

Do Transgender Children (Gender) Stereotype Less than their Peers and Siblings?

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Research Highlights

* This is the first study to examine gender stereotypes in socially-transitioned transgender children.

* This study finds that transgender children and siblings of transgender children show less gender stereotyping and greater tolerance of gender nonconformity than other children.

* Transgender children also indicated greater willingness to befriend or attend school with someone who defies gender stereotypes than other children.

Abstract

In the present work, we ask whether socially-transitioned, transgender children differ from other children in their endorsement of gender stereotypes and response to others' gender nonconformity. We compare transgender children ($N=56$) to a group of siblings of transgender children ($N=37$), and a group of unrelated control participants ($N=56$) during middle childhood (ages 6-8 years old). Our results indicate that transgender children and the siblings of transgender children endorse gender stereotypes less than the control group. Further, transgender children see violations of gender stereotypes as more acceptable, and they are more willing to indicate a desire to befriend and attend school with someone who violates gender stereotypes than the control participants. These results held after statistically controlling for demographic differences between families with and without transgender children. We discuss several possible reasons that can explain these differences.

Do Transgender Children (Gender) Stereotype Less than their Peers and Siblings?

Transgender children are children whose gender identity (the gender that they feel they are) is the “opposite¹” of their natal sex (as determined by their chromosomes and anatomy). Unlike decades ago, today, a number of these children are *socially-transitioning* or changing their pronouns and first names to match their gender identity while still in the prepubescent years (e.g., Kunalanka, Weiner, Mahan, 2014; Malpas, 2011; Steensma & Cohen-Kettenis, 2011). For example, 9-year-old Avery Jackson who was recently featured on the cover of *National Geographic* (2017), is a child who was identified by doctors at birth as a boy, but today lives as a girl; she wears clothing and hairstyles associated with girls and is referred to with female pronouns by the people in her family, school, and community.

Young socially-transitioned transgender children’s gender development often follows a unique path. Pilot data from 60 interviews with parents of socially-transitioned transgender children in our own lab suggest that more than 90% of these transgender children displayed gender nonconformity (from the perspective of the child’s natal sex) before their fourth birthday, and did so consistently for the next few years, with children spending an average of 4 years displaying gender nonconformity before socially-transitioning². Of course, after their social transitions, children continue to engage in the same behaviors, which now, from the perspective of their “new” identity, appear as gender-conforming. For example, a natal boy may display a strong identity as a girl, a preference for wearing dresses, and may prefer playing with female

¹ Gender is often described as discrete and binary such that boy and girl are conceptualized as “opposites” and the only available options. However, some people feel that they have a gender identity that is somewhere between boy and girl, a mix of both, or neither (e.g., Bockting & Coleman, 2007; Ehrensaft, 2010). Despite recognizing that gender is not discrete or binary for all people, we use the term “opposite” gender to increase ease of understanding by a wider audience and because the specific children we are talking in this paper have discrete, binary identities.

² As part of an honors thesis, 60 parents with transgender children were interviewed about their children’s gender development. Parents indicated the age of first signs of transgender identity was $M=2.5$ years and the age of social transition was $M=6.8$ years, suggesting gender nonconformity was displayed for 4 years on average before social transitions.

peers beginning in the toddler years, and these behaviors are likely to be seen by outsiders as clear gender nonconformity. After socially transitioning (changing pronouns and first name), this child is likely to be viewed as a girl, meaning, the same child's identity as a girl, preference for dresses, and desire to play with female peers now appear to be quite gender conforming. In fact, recent work suggests that socially-transitioned transgender children have toy and clothing preferences that are just as gender-stereotypical as their peers and that they feel just as similar to other children of their gender as their gender typical³ peers do (Fast & Olson, 2017; Olson et al., 2015). This unique history of appearing—at least to outsiders—as a gender nonconforming child and then as a gender conforming child, as well as their unique experiences that may occur as a result of being transgender (e.g., potentially different socialization by parents), make understanding how transgender children think about gender particularly interesting. In the present work, we focus on whether transgender children think about gender stereotypes and gender nonconforming peers differently from their gender typical peers.

Predictions for Gender Stereotyping and Responses to Gender Nonconformity in Transgender Children

Transgender children may stereotype and evaluate gender nonconforming children in ways similar to gender typical children. One possible hypothesis is that transgender children will not differ from other children in their endorsement of gender stereotypes and responses to gender nonconformity. The majority of past findings with socially-transitioned transgender children suggest that they look quite similar to gender typical children on most measures: transgender children display strong gender-stereotypic preferences for clothing and toys, they show strong preferences to play with same-gender peers, and they see themselves as similar to other children

³ We use the term “typical” in a statistical sense (i.e., most common), rather than in a prescriptive way.

of their own gender and not like children of the opposite gender (Fast & Olson, 2017; Olson et al., 2015). On all of these measures, socially-transitioned transgender children do not differ in magnitude or direction from gender- and age-matched gender typical peers. Consistent with this work showing the similarity between how transgender and gender typical children think about gender, a possible prediction is that transgender children will not differ from gender typical peers on measures of stereotyping or evaluations of gender nonconformity.

Further supporting this prediction is past work that has found a relationship between the extent to which (gender typical) children show stereotype-consistent preferences and their endorsement of stereotypes (e.g., Miller, Trautner, & Ruble, 2006; Turner, Gervai, & Hinde, 1993). Insofar as these two types of measures are linked, and socially-transitioned transgender children show stereotype-consistent preferences of the same magnitude as their gender typical peers, transgender children might show stereotype endorsement to the same degree as their gender typical peers.

One final reason why we might predict similar responses between transgender children and their gender-matched peers is homophily, or the tendency for people to prefer similar others (Lazarsfeld & Merton, 1954). In line with homophily, insofar as transgender children currently show gender-stereotypical behavior and see themselves as gender typical (as they reportedly do, Fast & Olson, 2017; Olson et al., 2015), they might also prefer people who engage in gender-stereotypical behavior, rejecting those who do not. Previous work has suggested that children display homophily in their friendship networks, for example, preferring people who share their race, gender, and play style (Cairns, Cairns, Neckerman, Gest, & Garipey, 1988; Hanish, Martin, Fabes, Leonard, & Herzog, 2005; Shrum, Cheek, & Hunter, 1988; Xu, Farver, Schwartz, &

Chang, 2004). Homophily might therefore lead transgender children to prefer gender conforming children and negatively evaluate gender nonconforming children, just like their peers do.

Transgender children may be more flexible about stereotypes and more accepting of gender nonconforming peers. An alternative hypothesis is that transgender children are more flexible about gender norms, leading them to reject gender stereotypes more than other children and to be more accepting of those who violate gender norms, than gender typical children. Interestingly, homophily could actually lead to this hypothesis as well. Insofar as transgender children see themselves as having a history of gender nonconformity (or still consider themselves to be gender nonconforming), they may identify with gender nonconforming people and therefore like gender nonconforming people more than other children who lack this history.

Contact theory (Pettigrew & Tropp, 2006) makes a similar prediction about transgender children being more open to gender nonconformity in others, though for different reasons. In past studies (e.g., Fast & Olson, 2017), as well as the present study, transgender children are often recruited via camps, conferences and support groups for transgender *and* gender nonconforming children, while gender typical children are unlikely to attend events with large numbers of gender nonconforming children. As a result, transgender children would have greater contact with gender nonconforming children and as a result might show more positive attitudes toward gender nonconforming people. Past work in diverse domains such as race, ethnicity, and linguistic group, has suggested that more exposure to a group is often associated with more positive evaluations of group members (Aboud, Friedmann, & Smith, 2015; Tropp & Prenovost, 2008; Wright & Tropp, 2005).

This exposure to gender nonconforming people is just one of the many ways in which parents of transgender children may tailor transgender children's social experiences which could

in turn influence their stereotype endorsement. For example, parents of transgender children might explicitly reject gender stereotypes more or may talk more openly about sexism than parents who do not have transgender children, which may in turn lead to reduced gender stereotyping and greater tolerance for gender nonconforming peers.

Finally, although not specifically about transgender children, there is some literature to support the hypothesis that children who themselves show gender nonconforming behaviors may endorse gender stereotypes less and may be more tolerant of gender nonconformity in others. Ahlqvist, Halim, Greulich, Lurye, and Ruble (2013) found that tomboys are more accepting of gender nonconformity in others than girls who were not tomboys. Relatedly, Martin and Dinella (2012) found that, tomboys are more likely than non-tomboy girls to endorse exceptions to gender stereotypes and, while not statistically significant, tended to be more flexible about gender stereotypes. Finally, Liben and Bigler (2002) found that children who were less gender-stereotypic (e.g., boys who endorsed more feminine traits), a year and a half later endorsed lower gender stereotyping of others, than those who were more gender-stereotypic. These findings suggest that if transgender children are or have been gender nonconforming, they might similarly endorse fewer gender stereotypes and be more tolerant of gender nonconformity in others.

Most simply, the present work asks which general pattern best describes transgender children—do they gender stereotype and negatively evaluate gender nonconforming peers to the same degree as their gender typical peers or do they instead reject gender stereotyping and embrace their gender nonconforming peers more? We return to the possible explanations for our observed pattern in the general discussion, but before describing our work, we briefly summarize the past work on gender stereotyping and responses to gender nonconforming peers in gender typical children, in order to better situate the present work.

Gender stereotyping and responses to gender nonconformity in gender “typical” children

Most children develop rudimentary gender stereotypes by late toddlerhood (e.g., Eichstedt, Serbin, Poulin-Dubois, & Sen, 2002) and explicitly endorse gender stereotypes by 3-4 years of age (e.g., Birnbaum, Nosanchuk, & Croll, 1980; Kuhn, Nash, & Brucken, 1978; Picariello, Greenberg, & Pillemer, 1990). Children typically show peak rigidity in gender stereotypes around the early elementary years and then begin to show greater flexibility in gender stereotypes toward the middle of elementary school (e.g., Signorella, Bigler, & Liben, 1993; Trautner, Ruble, Cyphers, Kirsten, Behrendt, & Hartmann, 2005). Thus, while children become aware of more gender stereotypes throughout childhood (Miller, Lurye, Zosuls, & Ruble, 2009; Signorella, et al., 1993, Williams, Bennett, & Best, 1975), they show a curvilinear pattern of endorsement—increasing through the early elementary years and then a reduction of endorsement by the later years. Despite these developmental fluctuations, children continue to endorse some degree of gender stereotyping throughout childhood (e.g., Berndt & Heller, 1986; Martin, Wood, & Little, 1990; Miller, et al., 2009) and into adolescence and adulthood (Alfieri, Ruble, & Higgins, 1996; Eagly & Mladinic, 1989; Eckes, 2002). Most critical for the present work, researchers have reported a particularly dramatic reduction in stereotype endorsement occurring between the ages of 6 and 8 (e.g., Trautner, Ruble, Cyphers, Kirsten, Behrendt, & Hartmann, 2005).

Not surprisingly, given their endorsement of gender stereotypes, children also express displeasure at others who display gender nonconformity (e.g., boys who play with dolls). Preschool children often state that gender nonconforming behaviors are not acceptable and sanction those who violate gender norms (Levy, Taylor & Gelman, 1995; Martin, 1989; Ruble, Taylor, Cyphers, Greulich, Lurye, & Shrout, 2007). By the elementary years, children’s views

about violations of gender norms shift. When directly asked whether cross-gender behavior is wrong, nearly all elementary-age children say such behavior is acceptable; however, the same children indicate that they would react negatively if they observed gender nonconformity and would refuse to play with a child who exhibited such behavior (e.g, Carter & McCloskey, 1984; also Conry-Murray, Kim, & Turiel, 2015; Martin, 1989). When compared directly, elementary-age children like gender conforming peers (e.g., a girl who wears nail polish) more than gender nonconforming peers (e.g., a boy who wears nail polish) (e.g, Carter & McCloskey, 1984; Martin, 1989). Unsurprisingly given children's relative dislike of gender nonconforming children in lab studies, outside the lab, gender nonconforming children experience high rates of bullying and rejection from peers (Grant, Mottet, Tanis, Harrison, Herman, & Keisling, 2011; Roberts, Rosario, Slopen, Calzo, & Austin, 2013; Toomey, Card, & Casper, 2014), and this bullying and rejection begins as early as elementary school (Ewing-Lee & Troop-Gordon, 2011; Zosuls, Andrews, Martin, England, & Field, 2016).

The Current Work

The current work was designed to ask whether transgender children differ from gender typical children in their endorsement of gender stereotypes and responses to gender nonconformity in others. Past theorizing and empirical work support two competing hypotheses: (1) that transgender children will endorse gender stereotypes and negatively evaluate gender nonconformers as much as gender typical children, or (2) that transgender children will endorse gender stereotypes less and evaluate gender nonconforming peers more favorably than gender typical children do. We utilize three measures to answer this question: a measure of gender stereotypes (versus gender flexibility) about activities (adapted from Liben & Bigler, 2002 as used in Fast & Olson, 2017); a measure of perceived acceptability of gender nonconforming

behavior (adapted from Smetana, 1986 as used in Ruble et al., 2007); and a measure of willingness to affiliate with (attend school with, befriend) gender nonconformers (adapted from Smetana, 1986 as used in Ruble et al., 2007).

In this work we focus on 6- to 8-year-olds because this is an age during which previous work suggests that most gender-typical children show gender stereotyping (e.g., Bigler, 1995; Friedman, Leaper, & Bigler, 2007; Patterson, 2012) and negative responses to gender nonconformity (e.g., Ruble et al., 2007) on these measures, but their performance is neither at floor or ceiling levels, allowing for the possibility that we would observe differences (in any direction) between a gender typical sample and our transgender sample if such differences exist. Further, this is an age range in which developmental changes are often noted, for example, finding a decrease in gender stereotyping (Trautner et al, 2005), providing a useful opportunity to replicate (or not) previous work.

In addition to including a group of transgender children and a group of unrelated gender typical children, one final feature of the proposed work is our inclusion of a third group of participants: siblings of transgender children. The inclusion of siblings of transgender children is critical in helping to interpret our findings. If transgender children and the gender typical control group differ on our measures, there are several reasons why this could be so. Siblings, by virtue of not being transgender themselves, but likely having extensive contact with transgender people (their siblings, but also others at camps, conferences, and play dates) and similar parental input, help to distinguish possible explanations. If siblings' results look similar to controls but different from transgender participants, then perhaps it is the personal experience of past gender nonconformity that would explain transgender children's responses. If, however, siblings' responses look more like transgender children and are different from unrelated gender typical

children's responses, one of the other explanations (e.g., contact, socialization) are more likely. Consistent with this prediction, Fulcher, Sutfin, and Patterson (2008), found that children of lesbian mothers saw gender nonconformity (amongst boys) to be less of a problem than children of heterosexual parents. Therefore, having significant exposure to a family member who defies gender stereotypes (in that case, by being in a relationship with someone of the same sex) is associated with reduced gender stereotyping. If such a mechanism was involved in the present work, we would predict that both transgender children and their siblings would show greater tolerance for violations of gender stereotyping than gender typical children.

In sum, the present work involves comparing transgender children, (unrelated) gender typical children, and siblings of transgender children (ages 6-8) on measures of gender stereotyping and evaluations of peer gender nonconformity. Our key question is whether the transgender children are more accepting than gender typical children are of violations of gender norms (or not). By including the siblings of transgender children we also hope to shed light on possible reasons why similarities and differences between groups may be found.

Method

Participants

Socially-Transitioned Transgender Children. Transgender participants in this study were recruited as part of a larger study investigating transgender and gender nonconforming youth. Families with transgender children were recruited through support groups, conferences, media stories, and through word-of-mouth. Interested families signed up for the study online or at conferences and then participated in person with researchers when the research team was visiting their local area or attending the same conference. In order to be included in this sample,

participants needed to be 6-8 years old during the testing period, socially-transitioned, and from the U.S. or Canada.

Social transitions were defined as occurring if the child used the pronoun of the gender “opposite” their natal sex in all contexts (e.g., at home, at school, upon introduction to strangers). A total of 56 transgender children ($M = 7.5$ years old, $SD = .76$, 14 transgender boys, 42 transgender girls) met all inclusion criteria and completed measures of gender stereotyping and/or responses to gender nonconformity. Additional demographic information such as the race of the participants and parent political orientation are included in Table 1. The majority of the children completed these measures the first time they participated in the larger longitudinal project ($n = 49$), but a few children completed the measures at their second visit ($n = 7$) with the research team. Additionally, one transgender child was accidentally asked to complete these measures twice (in two different visits) and that child’s first participation is used in the present analyses.

Siblings of Transgender Children. As part of the larger longitudinal project, the sibling closest in age to each transgender participant was also recruited to participate whenever possible. These children were recruited via the same methods as their transgender siblings. To be included in the present paper, all siblings must have completed the gender stereotyping and/or gender nonconformity measures and be between the age of 6-8 years old. Importantly, the siblings did not necessarily have a transgender sibling who is reported in this paper. Their corresponding transgender sibling could have been under age 6 or over age 8 and therefore a part of a separate piece of the bigger study. However, all siblings had first-hand experience living with a transgender sibling. A total of 37 siblings of transgender children participated ($M = 7.5$ years, $SD = .79$, 24 boys, 13 girls). Additional demographic information about this group is included in

Table 1. The majority of children completed these measures at their first visit ($n=30$), a few children completed the measures at their second visit ($n=5$), and a couple children completed the measures at their third visit ($n=2$). Two of these children were accidentally given only the rigidity measure at an earlier visit (but not the stereotyping measure). Their later participation was utilized in analyses as they could then be included for all measures.

Gender and Age-Matched Control Group

The last sample of participants was a group of children who were recruited to match the transgender children by age (within 4 months) and gender. Thus, an 8-year-old transgender girl would have a control participant who was an 8-year-old girl (as was done in Olson et al., 2015). These children were recruited from families who indicated that they were interested in participating in child development research when their child was born. Parents were all told that this was part of a study about transgender children and if parents reported any unusual gender history or a gender nonconforming or transgender sibling, they were not included as a control group member. A total of 56 control children participated ($M=7.5$ years, $SD=.78$, 14 boys, 42 girls). Additional demographic information for control children is also included in Table 1. Again, the majority of children completed these measures at their first visit ($n=50$), but a few children completed the measures at their second visit ($n=6$). Further one child was (accidentally) asked to complete these measures twice, but only their first participation is reported in this paper.

Procedure

Participants were tested in a quiet space. The majority of the transgender participants and siblings were tested in their homes or local community centers, conference spaces, and libraries, though a few were tested in a research lab. The control children were all tested in a research lab. All participants verbally assented while parents provided written consent. A researcher asked the

children questions verbally, and children indicated their answers either by stating a response or pointing to a response on a labeled response sheet.

Gender Stereotyping

The stereotyping measure was adapted from Liben and Bigler (2002) and used by Fast and Olson (2017). The researcher told the participants that they were going to hear about activities that people can do. The researcher then said, “We want you to tell us if you think each activity should be done by boys, girls, or both boys and girls. There are no right or wrong answers – we just want to know who you think should do these activities”. Children were then read a list of 15 activities and asked whether boys, girls, or both boys and girls should do the activities. Of the activities, 5 were stereotypically “girl” activities, 5 were stereotypically “boy” activities, and 5 were stereotypically neutral activities (activities that boys and girls are equally likely to participate in). The list of items is available in Fast & Olson (2017).

Consistent with Fast and Olson (2017), we computed a *stereotype flexibility score* or the number of times children indicate “both” boys and girls should do activities for the 10 stereotypical items (the 5 stereotypically “girl” items and 5 stereotypically “boy” items), providing each child with a score between 0 (never flexible) to 10 (always flexible, or that they believed all of the activities could be done by boys or girls). See Table 2 for scores broken down by boy and girl stereotypes. In addition, we separately examined responses on the 5 items designed to be gender neutral. These items allowed us to assess whether transgender children (and/or their siblings) would differ from controls in seeing activities as gendered even if they were not.

Acceptability of Gender Nonconformity

To assess the *acceptability of gender nonconformity* we adapted a measure of gender rigidity from past work (Ruble et al., 2007; Smetana, 1986). Children were told that they were going to be asked some questions about what they think about other kids, and they could either say they thought something was “Definitely Wrong”, “A little Wrong”, “A little Okay”, or “Definitely Okay”. Specifically, children were asked questions about whether it was wrong for: “a boy to wear nail polish”, “a girl to shave her head”, “a boy to play with baby dolls”, and “a girl to play with trucks”.

Responses were coded such that 1 indicated a behavior was definitely wrong and 4 indicated a behavior was definitely okay. There were a total of four questions on acceptability of gender nonconforming behavior, and each child’s answers were averaged across the four questions, resulting in a score from 1 (indicating complete rejection of gender nonconformity) to 4 (indicating complete acceptance of gender nonconformity).

Willingness to Affiliate with Gender Nonconformers

Our last measure was similarly adapted from Ruble and colleagues (2007) and Smetana (1986). It assessed whether participants were willing to affiliate with gender nonconforming children. Children were presented with the same four behaviors (e.g., a boy who painted his nails) and were asked whether they wanted *to be friends with* and whether they wanted *to go to school with* that gender nonconforming target. Children received a score of 1 if they said yes, and a score of 0 if they said no. We then added across items to create a Friend Composite and a School Composite, each ranging from 0 (never willing to affiliate) to 4 (always willing to affiliate).

Additional Data Analysis. In addition to comparing overall results by participant group (transgender, siblings, controls) using ANOVAs along with Tukey posthoc tests, when

applicable, we also report partial correlations with age (partialing out any potential group differences). While we believe that gender differences can be very important to examine in the domain of gender development, the unequal sample sizes by gender, especially the small number of boys, precluded formal statistical analysis. For maximum transparency, however, we provided the means by gender in Tables 2 and 3⁴.

Results

Gender Stereotyping. Participant groups (transgender, siblings, and controls) differed in their endorsement of gender flexibility, as indicated by a one-way ANOVA, $F(2, 140) = 6.50$, $p = .002$, $\eta^2 = .085$. Overall, control children ($M = 6.52$, $SD = 2.70$) were significantly less flexible about gender stereotypes than transgender children ($M = 8.15$, $SD = 2.78$), $p = .008$, $d = .60$, and siblings ($M = 8.37$, $SD = 2.89$), $p = .007$, $d = .67$ [All Cohen's d statistics computed using Lakens's formulas (2013)]. However, transgender children and their siblings did not differ in their degree of gender flexibility, $p = .927$, $d = .08$. We found no significant relation between age and the flexibility of gender stereotypes, $r(139) = .13$, $p = .131$, when controlling for participant group differences. Additionally, we found that all groups were equally likely to say neutral activities were for both boys and girls, as indicated by a one-way ANOVA, $F(2, 140) = 2.57$, $p = .080$, $\eta^2 = .035$.

Acceptability of Gender Nonconformity. Participant groups also differed in their judgments of the acceptability of gender nonconformity as indicated by a one-way ANOVA, $F(2, 141) = 13.81$, $p < .001$, $\eta^2 = .16$. Control children were significantly less accepting of gender nonconforming behavior ($M = 2.91$, $SD = .89$) than transgender children ($M = 3.61$, $SD = .68$),

⁴ At an anonymous reviewer's request we also assessed whether children were more strict or flexible with stereotyping and acceptability of their own-gender compared to the opposite-gender. Overall, children were equally likely to stereotype their own versus cross-gendered behavior, $t(142) = .269$, $p = .788$. Additionally, children were equally accepting of gender non-conformity in their own-gender and in the opposite-gender, $t(143) = .889$, $p = .376$.

$p < .001$, $d = .89$, and siblings ($M = 3.56$, $SD = .62$), $p < .001$, $d = .82$. Transgender children and siblings were equally accepting of gender nonconforming behaviors, $p = .955$, $d = .08$. Further, we found that participants were marginally more accepting of gender nonconforming behavior with age, $r(140) = .16$, $p = .054$, when controlling for participant group.

Affiliation with Gender Nonconformers. The three participant groups significantly differed on whether they wanted to be friends with gender nonconforming peers, according to a one-way ANOVA. $F(2,141) = 8.25$, $p < .001$, $\eta^2 = .11$. Control children ($M = 2.48$, $SD = 1.36$) were significantly less likely to indicate they wanted to be friends with gender nonconformers than transgender children ($M = 3.41$, $SD = 1.02$), $p < .001$, $d = .77$, and siblings ($M = 3.18$, $SD = 1.31$), $p = .028$, $d = .52$. Transgender children and their siblings were equally likely to say they would be friends with gender nonconformers, $p = .669$, $d = .20$. With age, children were significantly more likely to say they would be friends with gender nonconformers, $r(140) = .18$, $p = .032$, after controlling for participant group.

A similar pattern of results was observed for willingness to attend school with gender nonconforming children. Specifically, there was a significant group difference, $F(2,141) = 6.82$, $p = .001$, $\eta^2 = .088$, and follow-up tests indicated that control children ($M = 2.63$, $SD = 1.36$) were less likely to want to attend school with gender nonconformers than transgender children ($M = 3.50$, $SD = 1.02$), $p = .001$, $d = .72$. Siblings' responses fell between the other two groups ($M = 3.18$, $SD = 1.40$) and did not significantly differ from controls, $p = .110$, $d = .40$, nor from transgender children, $p = .468$, $d = .27$. Willingness to attend school with gender nonconformers was also correlated with age, $r(140) = .24$, $p = .004$, when controlling for participant group.

Supplementary Analyses. In addition to the primary analyses, because our groups differed by parental political ideology, parental income, and participant gender (see Table 1), we ran

ANCOVAs including all three of these demographic variables as covariates. The four ANCOVAs remained significant: gender stereotyping, $F(2,136) = 5.11, p = .007, \eta^2 = .07$; acceptability, $F(2,137) = 12.58, p < .001, \eta^2 = .16$; friendship, $F(2,137) = 5.43, p = .005, \eta^2 = .07$; school, $F(2,137) = 5.39, p = .006, \eta^2 = .07$, suggesting that group differences in demographic factors are unlikely to account for the observed effects.

Discussion

Overall, we found that socially-transitioned transgender children and siblings of transgender children endorsed gender stereotypes less than a group of age- and gender-matched gender typical children. Transgender children tended to think, for example, that it was more acceptable for both boys and girls to do gymnastics or play videogames. In addition, when presented with gender nonconforming individuals (e.g., a boy who painted his nails), transgender children and siblings of transgender children were more likely to say that such behavior was acceptable and were more willing to say they would befriend gender nonconformers than unrelated gender typical children did. Transgender children similarly indicated a greater willingness to attend the same school as gender nonconformers compared to unrelated gender typical children (siblings did not differ from either group on this last measure).

Explanations Lacking Support

Our findings speak against, or at least lack support, for several explanations outlined in the introduction. For example, both versions of the homophily argument appear to be unable to account for our observed findings. In particular, it does not appear that a personal history of gender nonconformity—as would have been the case in the years before a social transition for transgender children—is necessary to show greater tolerance for gender nonconformity. Siblings of transgender children were equally accepting of gender nonconformity. Since siblings do not

have personal experience as gender non-conforming and transgender children do, and their responses were largely indistinguishable, these findings suggest that personal experience was not necessary to show this greater tolerance.

We also believe that the overall relatively positive evaluations of gender nonconformity (amongst all participants) suggest the alternative homophily argument—that current gender *conformity* leads to liking for gender conformity—is unlikely. That is, all children, but especially transgender children and siblings showed very positive evaluations of gender nonconforming children, a strong desire to befriend them, and a willingness to attend school with them. If children only liked people like themselves, and if children see themselves as gender conforming (from the perspective of their current gender identity), we would not see such high evaluations. Therefore, we believe either interpretation of homophily is unlikely to explain these results.

Further, while past work has shown that transgender children display strong gender-stereotypical preferences and feel just as much a part of their gender groups as gender typical children (e.g., Olson et al., 2015), we did not find similarity in rates of gender stereotyping, suggesting that that stereotype-consistent preferences and endorsement of gender stereotypes are not necessarily linked. While past work has sometimes found a relationship between gender preferences and stereotyping in gender typical children (e.g., Miller et al., 2006; Turner et al., 1993), and we would need to look at individual level correlations to fully rule out this possibility, the present mean-level findings make us skeptical of that the level of gender preferences is tied to one's stereotype endorsement.

Finally, the current findings are at odds with a view that transgender children are overly rigid about gender. Specifically, the concern is that gender nonconforming boys (or girls) are socially-transitioning so that they fit with a more binary view of gender rather than being

encouraged to be content as gender nonconforming boys (girls) (Dreger, 2015; Soh, 2015).

While the current work cannot speak to the question of why children socially transition, these data do suggest that children who socially transition do not appear to be particularly rigid in their gender stereotyping of others, providing at least preliminary data to indicate transgender children are not any more rigid, and in fact appear to be less rigid, about gender than other children (see also Fast & Olson, 2017).

Explanations Consistent with the Present Findings

While we have ruled out, or shed some doubt on, many possible explanations, why might transgender children and siblings of transgender children show less endorsement of gender stereotypes and greater tolerance of gender nonconformity? Several potential, intersecting explanations are possible. In line with contact theory (Allport, 1954; Pettigrew & Tropp, 2006), perhaps transgender children and their siblings have more exposure to gender nonconforming peers and this leads to more positive evaluations of gender nonconformity. While we did not specifically assess each child's degree of exposure to gender nonconformity in others, we know that many of the transgender children and siblings in this study attend the same camps, support groups, and conferences as children who are gender nonconforming because they were recruited through these mechanisms. Thus, the experience of meeting and knowing gender nonconforming children might change evaluations and expectations of gender nonconformity, even if children do not think of themselves as gender nonconforming. Future work might test this explanation more directly by exposing gender-typical children to gender nonconforming children and subsequently assessing gender stereotyping, or assessing variability in exposure within samples of transgender children and their siblings.

An additional, not mutually exclusive, explanation for why transgender children and their siblings show less gender stereotype endorsement and more favorable evaluations of those who violate gender stereotypes is that parents of transgender children may explicitly encourage greater acceptance of gender nonconformity and rejection of gender stereotypes more (and/or the parents of control children may condemn gender nonconformity more, while reinforcing or encouraging gender stereotypes more). Our anecdotal experience talking with families of transgender children is that many of these parents report regularly discouraging gender stereotypes, encouraging all of their children (not just the transgender ones) to, for example, view all activities as open to boys and girls. Such families may also expose their children to environments in which gender stereotypes are discouraged, such as at the very camps and conferences where some of the children were recruited. Whether these kinds of everyday exposures to messages rejecting gender stereotypes occur less often in families with control children remains an open empirical question. We tried to reduce this difference in gender socialization by recruiting gender typical children from a particularly liberal part of the U.S., but nonetheless differences between our families on these variables are still possible and should be assessed in future work.

If there are differences between these families, an additional question is whether these differences emerged before or after their transgender child asserted gender nonconforming behavior or was identified as transgender. That is, the families that support their transgender children through a social transition may have already been families who refuted gender stereotypes, or these families might have been just like control families, but when presented with a child who defied stereotypes, they may have shifted to embrace a more tolerant attitude toward gender nonconformity. Unfortunately, the current design in which families are assessed only

after a child has come out as transgender, does not allow us to arbitrate between these possibilities. Further, given the extreme low incidence of transgender identities (likely <1% of the population, Zucker & Lawrence, 2009), prospective studies are unlikely to be feasible.

Changes over development and across time

Developmental Change? In addition to group differences, the present study also explored changes across development within middle childhood. Previous work with gender typical children had reported a reduction in gender stereotyping between the ages of 6-8 years old (Trautner et al., 2005)—the ages of children in the present work. Other work had found competing claims of an increasing (Carter & McCloskey, 1984) and decreasing (Conry-Murray et al., 2015) rejection of gender nonconforming peers across the elementary years. In the present work, controlling for group membership, older children showed greater willingness to befriend and go to school with gender nonconforming peers than younger children. In contrast, the relation between age and gender stereotyping, and the relation between age and acceptability of gender nonconformity, were not significant (though directionally also suggested, if anything, a reduction in bias with age).

One previous study had explored gender stereotyping in socially-transitioned transgender children, however that study focused on younger—3-5 year old—children (Fast & Olson, 2017). On average, children in all three groups (transgender, siblings, gender typical controls) in that study endorsed gender stereotypes more than the children in the current work, providing further evidence of a reduction in gender stereotyping across development. One other finding from Fast and Olson's (2017) stereotyping results is important to note. They found that socially-transitioned 3-5 year old transgender children and their siblings did *not* differ from age- and gender-matched controls on the same measure of gender stereotyping. One interpretation could

be that the difference across these papers could reflect a true age change—early in development all children seem to endorse gender stereotypes more, and perhaps it is only when gender stereotyping begins to abate later in development, that group differences can be observed. Alternatively, Fast and Olson (2017) had a smaller sample than the present work (32 vs. 56 transgender children), and therefore their lack of a significant effect could have been driven by smaller sample sizes.

In reality, both factors seem to be at play in that paper. The effect size for the comparison of transgender children and controls on the gender stereotyping measure from Fast and Olson's (2017) study was $d=.31$, while the comparison value in the present work was $d=.60$. Thus, it does appear to be the case that the difference in gender stereotyping between transgender children and controls is larger in the current work (perhaps reflecting developmental change), but also it is the case that the Fast and Olson (2017) sample was too small to have led to significant findings even if the effect size from the present work had been observed in that study (i.e., even if $d=.60$, Fast and Olson (2017) would have been unlikely to find significant results with such a small sample).

Historical Change? In addition to the general reductions in gender stereotyping across age in transgender and gender typical children, the children in the present work, in all groups, showed less stereotyping and relatively greater acceptance of gender nonconformity than children in previous work (Smetana, 1986; Ruble et al., 2007). This difference from previous work may reflect the fact that the parents of children who participated in this study, irrespective of their group, tended to be liberal (See Table 1), and having liberal parents has been linked to greater rejection of gender stereotypes and greater tolerance for gender nonconformity (e.g., Fulcher, Sutfin, & Patterson, 2008). Further, the parents who signed their children up for this study knew that it was about gender and knowing that may have produced a study that over-

represented families that endorse gender stereotypes less. Alternatively, children's relative decrease in stereotyping and increase in tolerance for gender nonconformity may reflect a broader social change in views about gender from the time when much of the early work in this area was done (in the 1980's-2000's) to the time of the current work (the mid-2010's) (Brewster & Padavic, 2000; Donnelly, Twenge, Clark, Shaikh, Beiler-May, & Carter, 2015). The overall low rates of stereotyping and general tolerance for gender nonconformity demonstrated by control participants makes the difference between them and transgender children all the more striking.

Limitations

As with all work, but especially work with rare, small, and non-random samples, there are key limitations to this work. First, there are important idiosyncrasies in the sample of transgender children in this paper. Very few children are transgender, have socially-transitioned by the early elementary years, and have parents who seek out and are willing to sign them up for research studies. Therefore, the degree to which these findings generalize, for example, to children who feel they are transgender but have not transitioned or who are transitioned but are not willing to participate in research, is unknown. Further, even amongst all children who are transgender, and transitioned, we likely have a biased sample as families had to be aware that our study was going on and had to reach out to participate. While we have tried to recruit in a diversity of ways, we know our sample is disproportionately White and from high-income backgrounds. Some research has found racial and income-based differences in gender development (e.g., Hoffman & Kloska, 1995), while other studies have found similarities across race and income (e.g., Halim, Ruble, Tamis-LeMonda, & Shrout, 2013). Care must be taken to

replicate this work in a sample of lower income, non-White families, in addition to non-Western samples, in order to understand how generalizable (or not) the findings are.

In addition, while we made efforts to recruit two theoretically-important comparison groups (unrelated gender typical children, siblings), there are limitations to each. One glaring concern is that while our transgender and sibling groups come from all over the United States (and parts of Canada), our unrelated control group all came from one large metro area in the Pacific Northwest. This imbalance came out of necessity—travel is expensive and recruiting controls while traveling for the recruitment of transgender children was not feasible. However, in an ideal and fully-funded world, a regionally-matched control group would be recruited. In addition, because these data are part of a larger longitudinal study, we had to recruit control participants who were interested in being part of a long-term study about gender nonconformity. While this helped us to, presumably, get a more liberal, educated, and therefore better-matched sample than a completely random sample of gender-typical children, this may have biased our sample in some unintended way that could influence how representative the control group is of gender-typical children.

Our sibling group is similarly imperfect. First, not all transgender children have siblings nor siblings in the necessary age range. Because of this, the sibling group was particularly small making their results the least reliable. One further limitation with regards to the sibling group concerns the scope of generalizability from the present findings. In this paper, siblings and transgender children did not differ on any of the measures of gender development but one should be careful not to assume that this means siblings and transgender children always see eye-to-eye on gender. The literature on this front is actually mixed. In particular, to date, it appears that transgender children and their siblings agree most with regard to how they view other people's

gender. For example, Fast and Olson (2017) found that sibling and transgender children, more so than unrelated gender typical children, believed that other people's gender can change across development (on a classic measure of gender stability). At the same time, transgender children differed from siblings in how they saw the stability of their own gender, with transgender children viewing their own gender as having changed across development while siblings believed their gender would be stable across development. Such findings highlight the fact that it is likely an over-simplification to assume that siblings always think about gender in the ways that their transgender siblings do, or that the experience of being transgender has no unique implications over and above knowing people who are transgender or gender nonconforming. Further empirical and theoretical work is necessary to understand when and why these groups look similar or different in their gender cognition.

One additional limitation is that our sample of transgender children is much more diverse in gender identity than this single term implies. We have children who spent years being actively discouraged from what was seen as cross-gender behavior and others who, since birth were allowed to cross gender boundaries. We have children who are open about being transgender and children for whom no one at their school knows they are transgender. We have children from parts of the U.S. that likely endorse gender stereotypes more than others. We are hopeful that our own and others' future work can begin to understand the diverse set of experiences that make up the group of children we have, in the current work, clumped together as one group. Relatedly, our sample includes many more transgender girls than boys so whether our findings would reflect those of a very large sample of transgender boys remains an open question.

Conclusions

Overall our results indicated that transgender children and their siblings showed a more positive response to gender nonconformity than unrelated gender typical participants did. Relatedly, transgender children were more accepting of gender nonconforming peers as friends and in school, and showed lower rates of gender stereotyping (i.e., greater stereotype flexibility). While considerable work remains to explain exactly why these differences were found, we suspect a range of experiences with gender nonconforming children and parental socialization aimed at tolerance for gender nonconformity are at play. As we continue to better understand the broader gender development of socially-transitioned, transgender children, we are hopeful that this population can inform our understanding, not only of transgender children's development, but also of the role that socialization and experience play in all children's gender development.

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Table 1. Demographics

	Transgender (n=56)	Siblings (n=37)	Controls (n=56)	Statistic	p-value
Child's Age ¹ (years)	7.48 (SD=.76)	7.54 (SD=.79)	7.53 (SD=.78)	$F(2,146) = .097$	$p = .91$
Child's Gender ²					
Male	25%	65%	25%	$\chi^2(2) = 19.45$	$p < .001$
Female	75%	35%	75%		
Child's Race ³					
White	77%	62%	66%	$\chi^2(2) = 2.63$	$p = .27$
Mono-racial, Non-White	4%	11%	5%		
More than one race	20%	27%	29%		
Household Annual Income ⁴				$F(2, 146) = 3.33$	$p = .038$
Less than \$25,000	5%	8%	2%		
\$25,001 to \$50,000	11%	11%	2%		
\$50,001 to \$75,000	18%	16%	14%		
\$75,001 to \$125,000	34%	27%	34%		
More than \$125,000	32%	38%	48%		
Parental Political Orientation ⁵	1.64 (SD=.75)	1.54 (SD=.77)	2.61 (SD=1.41)	$F(2,145) = 16.03$	$p < .001$

¹ Mean age of children in each group. The standard deviation is reported in parentheses. A one-way ANOVA was conducted to assess whether the groups differed by age.

² Percentage of children who identified as male and female. A chi square analysis found that children's gender varied significantly with group. Control and Transgender participants were matched on gender so differences are driven by the Sibling group.

³ Percentage of children in each racial category. A chi square analysis was used to compare the number of White and non-White children by group.

⁴ Percentage of children in each of 5 income brackets. A one-way ANOVA was conducted using a 5-point scale corresponding to the 5 income brackets finding a significant difference that varied by group. One control parent indicated their income halfway between \$50,000-\$75,000 and \$75,001-\$125,000. This parent's data was coded as part of the \$50,000-\$75,000 group. Post hoc tests with Tukey corrections found that controls had marginally higher family incomes than transgender children ($p = .060$) and their siblings ($p = .096$). Transgender and siblings had equal household incomes ($p = .999$).

⁵ Average parent score of political orientation where 1 is liberal and 7 is conservative. Standard deviation is reported in parentheses. One parent of a transgender child did not fill out their political orientation. A one-way ANOVA was conducted using the 7-point political orientation scale finding a significant difference that varied by group. Post hoc tests with Tukey corrections found that control families were significantly less liberal than families with transgender children ($p < .001$) and siblings ($p < .001$). Families of transgender children and their siblings were equally liberal, $p = .904$.

Table 2. Gender Stereotypes

	Trans Kids (n=54)			Siblings (n=35)			Controls (n=56)		
	Boys (n=14)	Girls (n=40)	Overall (n= 54)	Boys (n=22)	Girls (n=13)	Overall (n=35)	Boys (n=14)	Girls (n=40)	Overall (n=54)
Boy Stereotypes									
Boy Responses (Stereotypic)	1.14 (1.79)	.78 (1.39)	.87 (1.49)	.82 (1.47)	.77 (1.48)	.80 (1.45)	1.93 (1.77)	1.48 (1.38)	1.59 (1.49)
Girl Responses (Counter)	0.00 (0.00)	.08 (.35)	.06 (.30)	.05 (.21)	0.0 (0.00)	.03 (.17)	0.00 (0.00)	.03 (.16)	.02 (.14)
Both Responses	3.86 (1.79)	4.15 (1.42)	4.07 (1.51)	4.14 (1.52)	4.23 (1.48)	4.17 (1.48)	3.07 (1.77)	3.50 (1.41)	3.39 (1.51)
Girl Stereotypes									
Boy Responses (Counter)	.21 (.80)	.10 (.38)	.13 (.52)	.18 (.66)	.08 (.28)	.14 (.55)	.14 (.36)	.25 (.78)	.22 (.69)
Girl Responses (Stereotypic)	1.00 (1.30)	.73 (1.28)	.80 (1.28)	.82 (1.33)	.38 (.77)	.66 (1.16)	1.71 (1.14)	1.63 (1.43)	1.65 (1.35)
Both Responses	3.79 (1.53)	4.18 (1.45)	4.07 (1.46)	4.00 (1.66)	4.54 (.97)	4.20 (1.45)	3.14 (1.23)	3.13 (1.70)	3.13 (1.58)
Neutral									
Boy Responses	.21 (.58)	.03 (.16)	.07 (.33)	.32 (1.13)	.08 (.28)	.23 (.91)	.29 (.61)	.15 (.43)	.19 (.48)
Girl Responses	.21 (.43)	.08 (.47)	.11 (.46)	0.00 (0.00)	.08 (.28)	.03 (.17)	.21 (.43)	.45 (1.01)	.39 (.90)
Both Responses	4.57 (.76)	4.90 (.63)	4.81 (.68)	4.68 (1.13)	4.85 (.55)	4.74 (.95)	4.50 (.94)	4.40 (1.19)	4.43 (1.13)

Mean number of times children said “boys”, “girls”, or “both boys and girls” to the stereotype questions broken down by group and gender of participants. There were 5 boy stereotypes, 5 girl stereotypes, and 5 neutral activities. Standard deviation is in parentheses.

Table 3. Acceptability of Gender Nonconformity and Willingness to Befriend and Go to School with Gender Nonconformers

	Trans Kids (n=54)			Siblings (n=34)			Controls (n=56)		
	Boys (n=14)	Girls (n=40)	Overall 1 (n=54)	Boys (n=22)	Girls (n=12)	Overall (n=34)	Boys (n=14)	Girls (n=42)	Overall (n=56)
Acceptability of Gender Nonconformity									
Acceptability of Boy	3.36 (.69)	3.71 (.70)	3.62 (.71)	3.50 (.71)	3.88 (.31)	3.63 (.62)	2.61 (.79)	3.07 (.92)	2.96 (.91)
Acceptability of Girl	3.43 (.83)	3.65 (.69)	3.59 (.73)	3.39 (.77)	3.67 (.58)	3.49 (.71)	2.50 (.90)	2.99 (.95)	2.87 (.96)
Willingness to Be Friends with Nonconformers									
Friends with Boys	1.71 (.47)	1.68 (.69)	1.69 (.64)	1.50 (.86)	1.67 (.65)	1.56 (.79)	1.21 (.70)	1.10 (.89)	1.13 (.84)
Friends with Girls	1.71 (.47)	1.73 (.55)	1.72 (.53)	1.50 (.74)	1.83 (.39)	1.62 (.65)	1.29 (.61)	1.40 (.70)	1.38 (.68)
Willingness to Go to School with Nonconformers									
School with Boys	1.79 (.43)	1.73 (.64)	1.74 (.59)	1.55 (.80)	1.67 (.78)	1.59 (.78)	1.21 (.70)	1.24 (.82)	1.23 (.79)
School with Girls	1.79 (.43)	1.75 (.59)	1.76 (.55)	1.62 (.67)	1.67 (.65)	1.64 (.65)	1.43 (.65)	1.38 (.73)	1.39 (.71)

Acceptability of gender non-conformers was indicated on a scale from '1' ("definitely wrong") to '4' ("definitely okay") and the 4 items were averaged. Willingness to be friends and go to school with gender nonconformers was indicated on a scale from '1' for every time they indicated to willingness to be friends or go to school with gender nonconformers, and '0' for every time they said no. Scores are summed, and there were two questions of each type (two questions about boys and two about girls). Thus, the possible scores ranged between 0-2. Standard deviation is indicated in parentheses.