indicating substantial differences between the sexes (Trautner et al., 2005). Essentialist thinking has also been shown to affect children's reasoning about interactions between gender and fairness. Conry-Murray (2015) found that children around age 6 to 8 judged that it is more acceptable to provide girls and boys with gifts of unequal value if the gifts are consistent with gender norms.

Despite this, a long line of research from social domain theory has shown that children are concerned with fairness (Smetana, 2006 for a review). Some research shows that children are so concerned with fairness that they discard a resource rather than distribute resources unequally (Shaw & Olson, 2012). Especially at young ages, children seem to favor strict equality, while older children and adults are more capable of considering multiple contextual features (Damon, 1977; Fehr, Bernhard, & Rockenbach, 2008; McCrink, Bloom, & Santos, 2009). However, some research shows that children as young as age 3 use merit to assign resources, (Baumard, Mascaro, & Chevallier, 2012). Given that younger children may have difficulty with some contextual features in judgments of fairness, the current research examines whether children consider gender in distributions of resources (as the research on essentialism might suggest) or whether they strictly focused on equality.

Past research shows that children do consider gender, which they sometimes coordinate with concerns with fairness (Conry-Murray & Turiel, 2012). Children can be flexible in their judgments about gender norms when they are in conflict with moral concerns and personal preferences (Conry-Murray & Turiel, 2012; Conry-Murray, Kim & Turiel, 2015). For example, research on conflicts between gender norms and fairness shows that the majority of children at ages 4, 6 and 8 rejected a school rule enforcing gender norms (e.g., only boys can take a computer class; Conry-Murray & Turiel, 2012).

Thus, research has come to different conclusions about whether children in the essentialist phase prioritize fairness or gender norms, and whether they can coordinate both. The focus of the current study is on how children distribute gendered resources (butterfly and pirate stickers), requiring children to actively sort resources rather than to judge an action that has already been performed (as in Conry-Murray, 2015). Children distributed resources to a boy and a girl when the proportion of feminine and masculine resources varied (e.g., four butterfly stickers and two pirate stickers must all be divided between a boy and a girl). This required a choice between an equal distribution and a distribution consistent with gender norms.

One reason children may sometimes prioritize gender norms over fairness is if they assume personal preferences are consistent with gender norms. Research shows that young children use gender to predict preferences while older children are more sensitive to the possibility of a variety of preferences (Biernat, 1991). Conry-Murray (2015) found that children at the age of gender essentialism

were more likely than older children and adults to say that children's preferences are consistent with gender norms.

However, other research shows that children ages 6 to 10 consider counter-gender-norm preferences even at young ages. For example, Conry-Murray and Turiel (2012) found that majorities of children from age 4 to 8 years old stated that an unconventional item (e.g., a ballet costume for a boy) should be given to the child who prefers it, regardless of gender norms. The current study examines whether children consider unconventional preferences over concerns with gender norm adherence when distributing resources.

The choice to defy gender norms, either because of a personal preference or because of an attempt to be fair with resources that are not evenly split between feminine and masculine items may be particularly difficult in settings where gender norms are enforced through social pressure. However, this may require awareness that the environment can affect gendered displays. In research on gender essentialism (Taylor, 1996; Taylor et al., 2009), children were asked whether a child raised entirely by the opposite sex would grow up to have traits consistent with the child's own sex or with the environment in which they were raised. Children around the age of five attributed traits based on the child's biological sex rather than the environment. Are children at this age unaware of the influence of the environment on gender-related behaviors? Another way to test this is to ask children to make judgments about gender-norm adherence in different settings. Conry-Murray (2013) has shown that young children around age 6 are less likely to suggest that a child should follow an atypical preference when the child is in a public setting with familiar gender norms, as compared to a culture with different norms, while older children around age 8 prioritized personal preferences in both settings. Justifications indicated that children at both ages were concerned with both personal choice and social pressure, including teasing. These findings suggest that children are aware of the social motives people have for adhering to gender norms that can differ from an essentialist view of gender as reflecting internal qualities.

If children are capable of flexibility about gender norms when unconventional preferences are expressed, then they may use gender norms as a flexible heuristic for preferences without seeing gender norm adherence as an essential, unchangeable internal feature of being male or female. This heuristic may provide a flexible guideline that is responsive to different preferences and concerns with how the environment shapes our preferences (Gelman, 2004).

The current research examines whether children at ages 6, 8 and 10 distribute gendered items by sex or whether they prioritize equality. We expected children to prioritize equality given past research showing that children are concerned with fairness (e.g., Shaw & Olson, 2012). We also expected that children would use personal preferences, more so than gender norms, to sort items (Conry-Murray & Turiel, 2012). However, we expected this tendency to be affected by the setting. When the setting was described as public, we expected children to

conform to gender norms more in their distributions than when the setting was private. If children make different judgments in situations where others may observe gender related behaviors, it is an indication that they may be aware of social pressures to conform to gender norms and do not see gender norm adherences as solely a response to internal, inherent qualities. In each case, we expected younger children to be less flexible about gender and less aware of social sanctions for defying gender norms.

Justifications were expected to show that children are concerned with both moral aspects of the fairness of distributions and personal preferences. However, younger children were expected to use more gender-related justifications than older children. Conventional justifications were expected to be used when the setting was public more than when it was private.

Masculine items are sometimes judged to be acceptable for girls, while feminine items are judged as less acceptable for boys (Conry-Murray, 2013). Therefore, the gendered nature of the resources was examined. Sex differences were also explored in each of the judgments but no specific sex differences were hypothesized.

## **Methods**

### ***Participants***

Participants were 66 children ages 6 (female  $N = 10$ , male  $N = 11$ ), 8 (female  $N = 10$ , male  $N = 10$ ), and 10 (female  $N = 13$ , male  $N = 12$ ), years old, approximately evenly divided in age and sex. Participants were drawn from a community in suburban Pittsburgh that is primarily middle class with 15% of students receiving reduced or free lunches (Niederberger, 2014). The majority (86%) of this community is white.

### ***Procedures and assessments***

Children were interviewed individually and audio files of the interviews were transcribed and coded. Participants were asked to distribute different combinations of pirate stickers (masculine reward) and pink and purple butterfly stickers (feminine reward). Participants were asked which of these stickers they preferred. Following this question, the interview consisted of ten scenarios where two children were rewarded with stickers because they had been helpful. In each scenario, participants were asked to divide up all the stickers between one boy and one girl, ("Show me how the stickers should be given to each child?") and they were asked to justify their distribution ("Why did you decide to give the stickers out that way?"). Pictures of one boy and one girl were provided so that the children could place the stickers on each picture to indicate which child

received which stickers. The pairs of photos were shuffled before each interview so that particular photos would not be associated with any particular scenario.

The scenarios varied in three ways: (1) the number of feminine and masculine stickers, (2) the preferences of the children in the scenarios and (3) the setting. There were three variations of the number of masculine and feminine stickers: 3 butterfly and 3 pirate stickers in a control condition (called 3F-3 M for 3 feminine and 3 masculine stickers), 2 butterfly and 4 pirate stickers (2F-4 M), and 4 butterfly and 2 pirate stickers (4F-2 M).

Two additional scenarios described a child expressing a non-gender normative preference (e.g., "Tom sees both kinds of stickers and says, 'Oh good; I love butterflies! Butterflies are my favorite!'", while the other child says, "I like all kinds of stickers." The atypical preferences scenarios included 2F-4 M where the boy prefers feminine stickers and 4F-2 M where the girl prefers masculine stickers (3F-3 M was not tested with a non-normative preference).

Each of these five scenarios was tested with a private setting condition, where the rewards were described as being placed in the children's backpacks, and a public setting, where the stickers would be placed on the child's shirt right before recess. Pictures of the setting (either a backpack or a scene at recess) were placed next to the pictures of the two children. Whether private or public was presented first varied. Within each section (preference or no preference, and both settings), the control was presented first (for the no preference scenarios), followed by the distribution with more masculine stickers, and lastly the distribution with more feminine stickers.

## **Coding**

Coding of the ten distributions was based on the number of masculine and feminine stickers assigned to the boy and girl protagonists. Coding of justifications was based on categories derived from previous studies (e.g., Conry-Murray & Turiel, 2012) and from a portion of data from this study. The justification categories were called, *Personal choice* (the desires or preferences of the protagonists), *Moral* (including references to rights, justice or welfare), *Gender-related* (including references to gender norms, gender-related preferences and gender-related capabilities) and *Conventions* (including references to authority and concerns with embarrassment or others' reactions). Only these categories were included because they were the only categories that included at least 5% of responses. A small portion of participants used two codes (less than 5%). When this occurred, justifications were coded proportionally (i.e., .5 for each of the two codes).

Reliability was calculated for 14% of the interviews for evaluations and 29% for justifications. Inter-rater reliability (Cohen's kappa) was 1.00 for evaluations and .77 for justifications.

**Table 1.** Mean number of stickers given to the boy more than the girl (and SDs).

Distribution	Females			Males			Total
	6	8	10	6	8	10	
3F-3 M	.00 (.00)	.00 (.00)	.00 (.00)	-.31 (1.18)	.11 (.33)	.00 (.00)	-.04 (.52)
2F-4 M	.40 (.84)	.33 (.79)	.14 (.54)	1.08 (1.32)	.22 (.67)	.00 (.00)	.37 (.85)
4F-2 M	-.60 (.97)	-.33 (.79)	-.14 (.54)	.15 (2.38)	-.67 (1.41)	-.33(.78)	-.29 (1.29)
2F-4 M with preference	-.20 (1.14)	.00 (.00)	.00 (.00)	.15 (1.73)	.00 (.00)	.00 (.00)	.00 (.83)
4F-2 M with preference	.00 (1.33)	.33 (.79)	.00 (.00)	.62 (1.26)	.22 (1.20)	-.07 (.16)	.20 (.90)
Total	-.08 (.25)	.07 (.16)	.00 (.00)	.34 (.51)	-.02 (.21)	-.07 (.16)	.05 (.30)

Note. *F* indicates feminine stickers, *M* indicates masculine stickers and the number preceding indicates the number of those stickers that were available to be distributed.

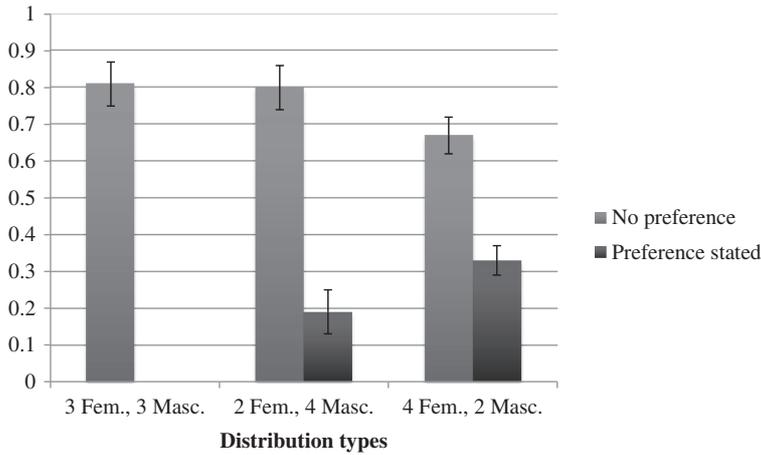
## Results

### Sticker preferences

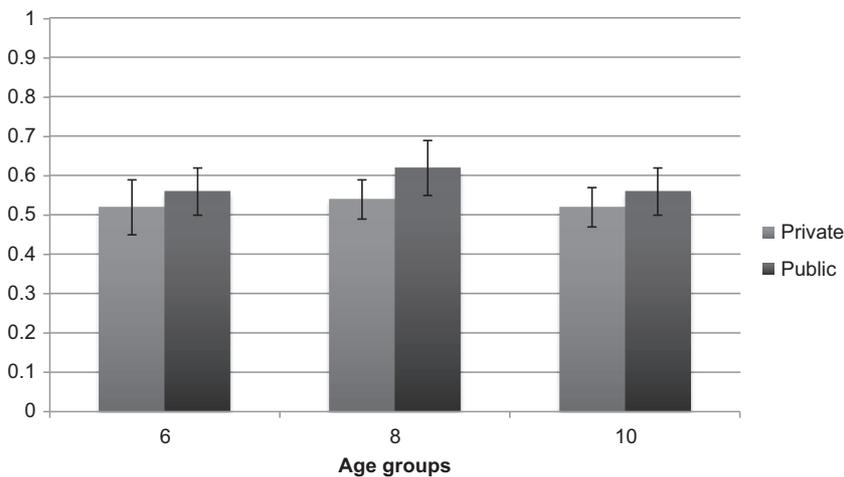
To confirm that butterflies were preferred by girls and pirates were preferred by boys, a 2 (sex)  $\times$  3 (ages 6, 8, and 10) ANOVA was conducted on a subsample of participants assessing their own preference for butterfly or pirate stickers. There were no age effects but there was a sex effect,  $F(1, 26) = 46.99, p < .001$ , partial  $\eta^2 = .64$ , which indicated, as expected, that more of boys (100%) preferred the pirate stickers and more girls (80%) preferred the butterfly sticker.

### Distribution fairness

The first major goal was to examine whether participants awarded an equal number of stickers to boys and girls across the different conditions. The total number of items given to the girl was subtracted from the total stickers given to the boy for a variable that indicated how many more stickers the boy got than the girl (with negative numbers indicating that the girl got more than the boy). A 5(type of distribution: 3F-3 M, 2F-4 M, 4F-2 M, 2F-4 M with preference, and 4F-2 M with preference)  $\times$  2(setting: public or private)  $\times$  2(sex)  $\times$  3(age: 6, 8, and 10 years) repeated measures ANOVA with distribution and public or private setting as repeated measures was conducted on the number of stickers awarded to the boy more than the girl. The overall mean was .04, indicating that boys got less than 1/10 of a sticker more than girls over all groups and conditions. A main effect for distribution type,  $F(4, 256) = 4.73, p = .001$ , partial  $\eta^2 = .07$  indicated that the boys received slightly more stickers when in the 2F-4 M condition than the even split condition (3F-3 M,  $p = .003$ ) and girls got slightly more stickers when there were more butterfly stickers available (4F-2 M) compared to when there were more pirate stickers (2F-4 M,  $p = .018$ ). See Table 1 for means.



**Figure 1.** Proportion of feminine stickers distributed to the girl in different settings with error bars indicating 95% confidence intervals.



**Figure 2.** Proportion of feminine stickers distributed to the girl in different conditions. Error bars show 95% confidence intervals.

An age  $\times$  sex interaction,  $F(2, 64) = 6.58, p = .003$ , partial  $\eta^2 = .17$ , was followed up. The age effect was only found within the boys,  $F(2, 31) = 5.07, p = .012$ , partial  $\eta^2 = .25$ . As the means in Table 1 show, the 6 year old boys were more likely than 10 year old boys to award more stickers to the boy protagonist ( $p = .019$ ).

### **Gender norms and distributions**

In order to examine whether children adhered to gender norms when distributing the stickers, proportions were calculated of the number of feminine

**Table 2.** Justifications by sticker distribution and age.

Sticker distribution	Justifications	Age group		
		6	8	10
3F-3 M	Personal Choice	.00 <sub>a</sub> (.00)	.08 <sub>a,b</sub> (.28)	.20 <sub>b</sub> (.34)
	Moral	.27 (.36)	.27 (.24)	.48 (.37)
	Gender	.58 <sub>a</sub> (.39)	.53 <sub>a</sub> (.30)	.14 <sub>b</sub> (.26)
	Conventional	.00 (.00)	.08 (.19)	.04 (.20)
2F-4 M	Personal Choice	.02 <sub>a</sub> (.09)	.06 <sub>a</sub> (.21)	.32 <sub>b</sub> (.36)
	Moral	.34 (.40)	.25 (.38)	.39 (.38)
	Gender	.43 <sub>a</sub> (.38)	.54 <sub>a</sub> (.43)	.12 <sub>b</sub> (.26)
	Conventional	.00 (.00)	.03 (.14)	.03 (.15)
4F-2 M	Personal Choice	.02 <sub>a</sub> (.09)	.08 <sub>a,b</sub> (.28)	.32 <sub>b</sub> (.45)
	Moral	.39 (.38)	.25 (.32)	.36 (.42)
	Gender	.44 <sub>a</sub> (.41)	.41 <sub>a,b</sub> (.40)	.10 <sub>b</sub> (.25)
	Conventional	.00 (.00)	.03 (.14)	.04 (.20)
2F-4 M with preference	Personal Choice	.79 <sub>a</sub> (.31)	.65 <sub>b</sub> (.44)	.30 <sub>b</sub> (.40)
	Moral	.09 (.18)	.15 (.22)	.02 (.10)
	Gender	.04 (.13)	.04 (.14)	.04 (.14)
	Conventional	.00 <sub>a</sub> (.00)	.00 <sub>a</sub> (.00)	.56 <sub>b</sub> (.45)
4F-2 M with preference	Personal Choice	.80 <sub>a</sub> (.33)	.77 <sub>a</sub> (.37)	.32 <sub>b</sub> (.45)
	Moral	.39 (.38)	.14 (.30)	.10 (.25)
	Gender	.05 (.15)	.02 (.07)	.10 (.25)
	Conventional	.00 <sub>a</sub> (.00)	.00 <sub>a</sub> (.00)	.54 <sub>b</sub> (.45)

Note. Means in the same row with different subscripts differ at  $p < .01$  (.01 is the Bonferroni corrected alpha level).

items awarded to the girl out of the total possible feminine items available. A 5(type of distribution: 3F-3 M, 2F-4 M, 4F-2 M, 2F-4 M with preference, and 4F-2 M with preference)  $\times$  2(setting: public or private)  $\times$  2 (sex)  $\times$  3(age: 6, 8, and 10 years) repeated measures ANOVA with distribution and public or private setting as repeated measures was conducted on the proportion of feminine stickers awarded to the girl protagonist. This resulted in a main effect for public vs. private setting,  $F(1, 63) = 18.8$ ,  $p < .001$ , partial  $\eta^2 = .23$ , indicating that participants gave a larger proportion of feminine stickers to girls (and thus used gender norms more) when the setting was public ( $M = .60$ ,  $SD = .14$ ) than when it was private ( $M = .53$ ,  $SD = .12$ , Figure 1).

A main effect for distribution type,  $F(4, 252) = 121.31$ ,  $p < .001$ , partial  $\eta^2 = .66$ , indicated that when there was a stated atypical preference, girls were given significantly fewer feminine stickers, indicating that the counter-stereotypical preference was respected to some degree. These means differed significantly from all other distributions and from each other,  $p < .001$ . A smaller difference was found when there were only 2 masculine stickers (4F-2 M) where the proportion of feminine stickers given to girls was significantly lower than all other distributions without a preference ( $p < .001$ ). Means are displayed in Figure 2.

### Justifications

Justifications were evaluated in four analyses, one for each justification category. These were 5(type of distribution: 3F-3 M, 2F-4 M, 4F-2 M, 2F-4 M with

preference, and 4F-2 M with preference  $\times$  2(setting: public vs. private)  $\times$  3(age group: 6, 8, 10)  $\times$  2(sex) repeated measures ANOVA with justification, distribution type and public vs. private setting as repeated measures. Means by age for each justification are located in Table 2.

The moral justification had a distribution type effect,  $F(4, 244) = 13.31$ ,  $p = .001$ , partial  $\eta^2 = .18$ , which indicated that participants used moral justifications in all the distributions where no preference was stated (3F-3 M:  $M = .35$ ,  $SD = .36$ ; 2F-4 M:  $M = .34$ ,  $SD = .38$ ; 4F-2 M:  $M = .35$ ,  $SD = .38$ ) more than both distributions where a preference was stated (2F-4 M with preference:  $M = .08$ ,  $SD = .17$ , 4F-2 M with preference:  $M = .09$ ,  $SD = .22$ , each  $p < .001$ ).

In the personal choice justification, an age  $\times$  distribution type interaction,  $F(2, 64) = 11.17$ ,  $p < .001$ , partial  $\eta^2 = .26$ , indicated that 6 and 8 year olds used the personal choice justification more than the 10 year olds for the distribution with a preference stated, but the older participants used it more when there was no preference stated. See Table 2 for pairwise comparisons.

In the gender justification, an age  $\times$  distribution type interaction,  $F(8, 244) = 6.33$ ,  $p < .001$ , partial  $\eta^2 = .17$ , showed that gender justifications only had an age effect when no preference was stated. In those distributions, the 10 year olds rarely used the gender justification but the 6 and 8 year olds used it often. See Table 2 for pairwise comparisons.

Finally, in the conventional justification, there were three main effects that were qualified by interactions. A main effect for setting,  $F(1, 61) = 17.84$ ,  $p < .001$ , partial  $\eta^2 = .23$ , a main effect for distribution,  $F(4, 244) = 11.83$ ,  $p < .001$ , partial  $\eta^2 = .16$ , and a main effect for age,  $F(2, 61) = 31.43$ ,  $p < .001$ , partial  $\eta^2 = .51$ , were qualified by an age  $\times$  setting interaction,  $F(2, 61) = 5.60$ ,  $p < .001$ , partial  $\eta^2 = .16$ , and an age  $\times$  distribution interaction,  $F(8, 244) = 18.99$ ,  $p < .001$ , partial  $\eta^2 = .38$ . Follow up indicated that both interactions were only significant among the 10 year olds. Ten year olds used the conventional justification more in the public setting ( $M = .28$ ;  $SD = .19$ ), than in the private setting ( $M = .21$ ;  $SD = .18$ ,  $p < .001$ ). They also used conventional justifications more when the distribution type included unconventional preference (2F-4 M with preference:  $M = .56$ ,  $SD = .46$ , 4F-2 M with preference:  $M = .54$ ,  $SD = .45$ ) than without a preference (3F-3 M:  $M = .04$ ,  $SD = .20$ ; 2F-4 M:  $M = .03$ ,  $SD = .15$ ; 4F-2 M:  $M = .04$ ,  $SD = .20$ ; each comparison with preference stated distributions was  $p < .001$ ).

## Discussion

The results indicate that children are concerned with both fairness and adherence to gender norms. Consistent with past research (Fehr et al., 2008; Smetana, 2006; Turiel, 2006) participants at all ages appeared to be most concerned with absolute fairness. Across all the conditions, most distributions were split evenly with approximately 3 stickers going to the girl and 3 to the boy. This was true even when stickers associated with one sex outnumbered the stickers associated

with the other. When there were variations from the even split, they were small (about third of one sticker difference on average for the most unequal group, the 6 year old boys). In addition, justifications related to fairness were among the most frequent.

Children at all ages used gender norms to distribute resources when no preference was stated. In that case, girls received most of the feminine stickers (and thus boys got most of the masculine stickers since the stickers were distributed very close to even splits), consistent with past research (Conry-Murray & Turiel, 2012).

Although there were no statistically significant age differences in distributions, age difference did occur in justifications related to gender. Gender-related justifications were especially common among the 6 and 8 year olds when no preference was stated, indicating that gender norms guided the younger children when explicit information about preferences was not available. Overall, gender norms clearly did influence the children, and age differences in justifications may reflect that younger children were less sensitive to the possibility that preferences are not always consistent with gender norms, as past research has shown (Biernat, 1991; Conry-Murray, 2015).

When unconventional preferences were stated, children showed a marked change in their distributions. Across all ages, children distributed significantly fewer feminine stickers to the girl when an unconventional preference was stated. Thus, when preferences were made explicit, children prioritized preferences over gender norms. Even 6 year olds who are at the age when children are often very inflexible about gender norms (Ruble, Martin, & Berenbaum, 2006; Taylor et al., 2009), did not have difficulty defying gender norms in order to distribute items according to a personal preference. Justifications for conditions with a stated preference were primarily references to personal choice, especially among the 6 and 8 year olds.

When a hypothetical child has an unconventional choice, are children aware of the setting and social pressures that may play a part of whether gender norms should be followed? The data here show that children were more reluctant to give children unconventional items when those items would be displayed publically on a shirt at recess. The 10 year olds more than any other age group seemed sensitive to the possibility of embarrassment when someone held an unconventional preference, since they mentioned conventional concerns. Killen and Stangor (2001) found that older children (age 13 in their study) are more concerned with group functioning than younger children. With age, children may become more sensitive to both the variety of preferences related to gendered items as well as the role that gender plays in social functioning. Mentions of embarrassment may be an indication that defying conventional norms could lead to teasing. Given that teasing is a form of psychological harm, this could transcend the conventional category and become a moral concern. More research is needed to investigate this possibility.

Overall, the findings indicate that children, even at the ages when they are at the height of gender inflexibility, are aware of limits to gender norms and they are sensitive to external influences on gender related behaviors. Rather than understanding gender as an intrinsic, internal quality with no overlap, it appears that children use gender norms as a heuristic that guides them when no contrary information is available. Recent research shows that children who endorse unequal distributions also see them as consensual, especially during ages that are typically inflexible about gender (Conry-Murray, 2015). However, when information regarding diverse preferences is presented, as in the current study, even young children around age 6 are capable of using the information to form flexible judgments.

The current study was limited by the possibility that children's responses reflected social desirability. In addition, the current study examined children's distributions to others and cannot conclude whether results would differ if the participants had held a stake in the outcome of the distribution (Shaw et al., 2014), or how participants would respond to the possibility of embarrassment or teasing directed at them. Finally, higher value or more visible items may also carry more stigma which could affect participants' willingness to subject others or themselves to teasing for defying gender norms. Given the influence of culture on social norms (Rhodes & Gelman, 2009), future research should examine these and other issues of gender and fairness cross-culturally.

In the current study, children as young as age 6 were sensitive to atypical preferences, indicating that they can be flexible about gender norms when relevant information is made explicit. They were also sensitive to whether the setting made it possible to defy gender norms. This is evidence that children are aware of social pressure to adhere to gender norms and these pressures affect their considerations of personal choice.

## Disclosure statement

No potential conflict of interest was reported by the author.

## References

- Baumard, N., Mascaró, O., & Chevallier, C. (2012). Preschoolers are able to take merit into account when distributing goods. *Developmental Psychology, 48*, 492–498.
- Biernat, M. (1991). Gender stereotypes and the relationship between masculinity and femininity: A developmental analysis. *Journal of Personality and Social Psychology, 61*, 351–365. doi:0022-3514/91/J3.00
- Conry-Murray, C. (2013). Children's reasoning about gender-atypical preferences in different settings. *Journal of Experimental Child Psychology, 115*, 210–217. doi:10.1016/j.jecp.2012.09.007
- Conry-Murray, C. (2015). Boys get the math games and girls get the reading games: Children's reasoning about distributive justice and gender. *Merrill-Palmer Quarterly, 61*, 319–344. doi:10.13110/merrpalmquar1982.61.3.0319

- Conry-Murray, C., Kim, J. M., & Turiel, E. (2015). Judgments of gender norm violations in children from the United States and Korea. *Cognitive Development, 35*, 122–136. doi:10.1016/j.cogdev.2015.04.002
- Conry-Murray, C., & Turiel, E. (2012). Jimmy's baby doll and Jenny's truck: Young children's reasoning about gender norms. *Child Development, 83*, 146–158. doi:10.1111/j.1467-8624.2011.01696.x
- Damon, W. (1977). *The social world of the child*. San Francisco, CA: Jossey-Bass.
- Fehr, E., Bernhard, H., & Rockenbach, B. (2008). Egalitarianism in young children. *Nature, 454*, 1079–1083. doi:10.1038/nature07155
- Gelman, S. A. (2004). Psychological essentialism in children. *Trends in Cognitive Sciences, 8*, 404–409. doi:10.1016/j.tics.2004.07.001
- Killen, M., & Stangor, C. (2001). Children's reasoning about social inclusion and exclusion in gender and race peer group contexts. *Child Development, 72*, 174–186. doi:10.1111/1467-8624.00272
- Lagattuta, K. H., Nucci, L., & Bosacki, S. L. (2010). Bridging theory of mind and the personal domain: Children's reasoning about resistance to parental control. *Child Development, 81*, 616–635. doi:10.1111/j.1467-8624.2009.01419.x
- Levy, G. D., Taylor, M. G., & Gelman, S. A. (1995). Traditional and evaluative aspects of flexibility in gender roles, social conventions, moral rules, and physical laws. *Child Development, 66*, 515–531. doi:10.2307/1131594
- McCrink, K., Bloom, P., & Santos, L. R. (2009). Children's and adults' judgments of equitable resource distributions. *Developmental Science, 13*, 37–45. doi:10.1111/j.1467-7687.2009.00859.x
- Niederberger, M. (2014, March 1). Pa. free lunches on the rise in poor economy: Enrollment down, but economy, outreach bring more subsidized meals. *Pittsburgh Post-Gazette*. Retrieved from <http://www.post-gazette.com/news/education/2014/03/02/More-Pennsylvania-students-qualifying-for-free-lunches/stories/201403020112>
- Rhodes, M., & Gelman, S. A. (2009). A developmental examination of the conceptual structure of animal, artifact, and human social categories across two cultural contexts. *Cognitive Psychology, 59*, 244–274.
- Ruble, D. N., Martin, C. L., & Berenbaum, S. A. (2006). Gender development. In N. Eisenberg, W. Damon, & R. Lerner (Eds.), *Handbook of child psychology: Vol. 3, Social, emotional, and personality development* (6th ed.). (pp. 858–932. Hoboken, NJ: Wiley
- Shaw, A., Montinari, N., Piovesan, M., Olson, K. R., Gino, F., & Norton, M. I. (2014). Children develop a veil of fairness. *Journal of Experimental Psychology: General, 143*, 363–375. doi:10.1037/a0031247
- Shaw, A., & Olson, K. R. (2012). Children discard a resource to avoid inequity. *Journal of Experimental Psychology: General, 141*, 382–395. doi:10.1037/a0025907
- Smetana, J. (2006). Social-cognitive domain theory: Consistencies and variations in children's moral and social judgments. In M. Killen & J. Smetana (Eds.), *Handbook of moral development* (pp. 119–153). Mahwah, NJ: Lawrence Erlbaum.
- Taylor, M. (1996). The development of children's beliefs about social and biological aspects of gender differences. *Child Development, 67*, 1555–1571. doi:0009-3920/96/6704-0017S01.00
- Taylor, M. G., Rhodes, M., & Gelman, S. A. (2009). Boys will be boys, cows will be cows: Children's essentialist reasoning about gender and animal development. *Child Development, 80*, 461–481. doi:10.1111/j.1467-8624.2009.01272.x
- Trautner, H. M., Ruble, D. N., Cyphers, L., Kirsten, B., Behrendt, R., & Hartmann, P. (2005). Rigidity and flexibility of gender stereotypes in childhood: Developmental or differential? *Infant and Child Development, 14*, 365–381. doi:10.1002/icd.399

Turiel, E. (2006). The development of morality. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5th ed.). (pp. 863–932. Hoboken, NJ: Wiley