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Gender-Typed Play Behavior in Early Childhood: Adopted Children with Lesbian, Gay, and Heterosexual Parents

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Abstract This study examined whether the gender-typed play of young children varies as a function of family structure. Using a sample of 126 couples (44 lesbian couples, 34 gay male couples, and 48 heterosexual couples) located throughout the United States, with an adopted child between the age of 2 and 4 years old (mean=2.5 years), we examined parent reports of children's gender-typed play behavior utilizing the Pre-School Activities Inventory (PSAI; Golombok and Rust 1993). Findings revealed that the perceived play behaviors of boys and girls in same-gender parent families were more similar (i.e., less gender-stereotyped) than the perceived play behavior of boys and girls in heterosexual-parent families (which were more divergent; that is, gender-stereotyped). Sons of lesbian mothers were less masculine in their play behavior than sons of gay fathers and sons of heterosexual parents. Our findings have implications for researchers who study gender development in children and adolescents.

Keywords Children · Gay · Gender · Lesbian · Multilevel modeling · Play

Introduction

The aim of this study was to examine, using multilevel modeling, whether gender-typed play behavior (measured by parent reports on the Pre-School Activities Inventory; Golombok and Rust 1993) of preschool-aged, adopted children (age $M=2.5$ years) varies by family structure: namely, in lesbian-, gay-, and heterosexual-parent families in the US. By studying lesbian, gay, and heterosexual parents who all became parents through adoption, this study avoids potential confounds related to biological parent-child relationships, in that gender-typed behavior may be hormonally and genetically mediated (Iervolino et al. 2005). Indeed, by studying parents who all became parents via the same route, this study overcomes limitations associated with prior research (all of the studies that we describe relied on U.S. samples unless otherwise noted). Specifically, prior research in the UK (e.g., MacCallum and Golombok 2004) and the Netherlands (e.g., Bos and Sandfort 2010) has tended to compare children who were born to lesbian mothers via insemination (and thus had a biological relationship to only one parent) with children born to heterosexual parents (who were biologically related to both parents).

The current study is unique in its examination of gender-typed play behavior in very young children of lesbian, gay, and heterosexual adoptive parents. Whereas there is a modest literature on the gender-related *attitudes* of older, school-aged children with lesbian parents in the Netherlands (Bos and Sandfort 2010), the UK (MacCallum and Golombok 2004), and the US (Sutfin et al. 2008), only one prior study examined gender-typed play behavior in *preschool-aged* children with lesbian *and gay male* parents (Farr et al. 2010). Studies of gender-related activities and behaviors (e.g., play) during early childhood are important, in order to gain a more nuanced understanding of how gender development in children with same-gender parents unfolds across the life course.

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A fairly large body of research has found that children demonstrate gender-stereotyped toy and activity choices from as early as 18 months of age, with boys choosing masculine stereotyped toys and play activities and girls choosing feminine stereotyped toys and play activities (Caldera et al. 1989; Golombok and Rust 1993; Golombok et al. 2008). Further, these patterns are fairly well established by the age of three (Golombok and Rust 1993; Golombok et al. 2008). Preschool-aged boys tend to play more with toy vehicles, tool sets, balls, swords, and toy guns, whereas girls tend to play more with dolls, tea sets, and other domestic items, as well as art activities and dressing up (Dunn and Hughes 2001; Martin et al. 1990; Servin et al. 1999; Turner and Gervai 1995; Zosuls et al. 2009). These studies have largely been conducted in the US and the UK; however, studies of children in Hungary (Turner et al. 1993) and Sweden (Nelson 2005) have found similar patterns. Studies using parent reports (Golombok and Rust 1993), teacher reports (Moller and Serbin 1996), and observational methods (Zosuls et al. 2009) have all documented gender differences in the play activities and toy choices of preschoolers. Children's gender-typed behaviors are stable across development, and become more pronounced in middle childhood (Ruble and Martin 1998).

There are many influences on the development of children's gender-typed behaviors. First, genetic influences and prenatal sex hormones have been found to influence gender development (Iervolino et al. 2005; Mitchell et al. 1989). Mitchell et al. (1989), for instance, found that genetic factors accounted for 20–48 % of the variance in children's masculine and feminine personality attributes; however, other studies have yielded lower estimates for the heritability of masculinity and femininity (e.g., Knafo et al. 2005). Turning to the role of the social context, parents represent one of the most salient contexts for children's development in early childhood (McHale et al. 2003). Parents play a crucial role in orchestrating children's activities, providing access to (or limiting) children's toy choices, and providing verbal and nonverbal feedback to children regarding their behaviors and interests. For example, many parents play a role in encouraging and modeling gender-typed activities (Fagot and Hagan 1991). Siblings play a role in children's gender-typed behavior as well. When children are young, older siblings in particular represent a salient influence on their emerging gender-related interests and activities (McHale et al. 2003; Rust et al. 2000). Peers, who become increasingly salient as children develop, represent another key influence on children's gender-typed behavior (Marmion and Lundberg-Love 2004). As children's contact with peers—and teachers—increases (e.g., via the school context), children become increasingly gender-typed (Maccoby 1998).

The current study examined one particular aspect of parents—namely, parent sexual orientation, or family type—

in relation to children's gender-typed play behavior in early childhood. We draw from both social constructionist and social learning theories in this study, in that both theories consider parents to be influential in children's gender development, and have frequently been used to theorize about the gender-related attitudes and behaviors of children raised by heterosexual and lesbian parents (Baumrind 1995).

Theoretical Framework

Both social constructionist and social learning theories suggest that the gender-typed play of children with lesbian and gay parents may differ from that of children of heterosexual parents. Social constructionist theories point to the ways in which lesbian/gay parents may create different home environments for their children (which may in turn encourage or cultivate different types of behaviors), because of their own tendency to hold less gender-stereotyped beliefs and behaviors than heterosexual parents (Goldberg 2007; Tasker and Golombok 1997). Indeed, lesbians describe themselves as more masculine and less feminine than heterosexual women, and gay men describe themselves as more feminine and less masculine than heterosexual men, on average (Lippa 2005; 2008). Lesbians and gay men also tend to have less gender-typical interests and hobbies (Lippa 2005; 2008); and, according to a study conducted in Israel, more liberal attitudes toward gender roles (Shechory and Ziv 2007) than heterosexuals. Further, there is evidence that lesbian mothers' attitudes toward the gender role behavior of their children are more liberal than those of heterosexual mothers (Fulcher et al. 2008). Since lesbian mothers and gay fathers generally possess less gender-stereotyped attitudes than their heterosexual counterparts, they may provide an environment that is less gender-typed; in turn, their children may develop less gender-stereotyped attitudes and behavioral repertoires (Baumrind 1995). Men and women who grew up with lesbian and gay parents often describe themselves as having a flexible approach to gender (e.g., having a wide range of interests that defy gender norms) which they attribute to their upbringing and their parents' socialization (Goldberg 2007; Tasker and Golombok 1997). And yet, at the same time that social constructionist theories have often been used to hypothesize about potential differences in children's gender-related attitudes and behaviors across family structure, these theories also emphasize the many social contexts and institutions (e.g., peers, the media) that shape children's constructions of gender (Boyle et al. 2003), and, thus, could also be leveraged to argue for few differences across family type.

Social learning theory also posits that parents influence the gender development of their children. Yet, in contrast to social constructionism, which allows us to speculate at a general level how lesbian/gay parents may create a familial

environment that permits and even encourages gender flexibility, social learning theory pushes us to consider how the presence or absence of a same-gender parent in the household might impact gender-typed play. According to social learning theory, parents participate in children's gender socialization by differentially reinforcing the behaviors of boys and girls (e.g., rewarding gender-stereotyped behavior and punishing gender-atypical behavior). If lesbian/gay parents value gender conformity in their children less than heterosexual parents do (as research suggests: Sutfin et al. 2008), they may be less likely to participate in differential reinforcement of their sons and daughters, thus facilitating less gender-typed behavior. This theory also emphasizes the significance of a same-gender parent, and, in turn, the role of modeling. That is, gender socialization is also accomplished via children's modeling of the same-gender parent (Bandura 1977; Mischel 1966). Thus, boys who lack a same-gender parent (i.e., boys with lesbian mothers) may demonstrate less gender-typed play than boys with a same-gender parent (i.e., boys with gay fathers or a heterosexual father)—not only due to the absence of a same-gender parent to emulate, but also because heterosexual fathers tend to be less tolerant than heterosexual mothers of cross-gender behavior, play, and activities, particularly in their sons (Fagot and Hagan 1991; Kane 2006; Roopnarine 1986). Likewise, girls who lack a same-gender parent (i.e., girls with gay fathers) may demonstrate less gender-typed play than girls with a same-gender parent (i.e., girls with lesbian mothers or a heterosexual mother).

Thus, although this theory also suggests that children who grow up in households with same-gender parents may show different gender role attitudes and behaviors than those who grow up with two different-gender parents, it further suggests that this effect may be moderated by child gender, whereby children who grow up in homes without a same-gender parent may be less gender-typed because they lack a same-gender role model with whom to identify and emulate (Mischel 1966). Of course, like social constructionism, social learning theory also acknowledges that parents are not the only agents of gender socialization (Marmion and Lundberg-Love 2004); teachers, peers, and others also provide children with direct and indirect feedback regarding their play behavior. Thus, children's gender-typed play behavior reflects not only the influence of parents but other socialization agents as well.

In sum, both theories suggest that children's gender-related play behavior may differ by family structure. However, social constructionism leads us to expect that boys and girls with same-gender parents should have less gender-stereotyped play than boys and girls with heterosexual parents, whereas social learning theories emphasize modeling and the significance of a same-gender parent. Thus, the social learning perspective suggests that boys in

lesbian-mother families should be less gender-typed in their play behavior than boys in gay-father families and boys in heterosexual-parent families, and girls in gay-father families should be less gender-typed in their play behavior than girls in lesbian-mother and heterosexual-parent families. These hypotheses are important to test, since the development of gender-stereotyped toy and activity preferences may limit children's experience, inasmuch as different types of toys facilitate different kinds of learning (Martin et al. 1995). By extension, gender flexibility may have psychological benefits for children. For example, a Dutch study of children (aged 8–12) in 63 lesbian-mother families and 68 heterosexual-parent families found that boys who scored higher on conventionally feminine traits had better psychological adjustment scores than boys with low femininity scores, regardless of family type (Bos et al. 2006).

Research on Gender-Typed Attitudes and Behavior in Children with Lesbian, Gay, and Heterosexual Parents

Social learning and social constructionist theories suggest the possibility of differences in children's gender-related attitudes and behaviors as a function of family structure. However, empirical research has not consistently found such differences. The research examining the role of parental sexual orientation in children's gender-typed attitudes and behavior has largely been limited to comparisons of children raised by lesbian mothers and heterosexual parents. This research has yielded somewhat mixed findings—which may be related to differences in the gender-related outcomes assessed (e.g., gender-related attitudes, personality characteristics, and behaviors), the age of the children being studied, and the cultural context in which the study took place. Some studies find a significant effect of parental sexual orientation on children's gender-typed attitudes regardless of child gender. For example, Sutfin et al. (2008) compared 4–6 year-old children in 29 lesbian-mother families and 28 heterosexual-parent families and found that children, regardless of gender, in lesbian-mother families demonstrated less traditional gender attitudes (i.e., more tolerance of gender transgressions in peers) than children in heterosexual-parent families. Bos and Sandfort (2010) studied 8–12 year-old children in 63 lesbian-mother families and 68 heterosexual-parent families in the Netherlands and found that children, regardless of gender, in lesbian-mother families felt less pressure to conform to gender stereotypes, and were less likely to view their own gender as superior, compared to children in heterosexual-parent families. These studies offer tentative evidence (across several different cultural contexts, age groups, and gender-related outcomes) that the children of lesbian mothers, specifically, may demonstrate less gender-typed *attitudes* than children of heterosexual parents.

One study found an effect of parental sexual orientation on gender-related personality characteristics that was moderated by child gender, as social learning theory suggests. MacCallum and Golombok (2004) compared 25 lesbian-mother families and 38 single heterosexual-mother families with 38 two-parent heterosexual-parent families (average age of children=12) in the UK and found that boys in lesbian-mother and single heterosexual-mother families scored higher on a measure of feminine personality characteristics than boys in heterosexual-parent families. (The femininity scores of boys in single heterosexual-mother families and boys in lesbian-mother families did not differ from one another.) No differences emerged in the femininity or masculinity scores of girls across family type.

These findings raise the question of whether differences in children's gender-typed behavior (i.e., play behavior) might accompany or precede such differences in attitudes and personality attributes. Yet the few studies that have the assessed gender-related *behaviors* (i.e., activities, play) of children with lesbian, gay, and heterosexual parents have found no differences in children's behavior by family type. Golombok et al. (2003) used a modified version of the PSAI (Golombok and Rust 1993) to examine the gender-typed activities and behaviors of school-aged children (mean age=7) in 39 lesbian-mother, 60 single-mother, and 74 heterosexual two-parent families in the UK and found no differences in behavior as a function of family structure. In the only study of gender-typed behavior to include gay-father families, Farr et al. (2010) used the PSAI to examine the gender-typed play behavior of preschool-aged children (mean age=3 years) in 27 lesbian-, 29 gay-, and 50 heterosexual-parent families and found no differences in gender-typed play behavior by family structure. Although Farr et al.'s (2010) study is pioneering in that it is the first to examine gender-typed play in young children with lesbian, gay, and heterosexual parents, it was limited by the fact that children varied widely in their ages (1–5) and some also had siblings, some older, which are known to influence child gender development (Rust et al. 2000).

Thus, while theory suggests differences in children's gender-related attitudes *and* behaviors as a function of family type, research to date has documented differences in children's gender-related attitudes only. Why might this be? First, it is notable that existing studies of gender-typed behaviors have tended to use younger children (Farr et al. 2010; Golombok et al. 2003) than studies of attitudes (Bos and Sandfort 2010; MacCallum and Golombok 2004). Thus, it is possible that such differences do not emerge until children are school aged; indeed, research utilizing the PSAI in different age groups shows that children tend to become more gender-stereotyped in their play behavior over time (Golombok and Rust 1993). Alternatively, gender-related attitudes may be more influenced by the familial

context than play behaviors, which may be more heavily influenced by biological aspects of gender (e.g., prenatal hormones; Burton et al. 2009). In turn, perhaps growing up with lesbian/gay parents facilitates more tolerant attitudes regarding gender transgressions, but children's own activity preferences and behaviors are relatively uninfluenced by family structure. In addition, it is possible that reports of children's gender-related attitudes are more sensitive to parent report biases than children's behavior, which is a more "objective" domain. Finally, the lack of findings for the role of family structure in children's play behavior in Golombok et al.'s (2003) study may be related to the nature of the sample: Of the 39 lesbian-mother families, 20 were headed by a single mother and 19 were headed by a lesbian couple; also, 28 of the children had been born into a heterosexual-parent family, and were 4.1 years, on average, when their mothers entered into a lesbian relationship. Thus, the children of lesbian mothers often spent time in other family structures during their early years.

The Current Study

The current study utilizes a sample of 126 couples (44 lesbian couples, 34 gay couples, and 48 heterosexual couples), all of whom had been placed with their adopted child 2 years prior, and thus had been parents for just over 2 years at the time of assessment. All of the children (age range=2–4 years old; mean age=29 months) were adopted. In the current study we sought to examine whether the degree of conformity to gendered norms with regards to play behavior differs by family type (lesbian-, gay-, or heterosexual-parent household). Namely, we used multilevel modeling (MLM) to test the effects of and interaction between family type and child gender in predicting childhood play behavior. We use this model to test two sets of hypotheses, which are grounded in the theories that have been used most frequently to speculate about the gender-related behaviors and activities of children of lesbian and gay parents. Again, although the very limited empirical literature that examines the gender-typed play behavior of children with lesbian, gay, and heterosexual parents has documented no differences in children's gender-typed play behavior by family type (Farr et al. 2010), theory nevertheless suggests that differences may exist.

Namely, social constructionist theory suggests that a) the daughters of both lesbian mothers and gay fathers will demonstrate less gender-typical (i.e., more masculine/less feminine) play behavior than daughters of heterosexual parents; and b) the sons of both lesbian mothers and gay fathers will demonstrate less gender-typical (i.e., more feminine/less masculine) play behavior than sons of heterosexual parents. Said another way, boys and girls in same-gender parent families should have less divergent scores on the

PSAI (i.e., be less gender-stereotyped) compared to boys and girls in heterosexual-parent families. Thus, we test the following hypothesis (**Hypothesis 1**):

1. Children in same-gender parent families will be less gender-typed in their play than children in heterosexual-parent families (i.e., there will be greater differences between the play behavior of boys and girls in heterosexual-parent families than between the play behavior of boys and girls in same-gender parent families).

Social learning theory suggests that children who lack a same-gender parental role model with whom to identify and imitate might show less gender-stereotyped behavior. Thus, we test the following hypothesis (**Hypothesis 2**):

2. Boys in lesbian-mother families (i.e., father-absent families) will demonstrate less gender-stereotyped play behavior (i.e., less masculine/more feminine behavior) than boys in gay-father families and boys in heterosexual-parent families (i.e., father-present families); and girls in gay-father families (i.e., mother-absent families) will demonstrate less gender-stereotyped play behavior (i.e., more masculine/less feminine behavior) than girls in lesbian-mother families and girls in heterosexual-parent families (i.e., mother-present families).

Method

Data from 126 couples (44 lesbian, 34 gay male, and 48 heterosexual couples; 240 individuals) were analyzed. In 12 couples, data from only one parent were available (i.e., two lesbian individuals, four gay individuals, and six heterosexual individuals did not provide data); thus, complete data were present for 42 lesbian, 30 gay male, and 42 heterosexual couples. The couples in the study were selected from a larger sample of couples experiencing the transition to adoptive parenthood because they adopted children who, at the time of placement, were under 2. Therefore, at the time of the 2 year follow-up, all children were between 2 and 4 years old.

Description of the Sample

Descriptive data for the sample, by family type, appears in Table 1. Analysis of variance revealed that 2 years post-adoption, the average family incomes for lesbian, gay, and heterosexual couples differed significantly, $F(2, 123)=7.81$, $p<.001$. Post-hoc tests revealed that although the incomes for lesbian- and heterosexual-parent households did not

differ from one another, income for both these groups was significantly lower than in gay male-parent families. This sample as a whole is more financially affluent compared to national estimates for adoptive families, which indicate that the average household incomes for same-gender couples and heterosexual married couples with adopted children are \$102,474 and \$81,900, respectively (Gates et al. 2007). To examine differences in levels of education, or age of participants, across the three groups, it was necessary to use multilevel modeling (MLM), as one parent's scores could not be treated as independent from the other parent's. MLM analyses revealed no differences in levels of education or age of participants across the three groups. The high education levels and older ages of participants are consistent with the demographic profile of adoptive parents in prior studies (Daniluk and Hurtig-Mitchell 2003).

Sixty-four percent of lesbian couples, 82 % of gay male couples, and 56 % of heterosexual couples had adopted via private domestic adoption; 18 % of lesbian couples, 12 % of gay male couples, and 10 % of heterosexual couples had adopted through public domestic adoption (i.e., the child welfare system); and 18 % of lesbian couples, 6 % of gay male couples, and 34 % of heterosexual couples had adopted through private international adoption. Chi-square analyses indicated that these distributions did not differ significantly across groups. Fifty-five percent of lesbian couples, 44 % of gay male couples, and 52 % of heterosexual couples adopted a girl; likewise, 45 % of lesbian couples, 56 % of gay male couples, and 48 % of heterosexual couples adopted a boy. The distribution of child gender did not differ by family type.

The mean age of children at placement was 4.56 months ($Mdn=0$ months, $SD=7.65$ months); thus, at the time of the 2 year post-placement follow-up, children were 29 months, or about 2.5 years old ($Mdn=28.5$ months, $SD=7.65$ months). The children of lesbian, gay, and heterosexual couples were 30.36 months ($SD=9.73$), 27.00 months ($SD=6.24$) and 30.41 months ($SD=8.27$), respectively. Analysis of variance indicated that child age did not differ significantly by family type. A minority of the children in the sample had siblings by the time of the 2 year post-placement interview: 11 % of lesbian couples, 15 % of gay male couples, and 10 % of heterosexual couples had adopted a second child (in all cases, these children were younger than the target children). There were no differences in sibling status by family type.

The adoptive parents in the sample were mostly White (92 % of lesbians, 88 % of gay men, and 91 % of heterosexuals). Chi square analyses indicated that there were no differences in parent race by group. The children that couples adopted were racially diverse: 54 % were White, and 46 % were Of Color. Child race (White versus Of Color) did not differ as a function of family type.

Table 1 Descriptive data by family type

		Lesbian Parents (<i>n</i> =44 couples, 86 individuals)	Gay Male Parents (<i>n</i> =34 couples, 64 individuals)	Heterosexual Parents (<i>n</i> =48 couples, 90 individuals)
Family Income	<i>M</i>	\$121,485 ^a	\$194,528 ^{a,b}	\$141,658 ^b
	<i>SD</i>	\$68,260	\$90,682	\$83,590
	<i>Range</i>	\$24,000–\$320,000	\$63,000–\$400,000	\$41,000–\$400,000
Parent Education	<i>M</i>	4.50	4.53	4.51
	<i>SD</i>	.86	.99	.95
	<i>Range</i>	2–6	2–6	2–6
Parent Age (years)	<i>M</i>	39.09	38.74	38.22
	<i>SD</i>	5.90	4.45	5.21
	<i>Range</i>	27.10–53.40	29.62–51.09	25.01–48.81
Child Age (months)	<i>M</i>	30.36	27.00	30.41
	<i>SD</i>	9.73	6.24	8.27
	<i>Range</i>	24–48	24–48	24–49
% (n) Girls	%	55 %	44 %	52 %
	<i>n</i>	24	15	25
% (n) Boys	%	45 %	56 %	48 %
	<i>n</i>	20	19	23
% (n) Adoption Type				
	Domestic Private	%	64 %	82 %
	<i>n</i>	28	28	27
Domestic Public	%	18 %	12 %	10 %
	<i>n</i>	8	4	5
International	%	18 %	6 %	34 %
	<i>n</i>	8	2	16
% (n) with Siblings	%	11 %	15 %	10 %
	<i>n</i>	5	5	5
% (n) White (Parents)	%	92 %	88 %	91 %
	<i>n</i>	81	60	87
% (n) White (Children)	%	41 %	65 %	58 %
	<i>n</i>	18	22	28

M=Mean; *SD*=Standard Deviation; *n*=sample size. Education was measured on a scale of 1–6 (1=less than high school, 2=high school diploma, 3=associate's degree/some college, 4=bachelor's degree, 5=master's degree, and 6=PhD/MD/JD)

^a Gay men's income is significantly higher than lesbians; ^b Gay men's income is significantly higher than heterosexuals

Recruitment and Procedures

Inclusion criteria were: (a) couples must be adopting their first child; and (b) both partners must be becoming parents for the first time. Participants were originally recruited during the pre-adoptive period (i.e., while couples were waiting for a child placement). Adoption agencies throughout the US were asked to provide study information to clients who had not yet adopted. U.S. census data were utilized to identify states with a high percentage of same-gender couples (Gates and Ost 2004) and effort was made to contact agencies in those states. Over 30 agencies provided information to their clients, typically in the form of a brochure that invited them to participate in a study of the transition to adoptive parenthood, and interested couples were asked to

contact the principal investigator for details regarding participation. Both heterosexual and same-gender couples were targeted through these agencies to facilitate similarity on geographical location. Among lesbian couples, 35 % lived on the West Coast, 30 % lived on the East Coast, 25 % lived in the South, and 10 % lived in the Midwest. Among gay male couples, 40 % lived on the West Coast, 23 % lived on the East Coast, 27 % lived in the South, and 10 % lived in the Midwest. Among heterosexual couples, 42 % lived on the West Coast, 44 % lived on the East Coast, 4 % lived in the South, and 10 % lived in the Midwest. Because some same-gender couples may not be “out” to agencies about their sexual orientation, several national gay/lesbian organizations, such as the Human Rights Campaign (HRC), a national gay political organization, also assisted in

disseminating study information. For example, the HRC posted study information on their Family-Net listserv, which is sent to 15,000 people per month.

Participation entailed completion of a questionnaire packet and participation in a telephone interview while participants were waiting to be placed with their first child. Participants then completed a follow-up questionnaire packet and telephone interview 2 years after they were placed with a child. Participants were interviewed separately from their partners. Interviews lasted 1–1.5 h. The data we draw on in this study come from the 2 year post-placement interview.

Measures

Outcome: Children's Play Behavior

The Pre-School Activities Inventory (PSAI), which was administered 2 years post-adoptive placement (or when the children were approximately 2.5 years old), is a psychometrically constructed instrument designed for use with parents or caretakers of children aged 3–7 that assesses children's gender role play behaviors (Golombok and Rust 1993). The PSAI represents an advancement over preexisting gender-related measures in that it “focus[es] on actual behavior rather than on preferences; the questionnaire was designed to measure the child's frequency of play with respect to a variety of toys, games, and activities” (Golombok and Rust 1993; p. 132). Stability coefficients demonstrate high stability over time among both boys and girls (Golombok et al. 2008) and the responses of parents and teachers on this measure are highly correlated (Golombok and Rust 1993).

The PSAI consists of 24 items addressing three aspects of play behavior: toys (seven items; e.g., tea set; tool set), activities (11 items; e.g., playing at taking care of babies; climbing), and characteristics (six items; e.g., avoids getting dirty; enjoys rough and tumble play). Parents use a 5-point rating scale (1=*never*, 5=*very often*) to designate how often their child plays with the described toy, engages in the described activity, and demonstrates the described characteristic. These items, which assess either feminine or masculine play behavior, are used to create a masculine scale (12 items) and a feminine scale (12 items). The feminine scale is then subtracted from the masculine scale to create a composite measure (Golombok and Rust 1993; Vreugdenhil et al. 2002).

The scoring system of the PSAI was designed to overcome various sources of potential bias. For example, use of a composite measure (as opposed to separate masculine/feminine scales) ensures that the number of toys available to the child does not artificially inflate their score. A higher score on this composite measure represents more masculine behavior, and a lower score represents more feminine behavior; indeed, the PSAI is designed to “discriminate both

within and between the sexes so that variation among as well as between boys and girls can be assessed” (Golombok & Rust, p. 132). Scores are then standardized according to age (see pp. 132 and 134 of Golombok and Rust 1993), and we refer to these age standardized composite PSAI scores simply as composite PSAI scores in the remaining portions of this paper.

In the standardization sample (Golombok and Rust 1993), the mean composite PSAI score for all children was 51.10; the mean composite PSAI score for boys was 61.66 ($N=1166$, $SD=9.40$); and the mean composite PSAI score for girls was 38.72 ($N=926$, $SD=9.66$). Golombok and Rust (1993) also report the composite PSAI scores by age group. The age-standardized mean composite PSAI score for boys between 24–29 months was 59.18 ($SD=9.72$) and the age-standardized mean composite PSAI score for girls between 24–29 months was 41.13 ($SD=9.11$). Likewise, the mean score for boys aged 30–35 months was 59.70 ($SD=9.72$), and the mean score for girls aged 30–35 months was 39.74 ($SD=9.84$).

In the current sample, alphas for the feminine scale were .77, .83, and .85 for lesbian, gay, and heterosexual parents, respectively; alphas for the masculine scale were .70, .69, and .70 for lesbian, gay, and heterosexual parents, respectively.

Predictors

Child Gender Child gender was effects coded (1=male, -1=female). Child gender was included as a predictor given prior research showing that child gender is a key predictor of play behavior, as measured by the PSAI specifically (Golombok and Rust 1993).

Family Type Family type was coded as 1=lesbian-mother family, 2=gay-father family, and 3=heterosexual-parent family, in light of prior research and theory suggesting that children's gender-typed behavior may vary by family structure (MacCallum and Golombok 2004).

Controls

Child Age Child age, in months, was included as a control, given that developmental status may be related to gender-typed behavior in children (Maccoby 1998; Ruble and Martin 1998).

Family Income

Family income (i.e., partners' combined income), in thousands of dollars, was included as a control in follow-up analyses, given group differences that emerged on this variable (see [Description of the Sample](#)).

Demographics

Participant race, participant educational level (measured on a scale of 1–6 where 1=less than high school education, 2=high school diploma, 3=associate's degree/some college, 4=bachelor's degree, 5=master's degree, and 6=PhD/MD/JD), type of adoption pursued, child race, and information about subsequent child placements since the original (target) child placement were recorded during participant interviews and are reported in the [Description of the Sample](#).

Results

Descriptive Data on Gender-Typed Play Behavior

Means, standard deviations, and ranges for the composite PSAI score appear in [Table 2](#). We present scores for boys and girls by family type and by parent gender. As [Table 2](#) shows, the mean composite PSAI score for the boys in the current sample was 61.47 ($SD=8.11$), and the mean composite PSAI score for the girls in the current sample was 44.10 ($SD=8.11$). The mean PSAI score for the boys in the current sample is just over 2 points above the standardization sample mean for boys aged 24–29 months (59.18, $SD=9.72$), and the mean PSAI score for the girls in the current sample is 3 points above the standardization sample mean for girls aged 24–29 months (41.13, $SD=9.11$) (Golombok and Rust 1993).

Reports of PSAI scores did not significantly differ according to parent gender in the sample as a whole or when just examining the reports of heterosexual couples using multilevel analyses. Differences in scores according to family type and child gender are addressed in the next section.

Primary Multivariate Analyses

Because both parents in each couple provided separate reports on their child's play behavior, the data are non-independent within families. The interclass correlation (ICC) for the composite PSAI score between parents was $r=.81$, $Wald Z=25.80$, $p<.001$, overall, with separate ICCs of .72, .84, and .85 for lesbian, gay, and heterosexual parents respectively. We therefore used multilevel modeling (MLM) as our data analytic approach, treating family as the upper-level unit, and individual parent as the lower-level unit (Kenny et al. 2006). Our initial model was a 2 by 3 factorial design that examined the effects of child gender and family type on composite PSAI scores, treating child age (grand-mean centered) as a continuous control variable. Again, means and standard deviations for the PSAI by gender and family type are presented in [Table 2](#).

The MLM analysis revealed that there was a significant main effect of child gender, $F(1, 126)=144.08$, $p<.001$, indicating that girls received significantly lower ratings on the composite PSAI measure than boys (M for girls=44.10; M for boys=61.47). In other words, girls were rated as less masculine (more feminine) in their play behavior than boys. The MLM analysis also revealed that although there was no evidence of a main effect for family type, $F(2, 126)=.31$, $p=.73$, the interaction between family type and child gender was statistically significant, $F(2, 126)=6.25$, $p=.003$.

Our first hypothesis predicted a family type by child gender interaction, but expected, as suggested by social constructionism, that the sons and daughters of same-gender couples (both lesbians and gay men) would demonstrate less gender-typed (and thus more similar) play behaviors than the sons and daughters of heterosexual couples; that is, the sons and daughters of heterosexual couples would show more gender-differentiated (dissimilar) play behavior (hypothesis 1). Said another way, the child gender

Table 2 Means and standard deviations for the composite PSAI score

	Boys <i>M (SD)</i>	Boys <i>Range</i>	Boys <i>n</i>	Girls <i>M (SD)</i>	Girls <i>Range</i>	Girls <i>n</i>
Full Sample	61.47 (8.11)	39.16–81.26	62	44.10 (8.11)	18.64–65.90	64
By Family Type						
Lesbian Parents	58.67 (7.91)	39.16–79.25	20	47.61 (9.86)	18.76–64.34	24
Gay Male Parents	61.07 (8.73)	44.25–75.70	19	43.11 (9.42)	25.53–65.90	15
Heterosexual Parents	63.75 (7.11)	49.68–81.26	23	41.10 (8.19)	18.64–58.26	25
By Parent Gender						
Male Parents	62.53 (8.44)	44.25–81.26	61	42.10 (8.76)	18.64–65.90	55
Female Parents	60.46 (7.72)	39.16–79.25	63	45.61 (9.88)	18.76–64.34	73
By Parent Gender, Heterosexual Couples Only						
Fathers	63.94 (7.93)	49.68–81.26	23	40.96 (8.00)	18.64–54.03	25
Mothers	63.56 (6.43)	52.59–74.52	23	41.26 (8.60)	24.28–58.28	25

PSAI Pre-School Activity Inventory; *M* Mean; *SD* Standard Deviation; *n* sample size

difference in heterosexual-parent families should be larger than the child gender difference in same-gender parent families. To test this hypothesis, we conducted a planned contrast that compares the average child gender difference in both gay- and lesbian-parent families to the average child gender difference in heterosexual-parent families. The test supported this prediction, $F(1,126)=7.13$, $p=.009$. The average (mean) gender difference in heterosexual-parent families was 22.65 whereas the average gender difference in same-gender parent families was 14.51, with an 11.06 unit difference for lesbian-mother families and a 17.96 unit difference for gay-father families. Thus, the average difference in heterosexual-parent families was more than twice that in lesbian-parent families. (It should be kept in mind that the difference between boys' and girls' scores in the heterosexual sample—22.65—was somewhat higher than the difference reported in the standardization sample, 18.05 for 24–29 month olds; Golombok and Rust 1993.) Overall, the tendency for the sons and daughters of same-gender couples to be less gender-differentiated in their play behavior was more marked for the children in lesbian-mother families than those in gay-father families.

Our second hypothesis also predicted a family type by child gender interaction, but specifically predicted, as suggested by social learning theory, a difference not *between genders* (boy versus girl) by family type, but *within gender* (boy versus boy, girl versus girl) by family type, whereby boys in lesbian-mother families are expected to show less gender-typed play behavior than boys in both gay-father and heterosexual-parent families; and girls in gay-father families are expected to show less gender-typed play behavior than girls in lesbian-mother and heterosexual-parent families (hypothesis 2). To test this hypothesis, we compared girls in gay-father families ($M=43.11$) to girls in either lesbian- or heterosexual-parent families ($M=44.36$), and this contrast was not statistically significant, $F(1,64)=.13$, $p=.72$. We also compared boys in lesbian-mother families ($M=58.67$) to boys in either gay- or heterosexual-parent families ($M=62.62$), and this contrast was significant, $F(1,62)=4.17$, $p=.046$. Boys in lesbian-mother families demonstrated less masculine play behavior, according to parent report, than boys in gay-father and heterosexual-parent families. Thus, there is partial support for this prediction—at least for boys.

It is important to consider the mean scores for this sample in conjunction with those in the standardization sample. The mean composite PSAI score for boys with lesbian mothers was only a half a point below the mean composite PSAI scores of 24–29 month old boys in the standardization sample (59.18, $SD=9.72$). Likewise, the mean composite PSAI score of boys with gay fathers was 2 points above the standardization sample mean, and the mean composite PSAI score of boys with heterosexual parents was 4.5 points above the standardization sample mean. Further, it should

be noted that while there was a significant mean difference of 3.95 between boys in lesbian-mother families and boys in other families, this would still fall within the norm for boys in all families as reported in the standardization sample ($SD=9.72$). Thus, the scores of boys in lesbian-mother families were not dramatically lower than those in the standardization sample, and the scores of boys in heterosexual-parent families (and, to a lesser degree, those of boys in gay-father families) were higher than those of boys in the standardization sample.

Analysis showed that the power to detect the child gender by family type interaction was between .76 (i.e., treating the family as the unit of analysis) and .96 (treating parent as the unit of analysis). Thus, there was sufficient power to detect this effect.

Follow-Up Multivariate Analyses

In our analyses above, we included child age as a control, given its theoretical relevance to the outcome (child gender-typed play behavior). Because group differences emerged in family income (i.e., gay men's incomes were higher than lesbians' and heterosexuals'), we added it as an additional control in a final series of analyses. Thus, all analyses were rerun with both child age and family income as controls, and then just with family income as a control. No differences in the pattern or significance of findings emerged when family income was added to the models.

Discussion

We found that girls and boys in same-gender parent families in the US were significantly less differentiated (stereotyped) in their play behavior than girls and boys in heterosexual-parent families, although examination of the means suggests that this tendency was more marked in lesbian-mother families than gay-father families. According to social constructionism, lesbian and gay parents may be more likely to facilitate their children's cross-gendered play and activities by creating a social environment where such behaviors are not punished, and may even be encouraged (Tasker and Golombok 1997). This may occur in part because of these parents' own gender flexibility and more liberal attitudes concerning gender nonconformity (Fulcher et al. 2008; Shechory and Ziv 2007). In other words, lesbian and gay parents' own gender-nonconforming identities may facilitate their creation of an environment that supports and reinforces less gender-typed behavior (Goldberg 2007; Tasker and Golombok 1997). Heterosexual parents, in contrast, may tend to create a social environment that is more discouraging of gender-atypical behavior and interests; indeed, cross-gender behavior, particularly in boys, is often

viewed by heterosexual parents as a precursor or indication of homosexuality (Kane 2006; Sandnabba and Ahlberg 1999), which may fuel direct or indirect stigmatization of gender nonconformity. Alternatively, our finding that the children of same-gender parents were less gender stereotyped in their play than the children of heterosexual parents may not reflect differences in their upbringing *per se*; rather, it may reflect reporting bias (i.e., lesbian and gay parents' more flexible gender-role attitudes may cause them to report their children as more gender-flexible in their play and activities).

We also found that boys in lesbian-mother families were rated as engaging in less masculine play than boys in other types of families. This finding can be understood through the lenses of both the general theory of social constructionism and the more specific predictions made by social learning theory. That is, this behavior may reflect not only boys' more liberal social environment, but also the influence of having two mothers/no father, such that boys in two-mother households may develop somewhat different play styles than boys with fathers. Jacklin et al. (1984) studied 54 4-year-old children in heterosexual-parent families in the US and found that the highest level of rough-and-tumble play occurred in father-son dyads (as compared to father-daughter, mother-son, and mother-daughter dyads), leading them to argue that "fathers are the discriminating influence on sex-appropriate play" (p. 413). These patterns have also been documented in more recent studies (Lindsey et al. 1997). Furthermore, fathers tend to be less tolerant and more discouraging of their children's cross-gender play and activities, particularly in their sons (Fagot and Hagan 1991; Kane 2006; Roopnarine 1986). Thus, in the absence of a live-in father figure, boys with lesbian mothers may be somewhat less likely to be exposed to—and less reinforced for playing with—certain types of masculine toys and activities. And yet, although boys with lesbian mothers were less gender-typed in their play than boys in other types of families in the sample, it is notable that their mean PSAI score fell within one standard deviation of the mean score for boys in the standardization sample (Golombok and Rust 1993), suggesting that these findings may not be generalizable.

Contrary to prediction, we did not find that the daughters of gay men were less feminine in their play behavior than the daughters of both lesbian and heterosexual mothers; examination of the means shows that the daughters of gay fathers were less feminine in their play behavior than the daughters of heterosexual parents, and more feminine in their play behavior than the daughters of lesbians. Perhaps, as Biblarz and Stacey (2010) argue, based on the limited research on gay male parenting, gay fathers do not provide a "double dose of 'masculine' parenting" (p. 12). Rather, they appear to adopt parenting practices/styles that are more feminine than those of heterosexual fathers, and sometimes

describe themselves as a balance of masculine and feminine energies (Biblarz and Stacey 2010). Thus, although lacking a female live-in parent, daughters of gay fathers may experience their fathers as modeling both masculinity and femininity.

Although raising children to adopt traditional gender roles was considered a desirable goal in the 1950's, currently many scholars, parents, and educators agree that the socialization of strict adherence to traditional gender roles limits boys' and girls' development (Eisenberg et al. 1996). One consequence of children developing gender-stereotyped toy preferences is that it may constrain their experiences, since different types of toys facilitate different types of skill-building (Martin et al. 1995). Our finding that the children of same-gender parents may be somewhat less gender-conforming in their play behavior than the children of heterosexual parents can be interpreted as suggesting that the children of same-gender parents may possess certain strengths that may aid them later in life. Playing with feminine-typed toys has been found to foster nurturance and role play, whereas play with masculine toys has been linked to greater mobility and manipulative play (Caldera et al. 1989; Caldera and Sciaraffa 1998). Further, there is some evidence that children's gender flexibility may in fact be associated with psychological benefits for children, such as the Dutch study by Bos et al. (2006) which found that boys who scored higher on conventionally feminine traits also had better psychological adjustment scores than boys with low femininity scores, regardless of family type. Thus, engaging in less gender-typed play behavior may be associated with positive outcomes in children.

This study adds to a growing body of research that has documented gender differences in play behavior as early as 18 months old (e.g., Caldera et al. 1989; Golombok et al. 2008) by extending these findings to adoptive and same-gender parent families as well. It also extends the use of the PSAI to a younger age group; most studies that utilize the PSAI do so with samples of children ages three and up (Hines et al. 2002; Rust et al. 2000). A particular strength of our study is that it provides data on young children in lesbian-, gay-, and heterosexual-parent families; most research on the gender role attitudes and behaviors of children of lesbian and gay parents examines older children (e.g., Bos and Sandfort 2010; Golombok et al. 2003; MacCallum and Golombok 2004). Notably, the early developmental patterns that we documented are somewhat consistent with, and may foreshadow, findings related to older children's gender development. For example, Bos and Sandfort (2010) found that 8–12 year-old children of lesbian mothers felt less pressure to conform to gender stereotypes than children with heterosexual parents. Inasmuch as we evaluated a developmentally appropriate but distinctly different aspect of gender role development (i.e., play behavior), future work should examine how these different components of gender role development intersect and unfold over time in diverse families.

Such research is particularly important given that the only prior study to utilize the PSAI to assess play behavior in young children did not find significant differences by family type (Farr et al. 2010). The current study addresses the divergence of scores between boys and girls, whereas Farr et al. (2010) examined mean scores as the outcome, suggesting that differences in analytic technique might be one possible reason for our differing results. However, a visual examination of the mean PSAI scores for boys in Farr et al.'s (2010) study show that boys in heterosexual-parent families ($M=60.98$), not those in lesbian-parent families ($M=61.19$), had the lowest scores, on average. Similarly, in Farr et al. (2010), the gap between the means reported for boys and girls within lesbian-parent families (mean difference=18.84) was much closer to the gap in heterosexual-parent families (mean difference=20.01) than in this study (mean difference=11.06 and mean difference=22.65, respectively). Thus, the scores in the samples of the two studies appear simply to be different, and findings would have been similar regardless of analytic technique. More research is clearly needed to resolve the discrepancies between the findings of the current study and those of Farr et al. (2010).

Limitations and Conclusions

This exploratory, descriptive study of young children's gendered play behavior in lesbian-, gay-, and heterosexual-parent families was limited in a number of ways. First, our sample was relatively small. Broken down by child gender and family type, some of our cell sizes were quite small (e.g., there were only 15 daughters in gay-father families); likewise, our subsample of gay-father families was small overall (34 couples). Future studies should seek to replicate the findings with larger samples. Second, we relied on parent report only. This is a major limitation, in that parent's own gender-related attitudes may shape their reporting of their children's gender-related behavior. For example, given that lesbians and gay men tend to hold more liberal attitudes toward gender roles than heterosexuals (Fulcher et al. 2008), it may be that they are more likely to report gender-atypical play behavior in their children. Future work should include outsider reports of child play behavior. Inclusion of teacher or caregiver report, or observational data, would have enhanced this study, yet was beyond the scope of our project. Importantly, prior work has found strong correlations between parent reports and outsider (e.g., teacher) reports on the PSAI (Golombok and Rust 1993), thus mitigating, to some degree, concerns about parent self-report bias.

A third limitation is that the data on which we based our analyses are cross-sectional, and therefore our ability to make causal attributions is limited. Future work should examine the gender-typed behavior of children in diverse family structures over time. Special attention should be paid

to the role of peers in the lives of children in diverse families. Peers play an increasingly influential role in children's gender-typed behavior and interests across development (Marmion and Lundberg-Love 2004); thus, the differences across family type that were observed in the current sample may narrow as the children age and enter formal schooling. As children grow older, their social spheres in general become increasingly gender segregated (e.g., they play mostly or exclusively with members of their same gender; teachers often separate boys and girls for lunchtime and other activities; Spade and Valentine 2011) and, in turn, gender-typing becomes particularly pronounced in middle childhood (Ruble and Martin 1998). Thus, children from all family types are exposed to many other key contexts and agents of gender socialization, which may become increasingly salient as they grow. A related limitation is the constricted age range of the children in our sample: While a strength in certain ways (e.g., it reduces one source of variability), it precluded examination of how children's gender-related play behaviors might vary by developmental stage. Finally, we did not include a measure of parental gender role attitudes and beliefs, and thus we were unable to tease apart effects due to ideology from those due to family structure. Our assumptions about the interrelationship between gender-related attitudes and parent sexual orientation rest on prior research that has documented attitudinal differences in same-gender and different-gender parents (Fulcher et al. 2008; Shechory and Ziv 2007). Future work should pair quantitative measurements of the gender-related attitudes of lesbian, gay, and heterosexual parents with open-ended questions about gender-related attitudes; this would further nuance what we know about the gender-related beliefs of parents of diverse sexual orientations.

Despite these many limitations, this study has a number of strengths. First, this study builds on a single existing study (Farr et al. 2010) that examined the gender-typed play behavior of preschool-aged adopted children with lesbian, gay, and heterosexual parents, and makes several unique contributions to the literature. Whereas Farr et al.'s (2010) sample included adopted children with and without older siblings, the current study included only first-born children, thus removing potential variance due to the role of an older sibling; prior research has found that children with same-gender older siblings are more gender-typed than only children as well as children with different-gender older siblings (McHale et al. 2003; Rust et al. 2000). Second, whereas the parents in Farr et al.'s (2010) study were interviewed anywhere from a year to 5 years post-adoptive placement, the current study controlled for length of time spent in the current family structure (i.e., all parents were interviewed 2 years post-placement), which could influence gender-typed behavior. Third, given the notable paucity of studies

on children in gay-father families (Erich et al. 2005; Farr et al. 2010), our inclusion of gay-father families is a particularly unique aspect of the current study. Fourth, this study also overcomes problems associated with many comparative studies of heterosexual and same-gender parents, in that all of the couples in the study became parents via the same parenting route (adoption), therefore controlling for any differences in route to parenthood across family structures (MacCallum and Golombok 2004). Related to this, our use of an adoptive sample removes confounds related to biological parent-child relationships.

As prior research has established, children construct understandings of gender as early as 18 months (Golombok and Rust 1993; Golombok et al. 2008). To gain a deeper and more nuanced understanding of gender development, it is important to examine young children's play behavior over time, in multiple settings, and within different types of families. As today's family structures become increasingly diverse, it will be important to document and explore variability in how the children in these families come to learn about and enact gender.

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