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**PARENTAL RESPONSE TO GENDER BIAS:
SOCIALIZATION STRATEGIES IN MOTHER-CHILD CONVERSATIONS AND
CHILDREN'S GENDER ATTITUDES**

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ABSTRACT

Children are faced with pervasive messages about what constitutes normative (and non-normative) behaviors and activities for men and women. Parents are important socializing agents who can help shape children's gender attitudes, their understanding of biases, and their access to strategies for handling discrimination.

The primary goal of the current study was to examine mothers' approaches to gender- and fairness-related issues with their children, with a particular focus on exploring the ways in which mothers use conversations to influence their children's gender-related attitudes and actions.

I created an observational setting in which mother-child dyads were exposed to gender stereotypes and discrimination, and observed the discussions of 62 mothers and their 6- to 8-year old children (divided evenly between daughters and sons). Of interest were mother-child communication patterns and maternal strategies. More specifically, mother-child dyads were shown materials depicting hypothetical situations in which characters were treated on the basis of gender stereotypes. The dyads were then prompted to discuss issues of fair treatment and gender bias. A week prior to the laboratory visit, mothers completed measures related to their gender attitudes, feminist beliefs, and parenting goals. Immediately following the conversation task, I assessed children's gender attitudes, responses to hypothetical sexist peers, and gender-based assignments of novel characters to activities.

Findings showed that mothers with more flexible gender attitudes and higher feminist endorsement were more likely to a) report that they discussed gender issues with their children and b) directly refute stereotypes in conversations with their children. Further, children with more flexible gender attitudes and more challenging responses to sexist peers were more likely to have mothers who personalized content in the conversation task (i.e., who related the conversation material to their own or their child's life). Results from this study suggest that mothers' strategies in response to bias can help children's processing of and responses to gendered information.

TABLE OF CONTENTS

List of Tables.....	vi
List of Figures.....	vii
Acknowledgements.....	viii
Chapter 1. INTRODUCTION.....	1
Parent Gender Socialization: Beliefs and Practices.....	10
Development of Children’s Intergroup Attitudes.....	18
Chapter 2. RESEARCH QUESTIONS AND HYPOTHESES.....	24
Specific Aim 1.....	27
Specific Aim 2.....	27
Specific Aim 3.....	28
Chapter 3. METHOD	29
Participants.....	29
Procedure.....	30
Maternal Gender-Related Characteristics.....	34
Maternal Gender-Related Behavior.....	37
Child Gender-Related Characteristics.....	40
Chapter 4. RESULTS.....	42
Preliminary Data.....	42
Conversation Themes and Frequency of Coding Categories.....	46
Mothers' Gender-Related Beliefs and Behavior.....	56
Relating Mothers’ Reported and Actual Gender-related Behavior to Child Outcome...	69
Chapter 5. DISCUSSION.....	75

Study Materials and Design.....	76
Considerations of the Dyadic Design.....	78
Mother-Child Conversation Themes.....	81
Maternal and Child Gender-Related Characteristics.....	84
References.....	93
Appendix A. Recruitment Materials.....	107
Appendix B. Conversation Task Protocol and Materials.....	120

LIST OF TABLES

Table 1. Overview of Measures Completed by Mother.....	31
Table 2. Cronbach’s α Reliability Coefficients and Summary Statistics for Multi-item Scales.....	35
Table 3. Associations Among Mother and Child Comments in Mother-Child Conversations.....	44
Table 4. Means and Standard Deviations for Mother and Child Comments in Mother-Child Conversations by Child Gender.....	55
Table 5. Associations Among Mothers’ Gender-Related Characteristics and Background Variables.....	57
Table 6. Associations Among Children’s Gender-Related Characteristics and Background Variables.....	58
Table 7. Associations Among Mothers’ Gender-Related Characteristics and Mothers’ Comments During Observed Conversations.....	59
Table 8. Regression Analyses of Mothers' Gender-Related Beliefs Predicting Reported Gender-Related Behavior (Preparation for Bias Score) with Statistical Controls for Mothers' Age and Education Level.....	62
Table 9. Regression Analyses of Mothers' Gender-Related Beliefs Predicting Stereotype-Refuting Comments During Conversations with Statistical Controls for Mothers' Age and Education Level.....	64
Table 10. Regression Analyses of Mothers' Gender-Related Beliefs Predicting Fairness-Endorsing Comments During Conversations with Statistical Controls for Mothers' Age and Education Level.....	65
Table 11. Regression Analyses of Mothers' Reported and Actual Behavior Predicting Children’s Gender Attitudes with Statistical Controls for Mothers' Age and Education Level.....	71
Table 12. Regression Analyses of Mothers' Reported and Actual Behavior Predicting Children’s Challenging Remarks with Statistical Controls for Mothers' Age and Education Level.....	73

LIST OF FIGURES

Figure 1. Hypothesized Associations Among Maternal Gender-Related Characteristics, Child Age, Maternal Reported and Observed Behavior, and Children’s Gender-Related Characteristics.....	26
Figure 2. Variation in Stereotype-Endorsing Comments in Mother-Child Conversations.....	48
Figure 3. Variation in Stereotype-Refuting Comments in Mother-Child Conversations.....	49
Figure 4. Variation in Fairness-Endorsing Comments in Mother-Child Conversations.....	51
Figure 5. Variation in Personalization Comments in Mother-Child Conversations.....	53
Figure 6. Variation in Children’s Gender Attitude Endorsement.....	70
Figure 7. Scatter Plot of Mothers’ Personalizations in Conversation Task and Children’s Gender Attitudes.....	72

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Chapter 1

Introduction

“Grown-ups always say they protect their children, but they're really protecting themselves. Besides, you can't protect children. They know everything.”

In this quote, Maurice Sendak makes a succinct yet powerful case about children's astute perceptions of the world around them and how adults provide and filter information often to shield against negative topics. Although it is normative for children to attend to differences of those around them and raise questions about why people look, act, or are treated differentially, parents may or may not be prepared to answer questions about sensitive topics or know how to respond to situations when they arise. Issues of discrimination in particular (e.g., a child seeing a male peer being teased or bullied for enrolling in ballet class) may provide a particularly difficult challenge for parents to face with their children. Parents may be hesitant to discuss such issues; however, parent messages in daily conversations are likely to help children navigate social and moral understanding surrounding difficult topics. One large piece of the social experience affecting both children's and adults' environments is the prevalence of social group differentiation.

Children face many messages regarding appropriate dress, play, activity, and behavior for individuals who belong to certain social groups. These messages are both blatant and subtle, and can be recognized on an individual level (e.g., a preschooler being told that he cannot dress up in a tutu because he is a boy) or an institutional level (e.g., a school that enforces differential clothing or hair policies based on gender). Children frequently encounter environmental information about social group expectations from family, peers, and media. At the same time, they make their own attempts to take in their surroundings and form categories that help them to

organize their understanding of the world. Gender is a highly visible and dominant social group that is relevant to children's individual and social experiences.

Gender is arguably one of the most salient categories by which social groups in the United States are organized and labeled. The prevalence of gender as a categorizing concept is demonstrated in gender-specific divisions for bathrooms, sports, and universities, and in gender-linked associations to qualities such as traits, colors, and abilities. Because so much of human experience is affected by gender differentiation, the study of gender development continues to be the subject of much developmental theorizing and research.

The manifestation of gender schemas (i.e., cognitive frameworks about gender) has been shown even in young infants. Habituation and preferred-looking paradigms have been used to investigate whether infants categorize people based on gender and groups. Studies have shown that infants attend to gendered characteristics and are able to discriminate between male and female faces by the age of 9 months (Leinbach & Fagot, 1993) and male and female voices by the first year (Miller, 1983). Gender categories become salient in the children's environment and language, by the findings that children show gender-typed toy preferences by 18 months (e.g., Caldera, Huston, & O'Brien, 1989), correctly label themselves and others by gender by 24 months (e.g., Poulin-Dubois, Serbin, & Derbyshire, 1998; Zosuls et al., 2009), and demonstrate same-sex peer play patterns by age 3 (e.g., Fabes, Martin, & Hanish, 2009). Children also express gender-based stereotypes by age 3 and continue to make associations by gender throughout childhood and adolescence in domains such as sports, occupations, school tasks, personality characteristics, and adult roles (Signorella, Bigler, & Liben, 1993; Sinno & Killen, 2009; Zemore, Fiske, & Kim, 2000). Stereotyped attitudes and attributions based on social group membership often lead to negative biases and acts of prejudice towards members outside

of one's social group.

General patterns of prejudice and discrimination can be shown across development. Children's preference for members of their own social group (e.g., gender, race) emerges quite early in development and persists throughout childhood (see Aboud, 1988). In-group biases are expressed through a desire to fit in with your own group and to avoid appearing non-conforming to norms associated with your group (Abrams, Rutland, & Cameron, 2003). Often this leads to the exclusion others who do not share similar group characteristics. Although preschool children assert that it is unfair to exclude someone based on race or gender (Theimer, Killen, & Stangor, 2001), by elementary school children report having experienced discrimination based on their social group characteristics. Verkuyten, Kinket, and van der Weilen (1997) found that most children (92%) are familiar with the meaning of discrimination by the age of 10 and could recall an instance in which they felt discriminated against. In that study, children most frequently cited "name calling" as the most common form of discrimination. In another study with adolescent participants, Leaper and Brown (2008) found that most adolescent girls reported instances of sexual harassment, with many also reporting experiences of academic and athletic sexism. Although prior work shows developmental patterns of discrimination-awareness and experience across childhood and adolescence, there is wide variation in whether or not a child perceives a particular act as discriminatory (Brown & Bigler, 2004; 2005).

The consequences of perceiving gender discrimination in children are not well-documented (see Brown & Bigler, 2005), but evidence from a range of work highlights potential negative costs. A study recording qualitative observations of middle-school peer networks showed that children who violated gender norms were often teased or shunned by peers (Thorne, 1993). There is some evidence that gender atypical behavior is linked with unpopularity and

rejection, especially for boys (Sroufe, Bennett, Englund, & Urban, 1993; Zucker & Bradley, 1995). In adolescence, perceived societal sexist discrimination toward women is linked to decreased motivation and achievement in academic and athletic domains (Leaper & Friedman, 2007). Adults' perceived sexist discrimination has been shown to increase women's stress, anxiety, and depression (Foster, 2000; Swim, Hyers, Cohen, & Hyers, 2001). Studies of age- and race-related perceptions of discrimination reveal links to negative mental health, world view, and achievement outcomes among both children and adults (e.g., Benner & Graham, 2010; Brody et al., 2006; Greene, Way, & Pahl, 2006).

Although discrimination is often linked to negative outcomes, evidence from social psychology and recent developmental work suggests that the impact of gender discrimination on women depends in part on how women respond to, or confront, sexist events. *Confronting* sexism refers to the target of the sexist act expressing dissatisfaction with discrimination to the perpetrator of the sexist act (Ayres, Friedman, & Leaper, 2009; Swim & Hyers, 1999). The likelihood that a person will confront sexism varies by individual (e.g., gender attitudes, feminist beliefs, experiences of sexism) and contextual information (e.g., status of perpetrator, social pressures; see Swim, Gervais, Pearson, & Stangor, 2009). Women with more flexible gender attitudes, stronger feminist beliefs, and reported personal experience with sexism are more likely to confront sexism than women with traditional attitudes, weaker endorsement of feminist beliefs, and little-to-no reported experience with sexism (Ayres et al., 2009; Mazer & Percival, 1989; Swim & Hyers, 1999). Although there are likely costs of confronting a sexist perpetrator in social situations (e.g., rejection, mocking, defensiveness), there are potential benefits to confronting biased remarks or actions. By confronting sexist acts, an individual has the potential to reduce prejudice of the perpetrator and/or bystanders. Further, the act of confronting itself is

shown to enhance personal control and self-esteem, thus buffering oneself from the negative impact of prejudice (Feldman-Barrett, & Swim, 1998).

There is little research on the potential benefits or costs of confronting discrimination in children. A recent study of children's challenging remarks to sexist comments by peers showed that by providing children with a script to respond to sexist remarks, children continue to use those retorts over time (Lamb, Bigler, Liben, & Green, 2009). In this study, girls who continued to use confronting remarks showed decreased gender-typed attitudes over time. Parenting provides a rich context for children in that parents can provide similar scripts by which their children process and respond to gender-related information. Parents are primary socializers of gendered information (Leaper, 2002; Lytton & Romney, 1991), though very little is known about the explicit content of the lessons that parents teach about potential biases about gender and how parents address discrimination and unfair treatment more generally with their children.

Undoubtedly, parents are not the sole influence on children's gender attitudes nor does parental influence operate independently of other agents. Children's experiences are shaped by messages, modeling, and approval from their parents, with particularly strong influence during the early years of development (e.g., Eccles, Jacobs, & Harold, 1990; McHale, Crouter, & Whiteman, 2003). As children begin to experience the broader world around them, their self-concept and conceptions about gender are also impacted by others outside of the family. Peers provide social relationships and gender norm enforcers (Witt, 2000). Preference for same sex peer play partners appears in preschool and such gender segregation increases throughout childhood (Maccoby, 1988; Martin & Fabes, 2001). Children, in turn, create two different peer cultures based on gender and thereby show differential patterns of behavior and adjustment (Rose & Rudolph, 2006; Thorne, 1993). These peer groups, as well as school, teacher, and

media influences reinforce what is acceptable and unacceptable behavior based on often strict gender norms. Children learn gender stereotyped behavior through interactions with these socialization agents and develop beliefs about consequences of social group categorization. Through this cognitive processing, children's gendered beliefs become deeply embedded schemas. Indeed, although it would be ideal to study all of the influences on children's behavior, it is often necessary to narrow the scope and explore specific mechanisms within one of the major arenas affecting children's gendered beliefs and behavior.

For the purposes of the current study, I will focus on the dynamics between parent and child due to the central role that parents play specifically in communicating explicit gender-related information. A large-scale survey conducted in 2001 found that 60% of 8-to 11-year-olds reported that they learned "a lot" about issues including alcohol and drugs, discrimination, and violence from their mothers, compared to 46% from teachers and classes, 42% from fathers, and 26% from TV and movies, 21% from friends, and 18% from the internet (Kaiser Family Foundation, 2001). In the current study, I have chosen to focus on the specific role that mothers play in shaping their children's gender attitudes and to facilitate discussion about gender-related information.

The purpose of the proposed work is to examine mothers' socialization strategies in response to gender discrimination. Such strategies refer to the approaches that parents take when their child witnesses discrimination or is the target of discrimination. For example, if a girl was told that she could not play football at recess because she is a girl, she is likely to come home and tell her parents what happened. Parents then must decide how to react to the situation. Strategies could vary by context (e.g., timing, characteristics of the perpetrator or event), children's response to the act (i.e., did the girl think it was unfair that she could not play?) and

parents' own characteristics (e.g., how much does the parent endorse gender stereotypes? What, if any, gender-related parenting goals does the parent have?).

The study of parent socialization strategies in relation to children's perceptions of gender discrimination and subsequent responses to bias has the potential to inform both theoretical and applied domains. Recent conceptual models offer a range of cognitive and intergroup factors that likely contribute to the development of stereotypes and prejudice (Bigler & Liben, 2007; Martin & Ruble, 2004). Developmental intergroup theory (Bigler & Liben, 2007) argues that children's perception of and responses to discrimination are affected by the salience of a group membership. Children face wide gender differentiation in the environment and could, without alternative explanations, internalize stereotypes and engage in discrimination toward others. Therefore, parents can intervene given the opportunity to address their children's biases if their goal is to raise their children in a non-biased manner.

Given current developmental models on children's perception of and attitudes towards social groups and the significant work on parent socialization, I propose that parents' facilitation of discussions about biases provide an important basis by which children may process gender-related material. Young children do not have much access to alternative answers or explanations, so their contact with the world is often filtered through their parents' perspectives. From this perspective, parental socialization strategies about discrimination (e.g., addressing stereotypes, discussing issues of fairness, and labeling biases) would be expected to provide scripts for how children perceive and respond to future discrimination.

The aim of the current study is to investigate mothers' gender-related socialization practices. In the process, I examined the association between mothers' observed behaviors and their young children's gender attitudes. For the present study, I have chosen to focus on the

potential influence of mothers rather than fathers. Overall, American mothers spend more time with their children than do fathers. Yeung, Sandberg, Davis-Kean, and Hofferth (2001) found that fathers spend 67% as much time as mothers with their children on weekdays and 87% as much time on weekends. Further, women are more likely to be the targets of and to perceive experiences of discrimination. Encountering sexism, and in turn deciding how to respond to instances of sexism, occurs on a regular basis for women and is a part of their everyday lives (Swim, Cohen, & Hyers, 1998). Thus, I judged that by focusing on parents who are likely to have the greatest amount of contact with their children and who are likely to have personal experience of sexism (i.e., mothers), I would maximize the chance of detecting socialization effects.

The irony is not lost that although I have been addressing the consequences of differential treatment by gender throughout this introduction, in the current study I have, in fact, made a distinction based on gender in the recruitment of my sample. In addition to choosing mothers as a proxy for the primary care-giver, the parent who spends, on average, more time with their children, and who is more likely to be sensitive to issues of gender bias, there were also practical considerations in the decision not to include fathers. Doing so would require doubling the number of participants, which was not a feasible venture for this study due to monetary and time constraints. It will be important to include both fathers and mothers in future studies in order to test the hypothesis that parent *characteristics*, rather than parent *gender*, are more likely to relate to parent behavior and children's outcome measures, though unfortunately I was unable to do so in the current investigation.

I have also chosen to focus on children aged 6 to 8 years. Children in this age range are capable of making attributions to discrimination (Brown & Bigler, 2004), although they show

variation in stereotype endorsement and in their explanations for discriminatory behavior.

McKown and Weinstein (2003) investigated the development of children's awareness of culturally-linked stereotypes and the consequences of that knowledge. In this study, the authors found that children's awareness of cultural stereotypes about stigmatized ethnic groups and the resulting consequences from those beliefs (i.e., discrimination) increased with age. That is, 30% of 7-year-olds, 60% of 8-year-olds, and 90% of 10-year-old believed that one's stereotyped beliefs would lead to discriminatory behavior. Therefore, at the target age range of the current study, children are beginning to have more nuanced understanding of biased treatment and are developing the cognitive ability to link others' beliefs with actions.

The study was guided by the following questions: What strategies do mothers employ when they are aware that their children are faced with overt gender-based discrimination? What personal and parenting-related characteristics are related to the use of particular parenting strategies for reacting to bias? How are mothers' strategies associated with children's gender attitudes and response to bias?

To address these questions, mothers and children participated in a conversation task designed to elicit responses to unfair treatment based on gender. Mother-child dyads were presented with scenarios that could occur in children's daily life (e.g., being told that a peer was not allowed to wear a tutu because he is a boy). Dyads assessed the degree of fairness in the hypothetical situations. Throughout the discussion, mothers had the opportunity to respond to both the overt discrimination in the material presented and their children's responses to that material. A week prior to the conversation task, mothers' gender attitudes, feminist beliefs, parenting goals, and reported response to gender bias were assessed. Directly following the conversation task, children's gender attitudes and hypothetical responses to sexist peers (i.e.,

open-ended responses to scenarios that depicted sexist remarks) were assessed. By using this design, I was able to gauge how mothers and children respond to biased material, test the associations between mothers' beliefs and behavior, and examine how maternal strategies relate to children's gender attitudes and reported willingness to confront unfair treatment based on gender.

This study investigated: (1) parents' socialization beliefs and practices and (2) the development of children's social group processing; therefore, I provide a brief review of selective literature in each of these areas.

Parent Gender Socialization: Beliefs and Practices

Parent socialization is defined as the process that parents engage in to shape their children's behaviors, beliefs, and values and raise them to fit in with peers and contribute as competent adults in society (Parke & Buriel, 1998; Suizzo, Robinson, & Pahlke, 2008). Within this section and in the current study, I focus specifically on the role of parental socialization, although peers, teachers, the media, and other factors also influence children's socialization process. Researchers have been interested in parental socialization for decades, and as theories have developed, socialization has increasingly been viewed as a multi-faced, bi-directional, lifelong process (e.g., see Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000, for a discussion of the multiple factors influencing the parent-child relationship).

In their review of the history of socialization research, Bugental and Grusec (2006) argue that, before multifaceted models of socialization emerged, theories tended to focus primarily on parental actions, parental attitudes, and parental meta-cognitions. Parental action research is rooted in social learning and attachment theories and largely focused on how parent behavior shapes young children's outcomes (e.g., Bandura, 1977; Bowlby, 1969). As social learning and

attachment theorists focused on parental actions, other theorists became interested in how parenting attitudes might predict children's outcomes. Early parental attitude research is reflected largely in the study of parental styles (authoritarianism, authoritativeness, and permissiveness; Baumrind, 1967) and their influence on transmitting parental values and beliefs (Darling & Steinberg, 1993; Maccoby & Martin, 1983). In contrast, researchers studying parental meta-cognitions (or ideas) tended to focus on implicit and explicit thoughts about their actions and how those thoughts influence children's outcomes (e.g., Bugental & Johnston, 2000). As work has progressed, parent-socialization researchers and theorists have recognized the importance of integrating different perspectives and considering a range of parent, child, and societal factors.

Building on this trend to integrate perspectives and influences, there are a number of potential ways to think about the role of parental-socialization practices in children's gender attitudes. In an article reflecting on the field of gender socialization and children's sex-role development, Katz (1996) asked how and why we might raise feminist children and what outcomes might be associated with greater gender flexibility. Bem (1983) highlighted similar issues when she described personal and proscriptive accounts of raising gender aschematic children within a highly gendered society. In their writings about personal and academic experiences, they suggest differential goals of parents. Whereas many parents are critical of their children's gendered lens and strive to create nontraditional contexts, beliefs, and behaviors, others may do just the opposite, and others still may be unaware and therefore neither encouraging of nor proactive about their children's gendered environment. Yet to be determined are the effects of these different parental viewpoints on children's cognitive and social development. Therefore, parental gender socialization goals and their link to children's attitudes,

values, and behavior are of particular interest to the field of gender development (Blakemore & Hill, 2008; Crouter, Manke, & McHale, 1995; Eccles, et al., 1990; Jacobs & Eccles, 1992).

It is well documented that, on average, parents treat boys and girls differently in respect to a number of domains, such as gendered environments, differential treatment, direct instruction, and modeling (for a review, see Blakemore, Berenbaum, & Liben, 2009). Gendered environments are created through the purchase of toys, clothing, and room decorations on the basis of gender (Pomerleau, Bolduc, Malcuit, & Cossette, 1990). Parents tend to select and encourage physical activities such as sports more often with sons than daughters and assign household chores according to cultural gender expectations (Crouter et al., 1995; Jacobs & Eccles, 1992; Manke, Seery, Crouter, & McHale, 1994). Lytton and Romney's (1991) meta-analysis of parental behaviors revealed systematic gender differences in parents' encouragement of sex-typed activities only. However, studies of differential treatment have not included an exhaustive set of parental behaviors (McHale et al., 2003; Leaper, Anderson, & Sanders, 1998). In their meta-analysis, Leaper et al. (1998) focused on a more specific set of parental behaviors (speech behavior as measured in observational studies) and found evidence of parental differential treatment along gender lines. Thus, important differences may exist in parents' gender socialization behaviors that have not been demonstrated because they have not been measured to date.

Empirical investigations of gender socialization in the family have focused primarily on parents' modeling of traditional and nontraditional family roles (see Ruble, Martin, & Berenbaum, 2006) and on parental differential treatment of sons and daughters (Lytton & Romney, 1991). A meta-analysis of 43 research articles concluded that moderate but consistent associations exist between parents' and children's gendered cognitions (Tenenbaum & Leaper,

2002) such that more traditional parental attitudes are associated with more traditional children's attitudes. Despite the correlational nature of this research, scholars have argued that the direction of influence is from parent to child because variations in parents' demographic characteristics (e.g., parental education, family structure) that are linked to parents' gender related attitudes are in turn related to youth's gender related attitudes (Tenenbaum & Leaper, 2002) and because parents' attitudes have been found to predict their children's attitudes many years later (Moen, Erickson, & Dempster-McClain, 1997). Notwithstanding compelling evidence that parents' and children's attitudes are related, however, the proximal mechanisms through which they are connected remain understudied.

Other research on gender socialization in the family has focused on associations between parents' gendered behavior and personal characteristics (e.g., the division of household labor between parents; mothers' education) and children's attitudes. For the most part, these studies have examined differences in parental roles, or dynamics between parents. For example, in a longitudinal investigation, Cunningham (2001) found across-time associations between parents' division of labor (when adolescents were roughly 15 years of age) and adolescents' gender role attitudes and beliefs about the ideal division of labor three years later. Researchers also have explored the impact of mothers' education, employment and investment in paid labor on children's gender development (Ex & Janssens, 1998). As in research on the transmission of gender attitudes, evidence from this line of research suggests that parents are important gender socializing agents, but does not specify the processes or mechanisms through which gender socialization takes place between parents and children.

Previous work has explored the association between parental socialization strategies when handling gender-related material and the behavioral and attitudinal outcomes of their

children (Gelman, Taylor, & Nguyen, 2000; Tenenbaum & Leaper, 2002). Studies show that some parents endorse gender stereotypes either directly or indirectly through their play, reading, and teaching (e.g., Cunningham, 2001; Friedman, Leaper, & Bigler, 2007; Schwartz, 2004), but that parents often fail to raise issues of stereotypes or discrimination with their children (for a review, see Leaper, 2002). Rather than focusing on the role of parents in the development of their children's perception of and responses to discrimination, the field has largely theorized that other factors, such as gendered environments, play central roles in determining young children's gender attitudes.

As Katz (1996) and Bem (1983) suggested, some parents do not endorse stereotypic behavior with their children and may strive to promote counter-stereotypic beliefs and assumptions. Parental involvement differs, on average, by parent gender. Mothers tend to hold stronger feminist beliefs and more egalitarian gender attitudes (Fagot, 1981), however the processes linking parental beliefs, parental socialization behavior, and children's outcomes remain understudied. Exploring this link would provide for important implications. Specifically, parental attitudes and the parent-child communication about social group assumptions may provide interpersonal mechanisms important for helping children navigate messages about gender and bias.

Previous work from developmental researchers has focused largely on parental gender attitudes and feminist beliefs and how these attitudes are associated with their children's gender-related outcomes (e.g., Blakemore, 1998; Fagot & Leinbach, 1995; Katz, 1996). Evidence from this work suggests a link between parental and child behavior and attitudes. For example, one study gauged preschoolers' interest in playing with unfamiliar babies and demonstrated that boys with parents who held stronger feminist beliefs were more likely to be interested in babies than

boys with parents who held weaker feminist beliefs (Blakemore, 1998). Preschool children with parents who hold egalitarian gender-related beliefs are also more likely to learn gender labels and stereotypes at an older age than children with parents who hold more traditional gender-related beliefs (Fagot & Leinbach, 1995). In a study of children in middle childhood, McHale, Crouter, and Tucker (1999) found evidence that children from families who reported less sex-typed (i.e., traditional) leisure and household activities were more likely to hold flexible gender attitudes than children from more traditional families. Although these studies provide important associations between family dynamics and children's attitudes and behavior, the specific ways in which these beliefs are potentially transmitted are yet to be investigated.

Despite previous work citing associations between feminist parenting and child outcome, studies typically find only a weak association between (a) mothers' attitudes and parenting behavior and (b) mothers' and children's gender attitudes (Tenenbaum & Leaper, 2002). Studies of mothers' conversations with their young children about gender suggest that mothers tend not to discuss gender stereotypes, even while reading gender-themed stories with their children. In a study of recorded mothers' speech while reading a gender-themed story to their preschool children, Gelman, Taylor, and Nguyen (2004) found that even mothers with egalitarian attitudes commonly used language that explicitly and implicitly stereotyped gender. For example, mothers made frequent use of generic statements concerning gender (e.g., "girls play with dolls") and frequent use of gender labels (e.g., "that's a boy racing the car"). Using a similar research design, Friedman and colleagues (2007) examined the association among mothers' gender attitudes, mothers' behavior while reading gender-themed stories, and their preschool children's gender stereotyping. Overall, mothers' gender role attitudes were not predictive of their use of stereotypic or counter-stereotypic statements to their children while reading. That is, mothers

largely failed to convey their personal attitudes in their speech to their children, and perhaps unsurprisingly, children's gender role attitudes were unrelated to those of their mothers.

In sum, extensive work has focused on the role of parents as instructors of gender relevant knowledge (e.g., McHale et al., 2003; Sinno & Killen, 2009), though little work has focused on the role of parents in facilitating discussions of gender-related discrimination. Studies investigating explicit comments parents make to their children about other social group discrimination, then, may be helpful models for identifying whether parental verbal instruction has an impact on children's attitudes.

In contrast, there is a wealth of information in the literature of parent socialization on racial socialization within African-American families and increasingly in other racial groups. Estimates show that 67-90% of African-American parents report preparation for bias (i.e., actively addressing racial issues and potential discrimination with children; for a review, see Hughes et al., 2006). African-American parents' communication to children about race is an important determinant of how children navigate negative messages about their race and respond to instances of discrimination (Bowman & Howard, 1985; Spencer, 1983). Although conceptualizations of the process vary, most researchers focus on how ethnic minority parents promote their children's sense of self, racial group knowledge, racial pride, and preparation for dealing with negative messages in their daily life (Hughes & Chen, 1999; Johnson, 2001). Parental discussion on racial bias and potential discrimination in African-American families has been linked to positive outcomes in children's racial pride, self-esteem, and discrimination coping strategies (Hughes & Chen, 1997, 1999; Johnson, 2001; Sinclair, Dunn, & Lowery, 2005).

The body of work on African-American families' racial socialization provides a useful model for understanding the parents' roles as instructors of social group information. Parents facilitate children's understanding of intergroup relations, stereotyped attitudes, discriminatory acts, and strategies for dealing with future issues. Whereas there is consensus that African-American families, on average, value race-related communication, it is unclear whether or not parents (or *which* parents) have the same parenting goals and explicit conversations with respect to gender-based discrimination.

A recent set of studies has examined these issues in young adults. Adults reported their own experiences with socialization about various *-isms* (e.g., sexism, racism) and their beliefs about if and when issues of bias and discrimination should be addressed with children (Hilliard & Liben, 2010). Survey responses showed that participants' own experience and their feminist identity were related to beliefs about when *-isms* should be addressed with children. Specifically, the more that young adults reported past discussion about discrimination and the higher their feminist self-rating, the more they endorsed the belief that it is important to address sexism with children.

Further, these sets of studies found relatively low endorsement of the notion that sexism is an important issue to address with children. Responses indicated that many young adults think issues of gender discrimination are not as important today, are not important in general, and could be harmful to bring up with children. When asked to provide explanations of their responses, a prevalent theme that emerged was the belief that parents should only address issues of gender discrimination when they come up. That is, young adults endorsed a reactive, rather than proactive approach to handling discrimination-related events with children. Results from these studies identify key themes and suggest potential predictors of parent socialization, yet the

specific pathways by which messages about discrimination are conveyed and received in parent-child relationships remain unstudied.

In order to investigate the implications of parental strategies on children's awareness of and responses to discrimination, it is necessary to discuss how children sort others into social groups, develop an understanding of social-group processing, and understand issues of fairness and equity.

Development of Children's Intergroup Attitudes

In the past decade, several comprehensive theories and frameworks have been proposed to explain young children's biases. Although these models have not yet been extensively tested, they do suggest that the field may be moving toward a more integrated view of the factors that influence social group attitude development. In this section, I present a recent theoretical model of intergroup processes that describes the course by which children process social group stimuli to form and maintain stereotypes. I integrate the theoretical framework and related empirical work focused on the consequences of stereotypes and discrimination.

Researchers studying social group processing have shown that children make comparisons between groups and begin to make distinctions between in-group and out-group members early in development (Abrams & Rutland, 2008). The creation and maintenance of evaluations based on group membership is at the core of a recent theoretical model of social group stereotyping and prejudice called developmental intergroup theory (DIT; Bigler & Liben, 2006). This theory describes the path by which children create and strengthen social group stereotypes. DIT posits that stereotypes derive from a) children's drive to reduce complexity of their world through categorization and b) the psychological salience of a social group category (e.g., perceptual differences between people, implicit and explicit labeling, and calling attention

to group membership). That is, children attend to various social group markers and sort people into groups based on those markers, thus leading to beliefs about the groups and prejudices about certain groups.

DIT makes an important distinction between the creation of stereotypes and the strengthening of existing stereotypes. Because gender stereotypes and own-group bias are seen in very young children (Ruble et al., 2006), it is important to understand how existing stereotypes are maintained and exacerbated. Children (and adults) hold stereotypes about various groups and then apply those stereotypes to individual members of those groups, often resulting in prejudicial and unfair treatment.

Theorists in gender development (e.g., Bigler & Liben, 2006; Gelman & Taylor, 2000; Martin & Ruble, 2004) argue that children are driven to explain inequalities and are likely to attribute such differences to essentialist qualities of boys/girls and men/women. That is, without an alternative explanation, children will endorse the view that men and women should perform specific roles because of specific skills or proficiency necessary for those roles (see Arthur, Bigler, Liben, Gelman, & Ruble, 2008). Explicit gender discrimination discussions can provide children with an explanation for gender gaps and discrepancies in male-dominated fields (e.g., top CEO positions, math and science careers). Without such explanations, children are thus left to sort out and understand the reasons for both individual-level bias and institutional, broader-level bias. By providing children with discrimination-based explanations for stereotypes (e.g., “some people think that boys should not do ballet, but really, anyone can”) and institutional-level bias (e.g., discussion of the changes in workforce and barriers to women), children were less likely to endorse the stereotypic view.

An intervention study recently tested this model in a study of adolescent girls enrolled in a program aimed at increasing girls' interest in science (Weisgram & Bigler, 2007). Half of the girls in the study were assigned to a nearly identical program that also included information about gender discrimination. At the end of the program, only girls who learned about gender discrimination in addition to the regular science topics showed an increase in science self-efficacy and in the value of science. Findings from this study suggest that explicit conversations about gender discrimination may reduce gender biases among children.

A study on children's racial biases investigated the impact of explicitly teaching European-American children about racial biases and discrimination in school. Children who received history lessons that included information about racism experienced by African Americans showed less biased attitudes than children who received lessons that did not include information about racism (Hughes, Bigler, & Levy, 2007). This type of intervention strategy in which discrimination was addressed specifically is in contrast to color-blindness, a dominant approach to managing diversity. In a recent investigation, researchers empirically tested the impact of color-blind strategies as a means to eliminate racial inequality on elementary-school students (Apfelbaum, Pauker, Sommers, & Ambady, 2011). Findings showed that children in the color-blind condition were less likely to detect overt instances of racial discrimination than children in a value-diversity condition. This work further supports DIT in that, without alternative explanations, children attend to information about the social groups and make their own attributions about perceived social group differences. By providing children with environmental explanations for past and present discrimination, children are less likely to endorse stereotypes and negatively evaluate out-group members.

Recent work has begun to unpack how and when children identify acts as exclusionary, unfair, or discriminatory (see Killen & Smetana, 2010; Rutland, Killen, & Abrams, 2010). A study by Brown and Bigler (2004) focused on children's perceptions and evaluations of discriminatory treatment. In this study, children were read hypothetical scenarios in which a boy and a girl were treated differently by a teacher. Children were also told background information about the teacher, namely, whether or not that teacher had a history of preferring one gender over another. Results showed that when read conditions in which a teacher had a history of discrimination, children were more likely to infer that a novel and ambiguous situation was discriminatory. These results varied by the gender and age of the target and the child who was evaluating the story. Specifically, older children (8- to 10-year-olds) were more likely than younger children (5- to 7-year-olds) to rely on the teacher's past history of discrimination when evaluating the novel act. Thus, although young children understand and are aware of discrimination as a social possibility, they are not as likely to use background (or historical) cues in evaluating ambiguous acts. Children as young as 5 sometimes attributed teachers' behavior to discrimination; however, younger children made only infrequent and inconsistent attributions to discrimination. Further, children with more egalitarian gender attitudes (i.e., endorse more activities as being appropriate for both girls and boys) make more attributions to discrimination than children with less egalitarian attitudes – at least when the discrimination is directed toward others.

Brown and Bigler (2004) also found differential effects for boys and girls. Girls were more likely to attribute an act as discriminatory for female targets than they were for male targets, but boys did not differ in their attributions. Evidence from other work is consistent with this finding. In research on children's judgments about peer exclusion, elementary school girls

(but not boys) rated exclusion of girls as more negative than peer exclusion of boys (Theimer et al., 2001). One possible reason for these findings is that girls report higher instances of experiencing gender-based discrimination (Leaper & Brown, 2008) and therefore girls' attention would be more heightened to the issue and therefore more likely to attribute situations as discriminatory (Killen & Stangor, 2001; Theimer, et al., 2001). Further, experiencing discrimination and acts of peer exclusion is likely to lead girls to be aware of the lower societal status of women relative to men, in turn leading them to be more sensitive to biased treatment. Taken together, findings from studies of children's perception of discrimination reveal age-related, individual, and situational factors influence that ways in which children interpreted novel situations. The perception of discrimination itself as well as the experience of discrimination is likely to have important outcomes for children and adolescents.

Being the target of discrimination has important consequences, particularly in academic domains, regardless of whether the child perceives the discrimination or not. However, because it is nearly impossible to measure actual discrimination, it is necessary to focus on perception of discrimination. As discussed in this section, researchers thus examine which factors lead to an attribution of discrimination across children and contexts. Research has shown that perceptions of discrimination lead to a range of both positive and negative outcomes. For example, recent evidence suggests that recognizing acts as discriminatory is linked to positive results in children. Brown, Bigler, and Chu (2010) tested 5- to 11-year-old's views of whether they have been the target of gender discrimination. In this study, children received either gender- biased or nonbiased feedback on a drawing and were asked to evaluate the feedback. Results showed that girls were more likely than boys to attribute their negative feedback to discrimination. Further, children who held egalitarian gender attitudes were more likely to explain the negative feedback

as an example of discrimination than children with more traditional attitudes. Children who made more attributions to discrimination were also more likely to have higher self-esteem about their performance on the drawing, suggesting that discrimination provided an external explanation for the negative feedback rather than internal. However, children who attributed feedback to gender discrimination and who held egalitarian attitudes felt less socially accepted at the end of the study. Findings from this work indicate that there are positive consequences to perceiving discrimination when it is a reasonable explanation for feedback. In addition, the findings suggest that children with egalitarian values may be sensitive to issues of social rejection and it may be beneficial to help children identify instances of discrimination in a thoughtful manner. Although research has been limited in this area, parents could be an important buffering agent by helping their child work through potential costs of being made aware of discrimination, navigate positive restructuring, and prepare for future biased encounters.

Taken together, the research presented in this chapter has explored how children understand and are affected by social group biases and has highlighted the complex ways in which mothers may be influencing their child's gender attitudes. Although gender is a highly salient and relevant topic in children's environments, direct discussion about stereotypes and destructive effects of discrimination is infrequent in parent-child conversations. By exploring these topics in further detail through empirical work, the field may well uncover a range of ways parents influence children's conceptions of gender biases by helping children first, to label acts of discrimination, second, to seek support to overcome negative effects of exclusion based on gender, and third, to open a dialogue to help children negotiate future instances of discrimination

Chapter 2

Research Questions and Hypotheses

The preceding literature review shows that children are frequently encountering messages about social group stereotypes, children begin to recognize gender stereotypes at an early age, and parent facilitation may shape how children begin to understand and respond to acts of bias. In the next section, I explain the aims and questions of the current study.

The overall goal of the current study is to examine the factors that affect parental response to bias and child gender attitudes in the early elementary school years. This study focuses on the discussion strategies that mothers employ with their children when confronted with gender discrimination and the impact of these strategies on children's gender attitudes and response to unfair treatment. The central questions of the current study are:

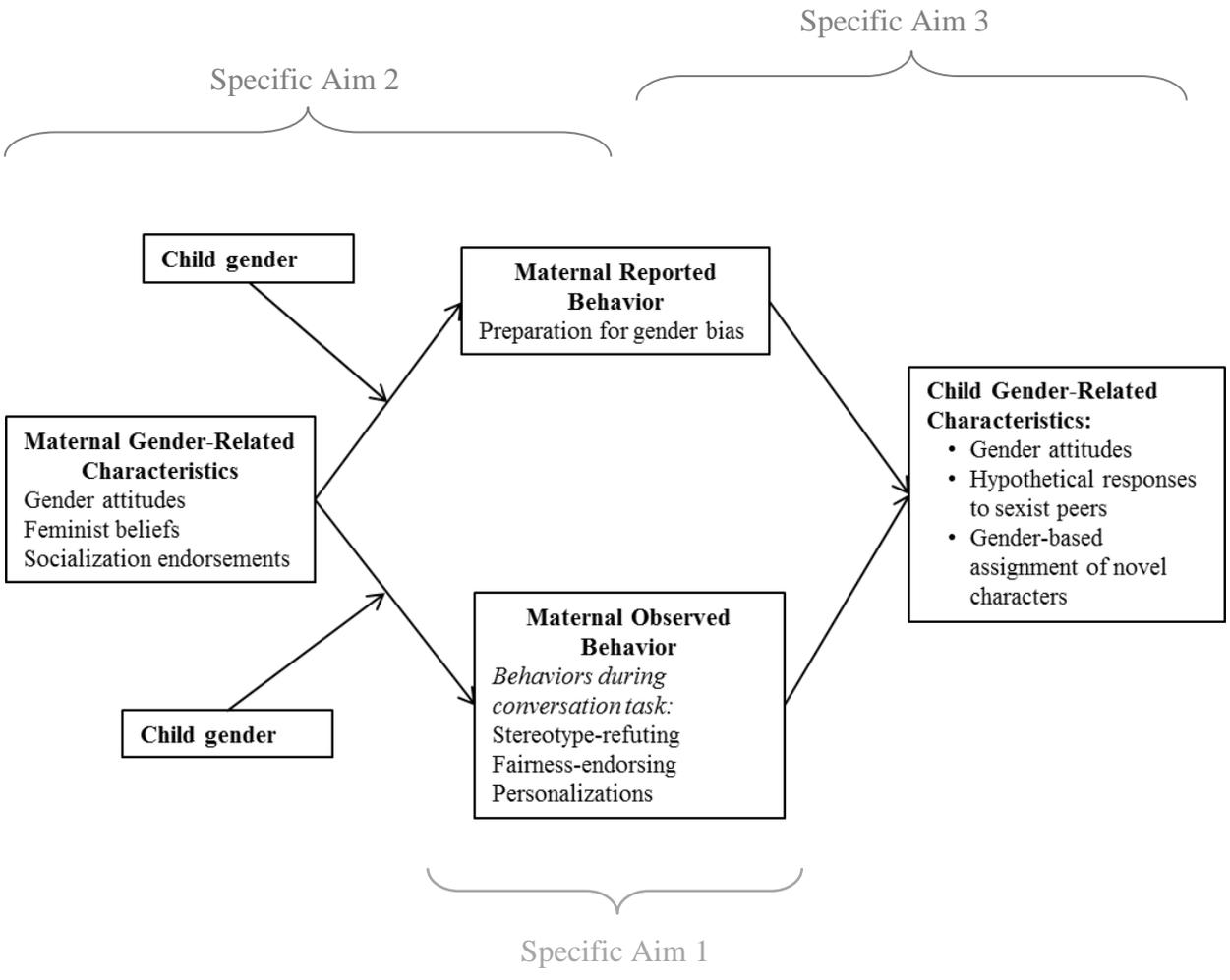
1. What strategies do mothers employ when they and their children are faced with overt gender-based discrimination? (Specific Aim 1)
2. What personal and parenting characteristics relate to mothers' reported and observed use of particular parental strategies for reacting to bias? (Specific Aim 2)
3. How do mothers' strategies relate to children's gender attitudes and bias-response outcomes? (Specific Aim 3)

These questions were addressed in an observational study of mothers and children. Measures of maternal gender attitudes, feminist self-rating, parenting goals about gender, and reported preparation for gender bias were assessed a week prior to the observational task. During the observational task, the mother-child dyad was presented with scenarios that show assignment of characters to hypothetical summer camps based on various justifications, including gender stereotype-based discrimination. The dyad was asked to discuss each character

assignment and evaluate the fairness of the assignment. Following the parent-child discussion, children met with an experimenter and were asked to assign six new children to the camps. They were also given measures of gender attitudes and hypothetical responses to sexist peers (i.e., reported willingness to speak up against sexism in a hypothetical situation).

I expected that mothers and children would vary across participants in the responses to the material and how gender-based justifications were provided to make decisions. As shown in Figure 1, I predicted a model in which (1) maternal characteristics (gender attitudes, feminist beliefs, and gender-related parenting goals) interact with child gender to predict both a) reported preparation for gender bias and b) actual maternal strategies exhibited in the discussion task and (2) maternal strategies in the discussion task predict children's gender-related beliefs. The specific aims and hypotheses of the study are given next.

Figure 1. Hypothesized Associations Among Maternal Gender-Related Characteristics, Child Age, Maternal Reported and Observed Behavior, and Children's Gender-Related Characteristics



Specific Aim 1: To provide descriptive data cataloging the frequency of strategies by which mothers guide their children in response to gender stereotypes and unfair treatment based on gender.

Hypothesis 1: Given current developmental models on children's perception of and attitudes towards social groups and the significant work on parent socialization, I propose that parents' facilitation of discussions about biases provide an important mechanism by which children process gender-related material. I predicted that children would be more likely to make stereotype-endorsing comments than mothers and less likely to produce stereotype-refuting and personalizations than their mothers. Prior research does not include observational data on parent-child discussions in the face of overt gender biases, and therefore the current study provides an important descriptive inventory of the range of responses given and strategies employed. Identification of successful strategies may be of practical value in suggesting means for reducing children's stereotypes more generally.

Specific Aim 2: To examine a) whether mothers' gender-related characteristics relate to mothers' gender-related socialization behaviors (both reported and observed), and b) whether child gender interacted with these associations.

Hypothesis 2: The second hypothesis was that maternal characteristics would be associated with maternal discussion strategies. I predicted that mothers with higher levels of egalitarian gender attitudes, feminist beliefs, and egalitarian parenting goals would show higher levels of reported preparation for bias (Hypothesis 2a) and more stereotype-refuting (Hypothesis 2b), fairness-endorsing (Hypothesis 2c), and personalization strategies (Hypothesis 2d) in the discussion task. Further, I hypothesized that the association between maternal gender-related

characteristics and discussion strategies would be moderated by child gender (Hypothesis 2e). I predicted that maternal characteristics would show a stronger link to discussion strategies with daughters than with sons. Specifically, I predicted that mothers with higher levels of egalitarian gender attitudes, feminist beliefs, and egalitarian parenting goals would show higher levels of stereotype-refuting, fairness-endorsing, and personalization strategies in the discussion task with daughters than sons.

Specific Aim 3: To examine whether maternal discussion strategies predict children's gender attitudes, hypothetical responses to sexist peers, and gender-related assignments of novel children in the camp task.

Hypothesis 3: The third aim of the current study was to test the association between maternal behavior (reported discussions of bias and observed discussion strategies) would be associated with children's gender-related outcomes. Specifically, I predicted that mothers with higher levels of preparation for bias and who produced more stereotype-refuting, fairness-endorsing, and personalization strategies in the discussion task would have children with more flexible gender attitudes (Hypothesis 3a), more stereotype-refuting hypothetical responses to sexist peers (Hypothesis 3b), and fewer gender-based assignments of novel characters (Hypothesis 3c).

Chapter 3

Method

Within this chapter, I present information about the current study's methodology, including details about the participants, procedures, and measures.

Participants

Sixty-two mothers and their children participated in the current study. Mothers who participated in the study ranged from 29 to 46 ($M = 37.39$, $SD = 4.62$). The majority of mothers self-identified themselves and their child as White, Caucasian, or European American (96.8%). The remaining identified as Hispanic and Arab-American. The mothers tended to be highly educated. All of the mothers had graduated from high school, 83.8% of mothers had graduated from college, and 40.3% of mothers had attended some sort of post-baccalaureate training. The mothers' partners were also highly educated, with 84.4% of them graduating from college or a post-bacheloreate program.

The children (31 boys and 31 girls) who participated in the study ranged in age from six to eight years ($M = 7.40$, $SD = .72$). Most of the children had one sibling (range 0-5, $M = 1.45$, $SD = .95$).

Families in the surrounding areas of central Pennsylvania were recruited for the study from the FIRSt (Families Interested in Research Studies) Families Database and community listserv announcements. Potential participants were contacted via letters and follow-up phone calls phone calls (see Appendix A for a copy of the letter sent to parents and a copy of the telephone script used). To reach additional families, I handed out flyers at a preschool in central Texas. Ten mothers participated from the Texas sample. Finally, some of the mothers who participated in the study offered to recruit their own friends to participate. These mothers

forwarded the recruitment information to their friends without telling their friends additional information about the nature of the study.

Procedure

Maternal measures. One week prior to the laboratory visit, mothers were asked to fill out parenting measures via online surveys or mailings as preferred. The measures of interest (e.g., gender attitudes, feminist beliefs, and socialization goals) were included in a parenting packet which also included general parenting questionnaires (goals, behaviors, and attitudes about parenting) and individual characteristics (political and religious beliefs). Items from the measures of interest (i.e., gender attitudes, feminist beliefs, and socialization goals) were embedded with items from general parenting and household scales as well as individual difference measures in order to make the gender-related research goals less salient. In addition to making the exact purpose of the study less apparent, including, the parenting and household scales also provides for a rich database that may be valuable for answering additional questions for future work. These scales are provided in Table 1 but will not be discussed in detail. The gender-related measures will be described in detail in the following sections.

Table 1

Overview of Measures Completed by Mother

Construct	Measure
Gender-related characteristics	
Gender attitude measure	Occupations, Activities, and Traits-Attitude Measure (OAT-AM; Liben & Bigler, 2002)
Feminist beliefs	3 questions; 7-point Likert scale
Gender socialization goals	The Child Gender Socialization Scale (Blakemore & Hill, 2008)
Preparation for gender bias	Adapted from Hughes & Chen (1997)'s Preparation for Racial Bias Scale; Shearer, 2007)
General parenting and household	
Parenting styles	Parenting Styles and Dimensions Questionnaire (PSDQ; Robinson, Mandleco, Olsen, & Hart, 1995)
Parenting beliefs	Parent topic checklist (when, if, and from whom topics should be addressed with children; Hilliard & Liben, 2010)
Household chores	Household division of labor (Coltrane, 2000)
Individual characteristics	
Political beliefs	3 questions; 7-point Likert scale
Religious and spiritual beliefs	2 questions, 7-point Likert scale

Laboratory visit. Dyads arrived at a research laboratory where an experimenter greeted the family, explained the study procedure, and obtained parent consent and child assent. The parent and the child were then escorted to a room with a video camera. An experimenter explained that for the first part of the study, the dyad would work on a task together, and for the second part of the study, the experimenter would ask the child a few questions as the parent filled out a demographics questionnaire in a separate room.

Procedure for conversation task. During the conversation task, the mother-child dyad sat at a table in two chairs next to each other in a quiet room. In front of them on the table was a magnet board that read, "Fun at Camp," with laminated instruction cards and photographs of children at a hypothetical summer camp. The experimenter asked the mother-child dyad to read

through the materials in front of them and to answer questions and discuss the material together at each prompt in the instructions.

In the “Fun at Camp” hypothetical scenario, ten children (referred to here as “characters”) are attending a camp with different activities available to them. The camp director has made a decision about which character should go to which activity. Six out of ten of the camp director’s decisions were based on gender (e.g., female characters assigned to stereotypically feminine activities and male characters assigned to stereotypically masculine activities). Brief justifications for the decisions were provided for each character. The mother-child dyad was asked to turn over cards one at a time. Each card gave information about one child. That is, the dyad read from the card (a) to which activity the camp director assigned the child, and (b) the criterion the camp director used to make that assignment decision. The prompts were written so that the camp director’s gender is ambiguous. For the specific protocol, chart of the task conditions, and a photograph of the study materials, see Appendix B.

Materials for conversation task. The three activities shown pictorially represent three types of camp activities: (1) masculine (rock-climbing), shown with a picture of the activity and pictures of two boys climbing rocks; (2) feminine (ballet), shown with two girls in ballet classes; and (3) gender-neutral (swimming), shown with pictures of a boy and a girl in the water with swimming gear. The camp director is reported to have assigned three of the girls to ballet using stereotype-ability-based (e.g., girls are better at ballet), stereotype-interest-based (e.g., girls like to do ballet), and group-cohesion-based (there are only girls in the ballet group) justifications. Three of the boys are reported to be assigned to rock climbing based on stereotype-ability-based (e.g., boys are stronger and good at rock climbing), stereotype-interest-based (e.g., boys like to

do rock climbing), and group-cohesion-based justification. The swimming justifications for the remaining boys and girls were based on ability and interest.

The mother-child dyad was asked to read through each of the camp director decisions and discuss what they thought generally about that decision and the degree to which that decision was fair. After discussing all ten characters and the corresponding decisions, the dyad turned over the last prompt, which had more specific and leading questions that are designed to encourage dialogue about the activity. Dyads answered the following questions after reading each character decision and rationale:

- Was the camp director fair in deciding which kids should go to which activity?
Why or why not?
- If you went to this camp, how would you want the director to assign you to the activities?

Following the individual character discussions were questions designed to extend the conversation beyond the initial character assignments, such as:

- What do you think would happen if Seth joined the ballet group? Do you think that he would be teased or would it be okay? Why do you think that?
- If Allison was good at rock climbing, do you think she should be able to join the group of all boys? Why or why not?
- What would Dylan's friends think if he wanted to go to the ballet group?

Discussions were videotaped, transcribed, and coded for reasoning strategies and behaviors.

Individual tasks. Following the joint conversation task, mothers were asked to complete a demographics questionnaire independently in a separate room. The experimenter remained

with the child and administered gender attitude, assignment of novel characters, and response to discrimination measures.

Maternal Gender-Related Characteristics

The measures outlined below were included in an online parenting survey administered to the mother one week prior to the parent-child discussion. Table 2 provides an overview of the means, standard deviations, and Cronbach's α coefficients for all of the multi-item measures. Maternal feminist beliefs, gender attitudes, and socialization goals were analyzed separately. Based on previous work on associations between parent and child gender attitudes, these three separate constructs, although similar in theory, show differential associations with children's outcome measures (e.g., Blakemore, 1998; Fagot & Leinbach, 1995; McHale et al., 1999).

Table 2

Cronbach's α Reliability Coefficients and Summary Statistics for Multi-item Scales

Scale	Number of items	Score min-max	α	M	SD
Maternal scales					
Gender attitudes					
Masculine items	10	1-5	.94	3.23	.01
Feminine items	10	1-5	.95	2.68	.02
Socialization goals about gender					
Toys and activities stereotyped for child's own gender	6	1-7	.72	4.88	.58
Toys and activities stereotyped for other-gender	7	1-7	.91	5.17	.10
Disapproval for other-sex characteristics	2	1-7	.81	2.69	.81
Preparation for gender bias	6	1-5	.86	1.74	.81
Feminist beliefs	3	1-7	.87	2.99	.15
Child measures					
Gender attitudes					
Masculine items	10	1-3	.91	2.21	.28
Feminine items	10	1-3	.90	1.88	.40

Demographics. Mothers completed a brief questionnaire that asked about parent and child age and ethnicity, family composition, parents' occupations, and number of years of each parent's education.

Maternal gender attitudes. Mothers' gender attitudes were measured with the Occupations Subscale of the Occupations, Activities, and Traits (OAT)—Attitude Measure (see Liben & Bigler, 2002). This measure asks "who should" perform 25 occupations (10 stereotypically feminine, 10 stereotypically masculine, and 5 neutral). This scale has shown excellent internal reliability, $\alpha=.89$ for feminine occupations and $\alpha=.91$ for masculine occupations. Mothers rated their gender attitude endorsement on a 5-point scale by selecting

“only men,” “mostly men/some women,” “both men and women,” “mostly women/some men,” or “only women.” The proportion of “both” responses were used for calculations. Scores range from 0-1, with higher scores indicating more egalitarian views.

Maternal feminist beliefs. Feminist beliefs were assessed with a 3-item measure. Mothers indicated on a 5-point Likert-type scale the degree to which they are aware of feminist issues, support feminist issues, and identify themselves as a feminist (1=not at all; 5=very much). Mean scores were compiled and range from 1-5, with high scores indicating higher awareness of feminist ideals and personal identification with feminism. This scale has been used in prior work (Hilliard & Liben, 2010) with high reliability between the items. Mothers were also asked to record their personal definition of the term “feminist” in an open-ended question.

Maternal socialization. Mother’s gender-related parenting evaluations were assessed with the Child Gender Socialization Scale (Blakemore & Hill, 2008). This 22-item measure asks mothers to indicate their attitudes about gendered behaviors in their children and assesses mothers’ comfort level about their child participating in activities associated with either boys or girls (i.e., traditional or non-traditional behavior) as well as their general goals for their children regarding marriage and achievement. Fifteen of these items comprise three subscales of interest in the current study: (1) approval for toys and activities stereotyped for the gender of their child (6 items), (2) approval for toys and activities stereotyped for the other-gender (7 items), and (3) disapproval for other-gender characteristics (2 items). The remaining items refer to mothers’ approval for their children doing household chores and were not included in the present analyses. Scale development showed internal consistency alphas ranging from .82 to .95 (Blakemore & Hill, 2008). The measure has also shown good test-retest reliability over a period of 1-2 months.

In this measure, mothers were shown several activities in which their child might engage now or in the future. The mothers were then asked to indicate their evaluation of their child in each activity or engaging with each toy (e.g., how positively or negatively the mother feels about her son/daughter taking ballet lessons or playing with toy guns). Mothers' responses are scored on a 1 (very negative evaluation to child doing activity) to 7 (very positive evaluation) Likert-style scale. Mean scores for each subscale range from 1-7, with mid-range score indicating that the mother is neutral to the behavior or activity and higher scores indicating more positive evaluations of counter-stereotypic behaviors.

Maternal Gender-Related Behavior

Mothers' gender-related behavior was assessed through self-report (with a preparation for bias measure) and observation (via coded comments during the mother-child conversation task).

Reported gender-related behavior with child. The Preparation for Gender Bias scale was used to assess mothers' reported communication behavior with their children. This 6-item scale is designed to assess mothers' perceptions of discussions with their children about gender issues and prejudices (developed by Shearer, 2007; adapted from the Preparation for Racial Bias subscale of the Racial Socialization Scale developed by Hughes and Chen, 1997). Mothers responded to direct questions about how often they engage in discussions about sexism with their children. The measure affords an important comparison to the observational data and provides a test of what parents *say* they do in relation to what parents *actually* do. This measure has shown high reliability, with alphas for mothers' reports between .88 and .92. In this measure, mothers reported how often they had engaged in various gender socialization behaviors over the course of the child's life (e.g., how often they have told their child that people might treat girls/women unfairly because of their sex/gender). Mothers rated frequency of behavior on a 1 (never) to 5

(very often) Likert-style scale. Mean scores range from 1-5, with higher scores indicating greater engagement of preparation for gender bias.

Observation of gender-related behavior with child. The mother-child conversations were transcribed and content-coded based on their discussion about the prompts and their answers to the specific questions. The coding system is based both on previous categories used in the literature (Killen & Stangor, 2001; Smetana, 1995) and on the expansion of these categories based on pilot testing.

Categories for coding patterns of responses address the mother's and child's individual responses to the camp director's decision. For the purposes of the present study, I focused primarily on maternal arguments and strategies. However, given that maternal response is likely to be influenced by both the material and how the child responds to the material, consideration in preliminary analyses were made based on the child's comments in each of the categories. Mothers' and children's comments were categorized and summed into four separate categories: (1) Stereotype-endorsement, (2) Stereotype-refuting, (3) Fairness-endorsement, and (4) Personalizations.

Videotapes of the mother-child conversations were transcribed. Comments coded as one of the four categories (stereotype-endorsing, stereotype-refuting, fairness-endorsing, and personalizations) were identified. A second coder independently coded all of the transcripts of the conversations. Intraclass correlations for the child categories ranged from .81 to .90, with a mean of .84. Intraclass correlations for the maternal ratings ranged from .84 to .95, with a mean of .87. Discrepant responses were discussed until agreement was reached.

Stereotype-endorsement. Codes in this category include statements in which the mother or child makes gender-stereotypical comments, often having to do with interest or ability (e.g., “only girls should do ballet;” “boys are better at rock climbing”).

Stereotype-refuting. Codes in this category include statements in which the mother or child negates or counters a stereotype. These statements could be in disagreement in response to either the camp director’s decision/rationale or to something that the mother/child said. Codes included comments that directly refuted stereotypic-content related to interest (e.g., “Girls also like to do rock climbing”), ability (e.g., “Boys are also good at ballet”), and group cohesion (e.g., “Boys and girls can work together in an activity and do not need to be separated”).

Fairness-endorsement. Comments included in this category related to issues of rights and fair treatment. In studies of children’s fairness reasoning, Killen and colleagues (e.g., Killen, Kelly, Richardson, & Jampol, 2010; Killen & Stangor, 2001) identified specific components related to moral reasoning such as fairness and rights, equal treatment, and equal access. Comments in this category were based on these constructs. These comments appealed to rights (e.g., “She has to be in rock climbing activity if she wants to”), evaluations of treatment of others (e.g., “The camp director should treat all of the campers the same way”), and equal opportunity (“Boys don’t usually get to do ballet, so they should have the chance to participate in that activity”).

Personalizations. This category referred to comments in which the mothers or children extended the discussion from the task to relate to experiences in their own life. Although this category could be used to endorse a negative stereotype, these types of comments did not occur, and therefore this category includes comments used only as a strategy to negate a stereotype. Examples include relating the material to (a) a past experience to the child’s life (e.g., “Your

friend Johnny likes to do ballet;” “You really like to dance, don’t you? And you’re a boy”), (b) a past experience in the parent’s life (e.g., “One time I really wanted to do x and was told that I couldn’t because I am a girl”), and (c) a hypothetical situation (e.g., the parent could ask the child, “What if you (or sibling/relative/friend) really wanted to do ballet, do you think you should be allowed to?” or “If you were playing outside and your friend wanted to do ballet, what do you think friends at school would say?”) All of these examples are within the context of countering the stereotype through personalization and would be calculated in the frequency of stereotype-refuting strategies.

Child Gender-Related Characteristics

Children’s gender attitudes. Children’s personal level of gender-typing were measured after the mother-child conversations using the Activity Subscale of the Children’s Occupation, Activity, and Trait (COAT)—Attitude Measure (COAT-AM; Liben & Bigler, 2002). In this measure, children were shown pictures and asked “who should” perform 25 occupations (10 stereotypically feminine, 10 stereotypically masculine, and 5 neutral). The COAT-AM has been shown to be a reliable ($\alpha = .81$ for feminine items and $.83$ for masculine items) and stable scale for measuring children’s gender-typing of others within the domains of occupations, activities, and traits. Children rated who they think should play with various masculine, feminine, and gender-neutral activities—only boys, only girls, or both boys and girls. The proportion of “both” responses were calculated. Scores range from 0-1, with higher scores indicating more egalitarian views.

Hypothetical responses to sexist peers. Children’s predicted responses to hypothetical cases of peers’ sexism were assessed using the Sexist Vignettes Task, a measure developed by Lamb et al. (2009). In this measure, children were asked in an open-ended format about their

predicted responses to a selection of scenarios that “depict five types of sexist remarks: (1) comments about counter-stereotypic characteristics, (2) comparative judgments, (3) exclusion, (4) role stereotyping, and (5) highlighting gender in a neutral context” (Lamb et al., 2009, p. 367). In the first four types of scenarios, the target of the sexist remarks vary by gender and the selection were counter-balanced across participants. The fifth type of scenario does not contain a specific target of sexism and thus was not coded for gender-specific items (e.g., children being asked to line up at the door all boys then all girls).

Children were asked to give open-ended responses to the scenarios. Following the protocol outlined in Lamb et al. (2009), children’s responses to the vignettes “were coded into one of four categories: (1) agreeing with the sexist remark (e.g., “I’d say the same thing.”), (2) ignoring the sexist remark (e.g., ‘I wouldn’t do anything.’), (3) objecting to the unfair/anti-social nature of the remark (e.g., “I’d say that I don’t like people being mean to each other.”), or (4) challenging the sexism inherent in the remark (e.g., “I’d tell him that there is no such thing as a ‘girl’s thing’”)” (p. 367). Scores represent the number of challenging remarks that the child makes in response to the scenarios.

Children’s character assignments. Following the parent-child discussion, children were presented with six novel characters—3 boys and 3 girls. The experimenter asked the child in the study to pretend that he or she is the camp director, assign each of the new children to camp activities, and explain their rationale, under the condition that only two children can go to each activity. Children’s responses were coded based on whether or not children made stereotypic-based reasoning in assigning the novel characters to camps. Children were assigned either a 0 (did not make decisions based on whether the assignment fits the cultural gender stereotype) or 1 (made decisions based on whether the assignment fits the cultural gender stereotype).

Chapter 4

Results

Results are presented in three sections as guided by tests of study aims. In the first section, I examine the mothers' and children's comments during the mother-child conversation task. I catalogue and describe the major themes of the mothers' and children's responses to the material and report frequencies of the targeted codes in the transcripts. In the second section, I examine mothers' self-reported gender-related behaviors and their behaviors in the mother-child conversation task. Specifically, I report and describe mothers' gender-related characteristics and test hypotheses about the associations among mothers' gender-attitudes, feminist beliefs, and socialization principles and mothers' a) reported preparation for bias and b) comments during the mother-child conversations. In the third section, I relate mothers' reported and actual behavior to children's gender-related beliefs. Specifically, I test hypotheses about the links among maternal reported preparation for bias and strategies in response to bias to children's gender attitudes and children's assignment of novel characters.

Preliminary Data

For the purpose of these analyses, I have chosen to focus primarily on mothers' gender- and fairness-based comments during the conversation task in order to categorize their socialization strategies in the face of gender bias with their children. Undeniably, mothers are not operating independently of their children's behavior, and children are not operating independently of their mothers' behavior. As such, the inherent dyadic nature of the study design provided rich dataset of mother-child communication patterns as well as challenges to analyzing maternal strategies with consideration of child contributions. This study and analyses provide a first step in examining mothers' gender-related communication across various

contexts. Because mother-child communication is dynamic and reciprocal, I coded children's responses during the conversations and compared them to their mothers' responses in an effort to explain the association between the overall frequencies of the coding categories and to address how child's behavior might influence maternal strategies. To this end, I provide preliminary comparisons between mother-child categories.

Correlations between the categories of maternal and child comments are shown in Table 3. Mothers' stereotype-endorsement comments were not included because mothers made very few comments in this category. One would expect that if mothers' responses were highly contingent on their children's remarks, then one might expect that there would be an inverse association between mother and child behavior such that mothers would show high stereotype-refuting behaviors when their child produced high stereotype-endorsing comments. An alternative concern lies with children who are producing many stereotype-refuting comments. If those children are already negating the stereotypes, then mothers would not need to use stereotype-refuting strategies. Correlations show that neither of these associations is significant; that is, children's endorsements are unrelated to maternal refuting strategies and children's refuting strategies are unrelated to mothers' refuting strategies and mothers' personalizations. Mother-child behaviors were not significantly associated, thus suggesting that mothers' comments were not necessarily contingent on or solely reactions to their child's comments.

Table 3

Associations Among Mother and Child Comments in Mother-Child Conversations

	Variables						
	1	2	3	4	5	6	7
1. Maternal stereotype-refuting	1	.49**	.36**	.20	.05	-.03	.06
2. Maternal fairness-endorsement		1	.24	.02	-.15	.36**	.04
3. Maternal personalizations			1	-.07	.25	.09	.40**
4. Child stereotype-endorsing				1	-.33**	-.43**	-.25
5. Child stereotype-refuting					1	.08	.38**
6. Child fairness-endorsing						1	.38**
7. Child personalizations							1

Note. * $p < .05$, ** $p < .01$; Significant correlations are bolded.

In addition, I divided children using a median split on children's stereotype-endorsing and stereotype-refuting comments, resulting in groups consisting of low/high endorsers and low/high refuters. Mothers' level of stereotype-refuting strategies did not differ between low endorsers ($M = .96$, $SD = 1.04$) and high endorsers ($M = 1.61$, $SD = 1.73$) or between low refuters ($M = 2.88$, $SD = 2.56$) and high refuters ($M = 4.20$, $SD = 3.37$). Mothers' level of mothers' personalization strategies also did not differ between low endorsers ($M = 4.12$, $SD = 3.3$) and high endorsers ($M = 3.47$, $SD = 3.03$) or between low refuters ($M = 1.46$, $SD = 1.67$) and high refuters ($M = 2.88$, $SD = 4.29$). If children entered the conversation with a low level of gender stereotypic attitudes and refuted the stereotypes initially, then one may expect that the mother would then not need to use stereotype-refuting or personalization socialization strategies. However, there was not a significant association between high stereotype-refuting children and maternal stereotype-refuting or personalizations.

Taken together, these analyses suggest that maternal strategies are not influenced by children's level of stereotype-endorsing or stereotype-refuting comments. These analyses were a first pass at examining dyadic communication patterns and may not have picked up on subtle associations. Additional analyses of this dataset will be necessary to explore possible contingencies between mother and child behavior.

Prior to testing the hypothesized associations between maternal characteristics, maternal behavior, and child characteristics, it was necessary to test the direct association between maternal and child characteristics. To test whether or not maternal gender-related beliefs were related directly to children's gendered outcomes, I conducted a series of regressions predicting children's gender attitudes, hypothetical responses to sexist peers, and assignment of novel characters from maternal gender-related characteristics.

Gender attitudes. To test the effect of maternal characteristics on children's gender attitudes, maternal age and education were entered on the first step of the regression, followed by mothers' gender attitudes, feminist beliefs, and socialization endorsements in the second step.

The predictor model was not significant, revealing that children's gender attitudes were not uniquely predicted by mothers' gender attitudes, feminist beliefs, endorsement of same-gender activities, endorsement of other-gender activities, and disapproval of other-gender characteristics.

Hypothetical remarks to sexist peers. To test the effect of maternal characteristics on children's hypothetical remarks to sexist peers, maternal age and education were entered on the first step of the regression, followed by mothers' gender attitudes, feminist beliefs, and socialization endorsements in the second step.

The predictor model was not significant, revealing that children's challenging remarks were not uniquely predicted by mothers' gender attitudes, feminist beliefs, endorsement of same-gender activities, endorsement of other-gender activities, and disapproval of other-gender characteristics.

Gender-based assignments of novel characters. To test whether mothers' gender-related characteristics were associated with children's gender-based assignments of novel characters, a logistic regression analysis was conducted. Mothers' age and education were entered as control variables; mothers' gender attitudes, feminist beliefs, endorsement of same-gender activities, endorsement of other-gender activities, and disapproval of other-gender characteristics.

A test of the full model against a constant only model was not statistically significant, indicating that the predictors (mothers' gender attitudes, feminist beliefs, and socialization endorsements) do not reliably distinguish between children who made gender-based assignments and those who did not.

Conversation Themes and Frequency of Conversation Categories

The first aim of this study was to provide descriptive data on the discussion patterns between mothers and children and to catalogue how mothers guide their children and think about issues related to gender stereotypes and prejudice.

Overall, mother-child dyads showed great variation in tone, interest, and time spent in the task. All dyads were engaged in the task, as evidenced that each dyad read all of the prompts out loud and responded to each question in some manner. The total time in the conversation task averaged 20.30 minutes ($SD = 6.82$) and ranged from 10.01 to 42.31 minutes. Following the conversations, mothers were asked to give feedback about the task and materials. All of the

mothers reported that the instructions were easy to follow and age-appropriate for their children, and all said that they enjoyed doing the activity with their child.

Below, I report descriptive statistics and histograms for each type of strategy that mothers employed in the mother-child conversations. In this section, I will report the frequency of behaviors and comparisons between mothers and children. As discussed previously, although maternal strategies were the principal data under investigation here and are used in the analyses for tests of later hypotheses, I have also included the frequency and distributions of children's comments during the conversation task to provide comparison to the mothers' responses.

Stereotype-endorsement. Mother and child comments were coded with the stereotype-endorsing label if they contained spontaneous stereotypic remarks or were in agreement with a stereotypic comment from the "Fun at Camp" prompts.

Mothers made very few comments that directly endorsed gender stereotypes (4.8% of mothers). Most mothers did not make any stereotype-endorsing statements, two mothers made one gender stereotype endorsement, and one mother made three. Conversely, the majority of children (82.3%) made at least one comment which directly endorsed a gender stereotype. Mothers produced an average, .08 ($SD = 0.42$) stereotype-endorsing comments, and children produced an average of 2.65 ($SD = 2.60$). Given that mothers made few comments that directly endorsed stereotypes, statistical comparison could not be made (See Figure 2). Children tended to provide either a) explicit and unprompted comments, or b) agreements to the camp director's gender-based rationale. Illustrative are the following excerpts between two mothers and their sons:

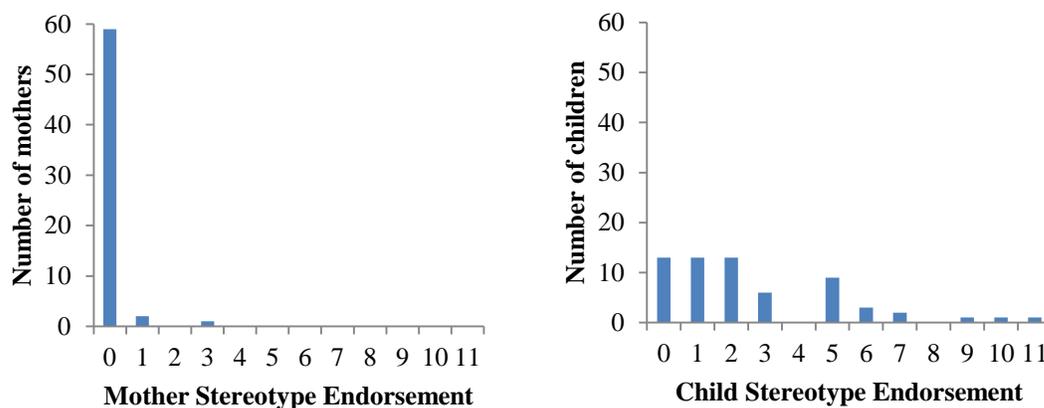
M: So ballet, you would want to do the least, so you don't want to do ballet.
C: Yeah why would I want to do ballet? Ballet's for girls.

M: Okay. So what do you think about what the camp director decided? Do you think that boys are stronger than girls?

C: Yeah. So I think it was a good idea because of their more strength they can climb all over and the more.. if they get a scraped leg they can just keep going.

Figure 2

Variation in Stereotype-Endorsing Comments in Mother-Child Conversations



Note. Scores represent the number of mothers and children who produced the given number of stereotype-endorsing comments.

Stereotype-refuting. Stereotypic-refuting comments were coded if the mother or child made a comment which contradicted a gender stereotypes directly. In response to the camp director’s assertion that boys are stronger than girls and thus a boy should participate in the rock climbing group, one mother proclaimed, “How do you know? I think girls can do just as good as a job as boys.”

Mothers and children showed similar overall levels and patterns of stereotype-refuting comments, representing 64.5% of mothers and 61.3% of children. Variations in stereotype-refuting responses are displayed in Figure 3. Mothers’ production of stereotype-refuting

responses ($M = .1.34$, $SD = 1.50$) did not differ from children's ($M = 1.53$, $SD = 1.73$), $t(61) = .68$, ns. Mothers and children tended to provide comments that disputed the camp director's assertion that boys or girls show certain characteristics or interests, as illustrated by the following responses:

M: [*Reading prompt*] Camp director told Dylan to go rock climbing. The camp director thinks that boys are stronger than girls so the best activity for Dylan would be rock climbing.

C: That's not true. Cause guess what, I've beat Drew on arm wrestling.

C: Most girls that I know like ballet so that probably means most girls like ballet

...

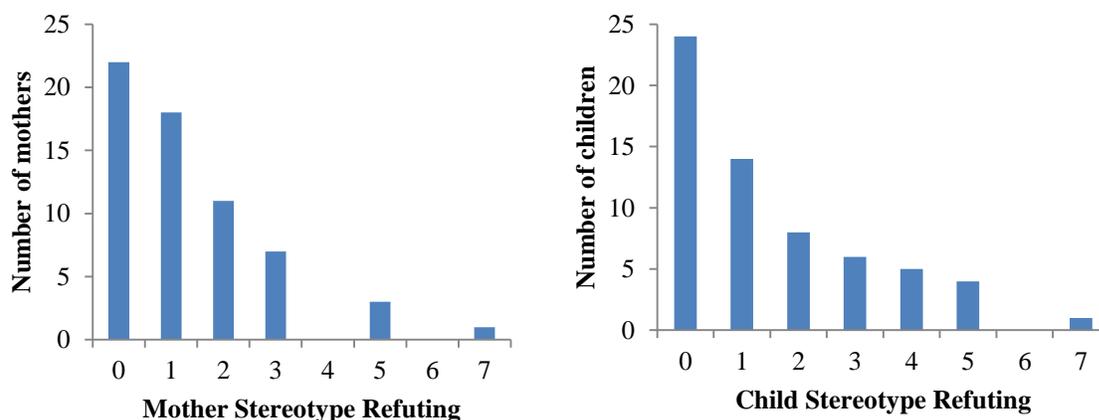
M: But I mean, just because most girls you know like ballet doesn't mean that most girls like ballet, that just means that most of the girls you know like ballet and since you know a lot of girls that take ballet, of course most of the girls that you know like ballet, right?

C: Yeah.

M: And you hang out with people who have interests like yours mostly, so, it's not a very reasonable generalization.

Figure 3

Variation in Stereotype-Refuting Comments in Mother-Child Conversations



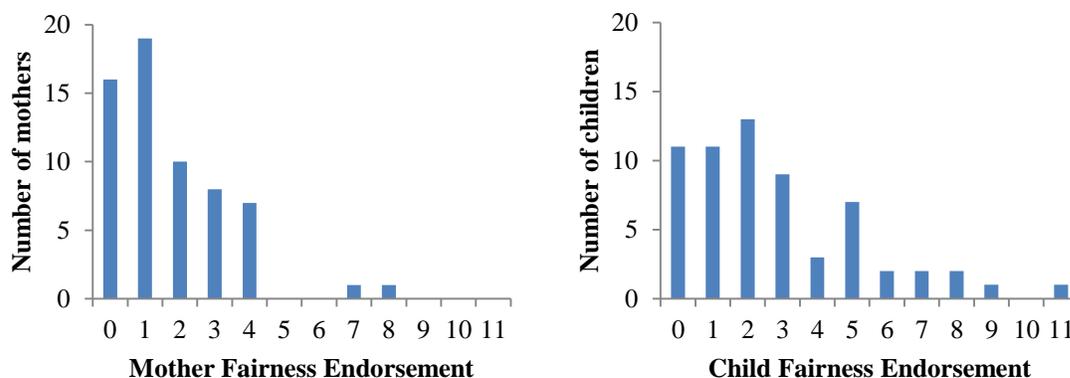
Note. Scores represent the number of mothers and children who produced the given number of stereotype-refuting comments.

Fairness-endorsement. Codes in the fairness-endorsing category referred to comments in which the mother or child explicitly drew upon on fairness principles. Often fairness-endorsing remarks centered on the idea that the camp director was being unfair in the assignments and that the child should be able to choose their own camp activity. As one child stated in response to a camp director's assignment, "probably not fair again because like for all kids they should get to pick what they want to do."

Mothers and children both displayed relatively high levels of fairness-endorsing comments, 74.2% and 82.3%, respectively, with mothers producing significantly fewer fairness-endorsing comments ($M = 1.71$, $SD = 1.69$) than children ($M = 2.72$, $SD = 2.51$), $t(61) = 3.45$, $p < .001$. Variation in fairness-endorsing responses is displayed in Figure 4. Frequently codes in this category were in disagreement of the camp director's rationale or decision, thus children and mothers appealed to issues of rights and fair and equal treatment, as demonstrated in the following excerpt in which a child describes an alternative way to decide on camper activity assignments:

C. So maybe a fair way to do this camp instead of making people choose ahead of time is maybe have the first week where everybody tries the activities because you haven't tried ballet. And you might really like it and some of the male ballet players are really strong and have a lot of muscles so maybe if you got to try everything right and then they did that then you could pick what sessions you wanted to go to. That might be a better way to do camp.

Figure 4

Variation in Fairness-Endorsing Comments in Mother-Child Conversations

Note. Scores represent the number of mothers and children who produced the given number of fairness-endorsing comments.

Personalization responses. Personalization codes refer to comments in which a mother or child personalized the material and related it to an experience, in their own life. For example, a number of mothers when, after refuting that boys should not do ballet, would point out a person in the child's life who takes ballet or likes to dance or would refer to a time when they saw a boy/man in a ballet performance. As one mom recalled, "remember we went... what about the nutcracker and you see all these men dancing with women."

Personalizations were produced by 87.1% of mothers and 32.3% of children. See Figure 5 for variation in number of mothers and children who used personal applications from the material in the conversations. Mothers produced an average of 3.74 ($SD = 3.14$) personalizations and children produced an average of .60 ($SD = 0.97$). Mothers commonly related the material to an event in the child's life and reminded children of counter-stereotypic instances that they have

witnessed. Illustrative are the following exchanges between a mother-son pair and mother-daughter pair, respectively:

M: Do you think boys like rock climbing more than girls?

C: Yeah.

M: You think so? What makes you think that?

C: Well you might be going really high and if girls fall they might freak out and not even try to and they seriously might freak out and not try to land safely.

M: You think girls would do that and boys wouldn't?

C: Well maybe.

M: You think? Have you ever seen the rock climbing wall at camp?

C: Yeah.

M: Yeah. There [*are*] tons of girls there, isn't [*sic*] there?

C: Cause they're flexible.

M: Well yes, that's true there are athletic girls, but still. And you know our friend Martha that came to visit us?

C: Yeah.

M: She's an avid rock climber. She climbs big mountains of rock. And she's a girl.

C: Like three thousand meters taller?

M: I don't know how tall but she does lots of rock climbing real mountains.

C: Okay.

M: So she's a girl. So do you think it's fair that boys like it more than girls? Or do you just think that there's no right or wrong answer? ... Or do you just think that generally for most kids boys would like it more than girls?

C: Yeah.

M: And why do you think that again?

C: Uh cause the girl cause girls might fall and freak out [*inaudible*] and land safely.

M: Okay. I'm gonna beg to differ, but I like you're sharing your opinion. Girls can do this stuff too can't they?

C: Uh huh.

C: [*Reading prompt*] Camp director told Brittany to go to ballet. Since there are already only girls in the ballet class, the camp director told Brittany would fit the best in ballet.

M: Wow. What do you think about that?

C: That's pretty good I like that. Alrighty.

M: Why do you like that?

C: Because girls like ballet more than boys.

M: You think so?

C: Nicole-

M: What if [*Child's brother*] likes ballet?

C: [*Laughs*] He likes trucks more.

M: For now, but what if later he likes ballet?

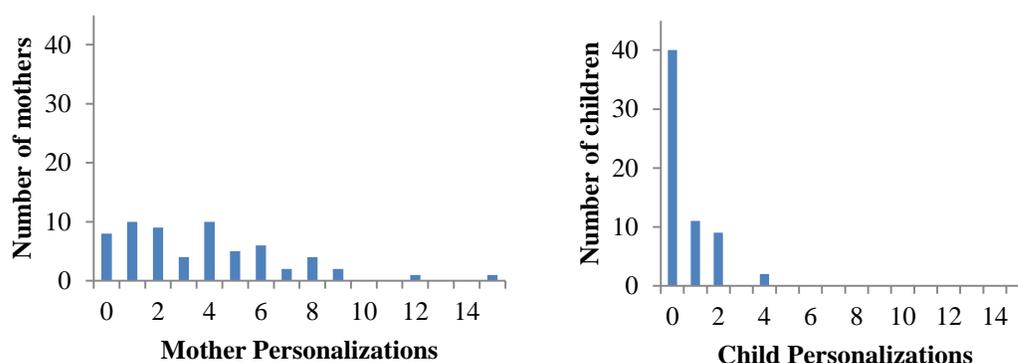
C: Umm, I don't know.

M: What about the nutcracker?

C: Ohh he really loves the nutcracker.
 M: But are there boys in the nutcracker?
 C: I don't know.
 M: There are boys that dance.

Figure 5

Variation in Personalization Comments in Mother-Child Conversations



Note. Scores represent the number of mothers and children who produced the given number of personalizations, $M(SD) = 3.74 (3.14)$ and $0.60 (0.97)$.

Conversation categories by child gender. Given that previous work has found differential socialization strategies for boys and girls, and that boys and girls often differ in stereotype endorsement and susceptibility to experimental conditions, I examined the four coding categories by child gender.

T-tests showed that none of the four maternal strategies differed by child's gender. Based on these coding categories, mothers do not show different patterns in communicating with boys and girls in the task. However, boys and girls themselves showed significant differences in their stereotype-endorsing, stereotype-refuting, and fairness-endorsing responses. Boys made more stereotype-endorsing comments than did girls, $M(SD) = 3.90 (2.84)$ versus $1.39 (1.60)$, $t(60) = 4.29, p < .001$. Boys made fewer stereotype-refuting comments than did girls, $M(SD) =$

.42 (.72) versus 2.65 (1.74), $t(60) = -6.57$, $p < .001$. Lastly, boys made fewer fairness-endorsing comments than did girls, $M(SD) = 2.13 (2.11)$ versus $3.45 (2.73)$, $t(60) = -2.13$, $p = .04$. Given that so few personalization comments made altogether, personalization scores were not compared. See Table 4 for descriptive statistics for mother and child comments by gender.

Table 4

Means and Standard Deviations for Mother and Child Comments in Mother-Child Conversations by Child Gender

Category type	Mother						Child					
	With sons		With daughters		Pooled		Boys		Girls		Pooled	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Stereotype-endorsement	0.13	0.56	0.03	0.18	0.08	0.42	3.9	2.84	1.39	1.61	2.65	2.62
Stereotype-refuting	1.39	1.56	1.29	1.47	1.34	1.50	0.42	0.72	2.65	1.74	1.53	1.73
Fairness-endorsement	1.81	1.78	1.61	1.63	1.71	1.69	2.13	2.11	3.45	2.73	2.79	2.51
Personalization	3.68	3.06	3.81	3.26	3.74	3.14	0.39	0.67	0.81	1.17	0.6	0.97

Mothers' Gender-Related Beliefs and Behavior (Hypothesis 2)

Preliminary analyses. I examined correlations among mothers' and children's gender-related characteristics and a series of demographic variables, including child's age, child's gender, mother's age, mother's education level, and mothers' partner's education level. There were no significant correlations among mothers' or children's gender related-characteristics and child age, sibling number, or mothers' partners' education level. Thus, data are pooled across these variables in subsequent analyses.

Preliminary bivariate correlations revealed a significant association between mothers' preparation for bias score and both mothers' age and education level, such that mothers who were older and more highly educated had a higher reported preparation for bias score. Mothers' approval for toys of the other gender on the socialization scale was also associated with mothers' age, such that older mothers had higher approval for toys and activities stereotyped for the other gender. There was a significant association between child gender and the disapproval for other-sex characteristics subscale in which mothers with sons had higher disapproval for girl characteristics related to their son. Associations among background are shown in Table 5.

Next, I examined the correlations among children's gender-related characteristics and these same demographic variables (See Table 6). There was a significant association between children's responses to challenging remarks and mothers' education level, such that more educated mothers had children who made more challenging hypothetical remarks to sexist peers. These associations are considered in the relevant subsequent analyses. Associations among all maternal measures (gender-related characteristics and comments during task) are displayed in Table 7.

Table 5

<i>Associations Among Background Variables</i>											
	Variables										
	2	3	4	5	6	7	8	9	10	11	12
1. Child's gender (1=male, 2=female)						1	-.07	.00	.16	.13	.05
2. Child's age							1	.10	.45**	.47**	.09
3. Number of child's siblings								1	.11	.08	-.09
4. Mother's age									1	.45**	.06
5. Mother's education level										1	.45**
6. Partner's education level											1

Note. * $p < .05$, ** $p < .01$; Significant correlations are bolded.

Table 6

<i>Associations Among Children's Gender-Related Characteristics and Background Variables</i>								
	Variables							
	2	3	4	5	6	7	8	9
1. Children's gender attitudes	.27*	-.43**	.22	-.14	-.07	-.07	.01	.08
2. Children's challenges to sexist remarks	1	.01	.04	.05	-.06	.25	.27*	.16
3. Children's stereotypic assignment of novel characters		1	.04	.23	-.00	.22	.08	-.10
4. Child's gender (1=male, 2=female)			1	-.07	.00	.16	.13	.05
5. Child's age				1	.10	.45**	.47**	.09
6. Number of child's siblings					1	.11	.08	-.09
7. Mother's age						1	.45**	.06
8. Mother's education level							1	.45**
9. Partner's education level								1

Note. * $p < .05$, ** $p < .01$; Significant correlations are bolded.

Table 7

<i>Associations Among Mothers' Gender-Related Characteristics and Mothers' Comments During Observed Conversations</i>								
	Variables							
	2	3	4	5	6	7	8	9
1. Gender attitudes	.32*	-.19	.16	-.48**	.33**	.16	.26*	.13
2. Feminist beliefs	1	-.11	.12	-.48**	-.60**	-.19	.14	-.05
3. Approval toys and activities stereotyped for child's gender		1	-.06	.25	-.24	.08	-.03	-.01
4. Approval toys and activities stereotyped for other gender			1	-.31*	.12	.14	.37**	.24
5. Disapproval of other-gender characteristics				1	-.27*	.09	-.28*	.17
6. Preparation for bias					1	-.04	.38**	.08
7. Observed: Stereotype-refuting comments						1	.49**	.36**
8. Observed: Fairness-endorsement comments							1	.24
9. Observed: Personalization comments								1

Note. * $p < .05$, ** $p < .01$; Significant correlations are bolded.

Overview. I collected information from mothers to determine various aspects of their personal and parenting-related gendered attitudes and beliefs. Mothers reported their gender attitudes, feminist beliefs and identification, socialization goals about gender, and frequency of discussing gender bias with their children. These measures were used to address my second research question: Do mothers' gender-related beliefs predict the strategies that mothers use in bias-laden conversations with their children? First I report descriptive statistics of each of the variables, and then I test how each of the measures relate to conversation strategies.

Gender attitudes. The 20-item gender attitude measure described earlier was scored by tallying the number of flexible responses of masculine and feminine items (e.g., responding "both" to the question, "Who do you think should be an electrician?") and dividing it by the total number of responses. Therefore, higher proportion scores indicated more egalitarian views. Overall, mothers held highly flexible (i.e., egalitarian) gendered attitudes. Scores ranged from 0 to 1; $M (SD) = .75 (0.34)$.

Feminist beliefs. Feminist beliefs were assessed with the 3-item, 7-point scale measure described earlier. Mean scores range from 0-7, with high scores indicating higher awareness of feminist ideals and personal identification with feminism. The mean for mothers' feminist beliefs was 2.99 ($SD = 1.04$), indicating that on average, mothers reported being "somewhat" aware of feminist issues and identify as a feminist.

Gender socialization beliefs. Mothers' gender socialization beliefs represent mothers' evaluation of how positively or negatively they would feel about their child engaging in activities or playing with toys that are stereotypic to the same gender of their child and those which are stereotypic to the other gender of their child. Mean scores for each subscale range from 1-7, with mid-range score indicating that the mother is neutral to the behavior or activity and higher

scores indicating more positive evaluations of counter-stereotypic behaviors. Mothers rated their children doing activities and playing with toys stereotyped for the same gender of their child as more positive ($M = 5.63$, $SD = 0.93$) than they rated their children doing activities and playing with toys stereotyped for the other-gender ($M = 4.56$, $SD = 1.16$), $t(61) = 5.54$, $p < .001$.

Preparation for gender bias. Mothers rated the frequency with which they currently talk to their children about gender-related topics and their intent to do so in the future to represent mothers' *reported* gender-related behavior. The gender socialization measure is comprised of 6 items, with scores ranging from 1-5 and higher scores indicating greater engagement of preparation for gender bias.

Mothers reported engaging in low levels of preparation for gender bias with their children. Reported behavior ranged from 1-5 on the scale items. The mean for mothers' reports was 1.74 ($SD = 0.69$), indicating that, on average, they "never" to "rarely" engage in preparation for gender bias with their children.

Associations between mothers' gender-related beliefs and behavior. Multiple regression analyses were conducted to examine the association between the criterion variable (maternal gender-related behavior: reported and observed) and potential predictors (mothers' gender stereotypes, feminist beliefs, and socialization endorsement). Below, I describe multiple regression analyses performed to examine differential contributions of the mothers' characteristics to reported behavior (preparation for bias) and actual behavior (conversation strategies in task). Because only four mothers made stereotype-endorsing comments across participants, the stereotype-endorsing category were not examined statistically for maternal predictors. Separate regression analyses were performed for mothers' reported preparation for

bias and each maternal discussion strategy (stereotype-refuting, fairness-endorsing, and personalizations).

Preliminary analyses revealed that mothers' age and education were related to mothers' preparation for bias scores ($r = .25, p < .05$ and $r = .36, p < .001$ for age and education respectively). Therefore, I controlled for mothers' age and education in subsequent analyses.

Reported behavior: Preparation for bias (Hypothesis 2a). Regression analyses were performed next to examine the effect of each mother gender-related characteristic variable on mother reported preparation for bias, controlling for mother age and education. Table 8 reports the hierarchical regression results, showing the age and education controls (Step 1), and then the effect of the gender-related characteristics (Step 2) with the controls in the model.

Table 8

<i>Regression Analyses of Mothers' Gender-Related Beliefs Predicting Reported Gender-Related Behavior (Preparation for Bias Score) with Statistical Controls for Mothers' Age and Education Level</i>					
	β	R^2	Adjusted R^2	$F(2, 59)$	f^2
Step 1					
Mothers' age	.11				
Mothers' education level	.31*				
		.14	.11	4.83*	.16
Step 2				$F(5, 54)$	
Mothers' age	.09				
Mothers' education level	.20				
Gender attitudes	.04				
Feminist beliefs	.58**				
Approval same-sex activities	.06				
Approval other-sex activities	-.01				
Disapproval other-sex characteristics	.09				
		.43	.36	5.57**	.51

* $p < .05$, ** $p < .01$; Significant findings are bolded.

Shown in Table 8 are the regression analyses examining gender-reported beliefs predicting reported gender-related behavior. Mothers' age significantly predicted their reported gender-related behavior in Step 1 ($\beta = .31, t(59) = 2.23, p < .05$), but did not uniquely predict preparation for bias scores in Step 2 when including the additional predictors ($\beta = .58, t(54) = 1.66, p = ns$). Older mothers were more likely to report higher levels of preparation for bias with their children. Mothers' education did not uniquely predict gender-related behavior in either step.

In the second step of the model, mothers' feminist attitudes significantly predicted their reported gender-related behavior, $\beta = .58, p < .001$. Higher endorsement of mothers' feminist values and identification with being a feminist was related to more reported use of preparation for bias (i.e., discussing issues of gender and discrimination with their children). Mothers' gender attitudes ($\beta = .04, p = ns$), approval of same-sex activities ($\beta = .06, p = ns$), approval of other-sex activities ($\beta = -.01, p = ns$), and disapproval of other-sex characteristics ($\beta = .09, t(54) = .64, p = ns$) were not unique predictors of mothers' preparation for bias.

Observed behavior: Stereotype-refuting strategies (Hypothesis 2b). A multiple regression analysis was conducted to evaluate how well mothers' gender attitudes, feminist beliefs, and socialization endorsements predicted mothers' stereotype-refuting remarks during the conversation task. The first step of the model included mothers' age and education level, and the second step included mothers' gender attitude, feminist belief, and socialization approval/disapproval scores.

Table 9 reports the hierarchical regression results, showing the age and education controls (Step 1), and then the effect of the gender-related characteristics (Step 2) with the controls in the model.

Table 9

Regression Analyses of Mothers' Gender-Related Beliefs Predicting Stereotype-Refuting Comments During Conversations with Statistical Controls for Mothers' Age and Education Level

	β	R^2	Adjusted R^2	$F(2, 59)$	f^2
Step 1					
Mothers' age	-.21				
Mothers' education level	.16				
		.04	.01	1.18	
Step 2					
				$F(5, 54)$	
Mothers' age	-.24				
Mothers' education level	.26				
Gender attitudes	.36*				
Feminist beliefs	.32*				
Approval same-sex activities	.12				
Approval other-sex activities	.27*				
Disapproval other-sex characteristics	.25				
		.24	.14	2.38*	.26

* $p < .05$, ** $p < .01$; Significant findings are bolded.

Maternal age and education did not uniquely predict mothers' stereotype-refuting behavior during the conversation task in either step. In the second step, mothers' gender attitudes and feminist beliefs independently predicted stereotype-refuting strategies, $\beta = .36$, $p < .05$ and $\beta = .32$, $p < .05$, respectively. More stereotype-refuting strategies were shown in mothers with more flexible gender attitudes and higher endorsement of feminist beliefs. Further, mothers' approval of other-gender activities and toys was a unique predictor of the model variance, $\beta = .27$, $p < .05$. Mothers with higher approval of their children doing activities stereotyped for the other-gender were more likely to refute stereotypes in the conversation task. Mothers' approval of same-gender activities and global disapproval of other-gender characteristics were not unique predictors in the model.

Observed behavior: Fairness-endorsing strategies (Hypothesis 2c). A multiple regression analysis was conducted to evaluate how well mother's gender attitudes, feminist beliefs, and socialization endorsements predicted mothers' use of fairness-endorsing strategies in the conversation task (See Table 10). The first step of the model included mothers' age and education level, and the second step included mothers' gender attitude, feminist belief, and socialization endorsement scores

Table 10

Regression Analyses of Mothers' Gender-Related Beliefs Predicting Fairness-Endorsing Comments During Conversations with Statistical Controls for Mothers' Age and Education Level

	β	R^2	Adjusted R^2	$F(2, 59)$	f^2
Step 1					
Mothers' age	-.21				
Mothers' education level	.16				
		.01	-.02	.41	
Step 2					
				$F(5, 54)$	
Mothers' age	-.24				
Mothers' education level	.26				
Gender attitudes	.36*				
Feminist beliefs	.32*				
Approval same-sex activities	.12				
Approval other-sex activities	.27*				
Disapproval other-sex characteristics	.25				
		.2	.09	1.89*	.24

* $p < .05$, ** $p < .01$; Significant findings are bolded.

Maternal age and education did not uniquely predict mothers' fairness-endorsing behavior during the conversation task in either step. Mothers' approval of other-gender activities and toys was the only unique predictor of mothers' fairness-endorsing comments, $\beta = .31$, $p < .01$. Mothers who rated their children playing with toys and doing activities stereotyped for the

other-gender were more likely to endorse issues of fairness with their children in the conversation task. Mothers' gender attitudes, feminist beliefs, approval for same-gender activities, and disapproval for other-gender characteristics were not unique predictors for mothers' fairness-endorsement behavior.

Observed behavior: Personalization strategies (Hypothesis 2d). To test the hypothesis that mothers' gender-related characteristics would be associated with how frequently they extended beyond the task with personal examples or scenarios, I ran a multiple regression. As in the previous analyses, the first step of the model included mothers' age and education level, and the second step included mothers' gender attitude, feminist belief, and socialization endorsement scores.

Maternal age and education did not uniquely predict mothers' fairness-endorsing behavior during the conversation task in either step of the model. Mothers' gender attitudes, feminist beliefs, approval for same-gender activities, approval for other-gender activities, and disapproval for other-gender characteristics were not unique predictors of mothers' personalization strategies during the conversation task.

Effect of child's gender on association between maternal characteristics and maternal behavior (Hypothesis 2e). As part of my second main hypotheses, I predicted that child gender would moderate the association between maternal characteristics and maternal-reported and actual behavior. Interactions were interpreted according to the guidelines set forth by Aiken and West (1991) to determine how child gender affects the association between maternal characteristics (gender attitudes, feminist beliefs, and three socialization endorsement scores) and maternal strategies (reported preparation for bias; stereotype-reducing, fairness-endorsing, and personalization socialization strategies in the conversation task). Results

indicating a change in strength of association between maternal characteristics and behavior would provide support for the hypothesis that child gender moderates the association. Analyses were performed separately for each maternal strategy and predictor variable, and each predictor variable was centered to produce the unique effect of the combination of the variables and prevent multicollinearity.

Preparation for gender bias. To test the prediction that child gender would moderate the effect of maternal characteristics on maternal reported preparation for bias, I conducted separate multiple regression analyses in which maternal gender attitudes, feminist beliefs, and socialization endorsements were the predictor variables and preparation for gender bias was the criterion variable. The hierarchical regression analyses had the same first two steps as the previous models, such that maternal education level was entered in the first step and maternal characteristics were entered separately in the second step with the addition of gender, and the interaction term was added as the third step.

Feminist beliefs served as the only significant model in which gender moderated the association between a predictor variable and mothers' reported preparation for bias. In examining whether gender moderated the association between feminist beliefs and reported preparation for bias, feminist beliefs had a main effect on preparation for bias scores, $\beta = .55$, $p < .001$. The final step of the regression analysis revealed that the interaction term between gender and feminist beliefs accounted for a significant proportion of the variance in maternal preparation for bias scores, $\Delta R^2 = .10$, $\Delta F(1, 57) = 12.23$, $p = .001$, $\beta = -0.46$, $p < .001$. Mothers with high feminist values and identification are more likely to report engaging in preparation for bias discussion with girls.

Maternal gender attitudes, endorsement of same-gender activities, endorsement of other-gender activities, and endorsement of other-gender characteristics did not yield significant models, revealing that gender does not moderate the association between these predictors and maternal reported preparation for bias.

Stereotype-refuting strategies. A sequential regression analysis was conducted in order to determine the extent to which maternal characteristics and gender predict stereotype-refuting strategies in the mother-child conversation task. The analysis explored a possible interaction between maternal characteristics and gender, to determine whether gender moderates the association between maternal gender-based characteristics and maternal behavior. Maternal age and education level were not predictors of stereotype-refuting strategies in previous analyses and therefore were not used as controls in the moderation analyses. Maternal characteristics were entered separately with gender in the first step, and the interaction term was entered in the second step. In these regression analyses, none of the steps yielded significant models.

Fairness-endorsing strategies. A sequential regression analysis was conducted in order to determine the extent to which maternal characteristics and gender predict fairness-endorsing in mothers. Maternal age and education level were not predictors of fairness-endorsing strategies in previous analyses and therefore were not used as controls in the moderation analyses. Maternal characteristics were entered separately with gender in the first step, and the interaction term was entered in the second step. In these regression analyses, none of the steps yielded significant models.

Personalization strategies. A sequential regression analysis was conducted in order to determine the extent to which maternal characteristics and gender predict personalization strategies in mothers. Maternal age and education level were not predictors of personalization

strategies in previous analyses and therefore were not used as controls in the moderation analyses. Maternal characteristics were entered separately with gender in the first step, and the interaction term was entered in the second step. In these regression analyses, none of the steps yielded significant models.

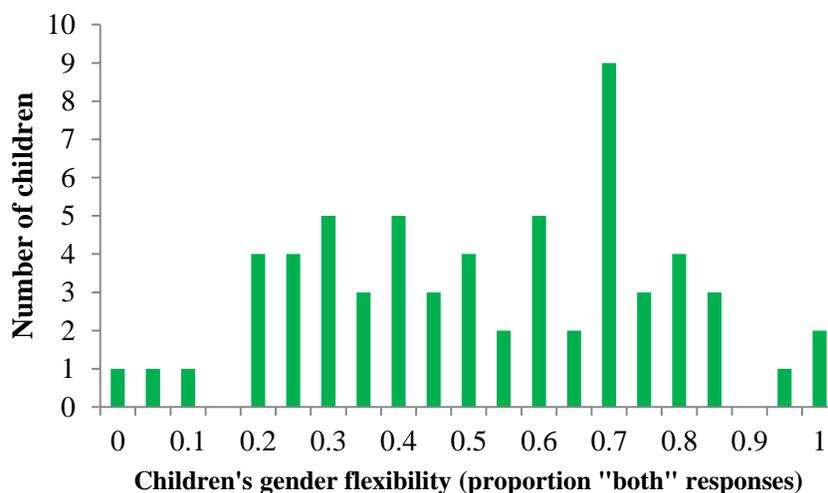
Relating Mothers' Reported and Actual Gender-related Behavior to Child Outcome

(Hypothesis 3)

Overview. The third major aim of the current study was to examine whether maternal discussion strategies related to children's gender attitudes, hypothetical responses to sexist peers, and gender-related assignments of novel children. I predicted that mothers who reported more preparation for bias and who produced more stereotype-refuting, fairness-endorsing, and personalization strategies in the discussion task would have children with more flexible gender attitudes, more stereotype-refuting hypothetical responses to sexist peers, and fewer gender-based assignments of novel characters. Below I first provide the descriptive analyses for each of the child outcome variables and then I report how each of the measures relate to mothers' conversation strategies.

Children's gender attitudes. Scores of children's gender attitude endorsement were calculated by tallying the total number of "both" responses to questions asking whether masculine and feminine activities should be performed by "only boys," "only girls," or "both boys and girls" and dividing by the total number of items. Higher proportion scores indicate higher gender flexibility (i.e., higher egalitarian attitudes). Overall, children showed mid-range gender flexibility ($M = .52$, $SD = 0.24$), though children ranged from highly stereotyped to highly flexible (see Figure 6).

Figure 6

Variation in Children's Gender Attitude Endorsement

Associations between mothers' reported and actual behavior and children's gender-related characteristics (Hypothesis 3a). To test the hypothesis that mothers' reported preparation for bias and stereotype-refuting, fairness-endorsing, and personalization comments during the conversation task would be associated with their children's gender characteristics, I completed a set of multiple regression analyses.

A multiple regression analysis was conducted to evaluate how well mothers' reported and actual behavior predicted children's gender attitudes. Earlier analyses showed that maternal age and education were correlated with child outcomes; therefore these variables were entered in the first step of the regression models as control variables. Maternal preparation for bias scores and stereotype-refuting, fairness-endorsing, and personalization comments were entered in the second step as a predictor of children's gender attitudes (see Table 11 for regression summary statistics).

Table 11

Regression Analyses of Mothers' Reported and Actual Behavior Predicting Children's Gender Attitudes with Statistical Controls for Mothers' Age and Education Level

	β	R^2	Adjusted R^2	$F(2, 59)$	f^2
Step 1					
Mothers' age	-.09				
Mothers' education level	.05				
		.01	-.03	.83	
Step 2					
				$F(5, 55)$	
Mothers' age	-.01				
Mothers' education level	-.17				
Reported: Preparation for bias	.08				
Observed: Stereotype-refuting comments	-.16				
Observed: Fairness-endorsing comments	.16				
Observed: Personalization comments	.62**				
		.37	.3	5.44**	.57

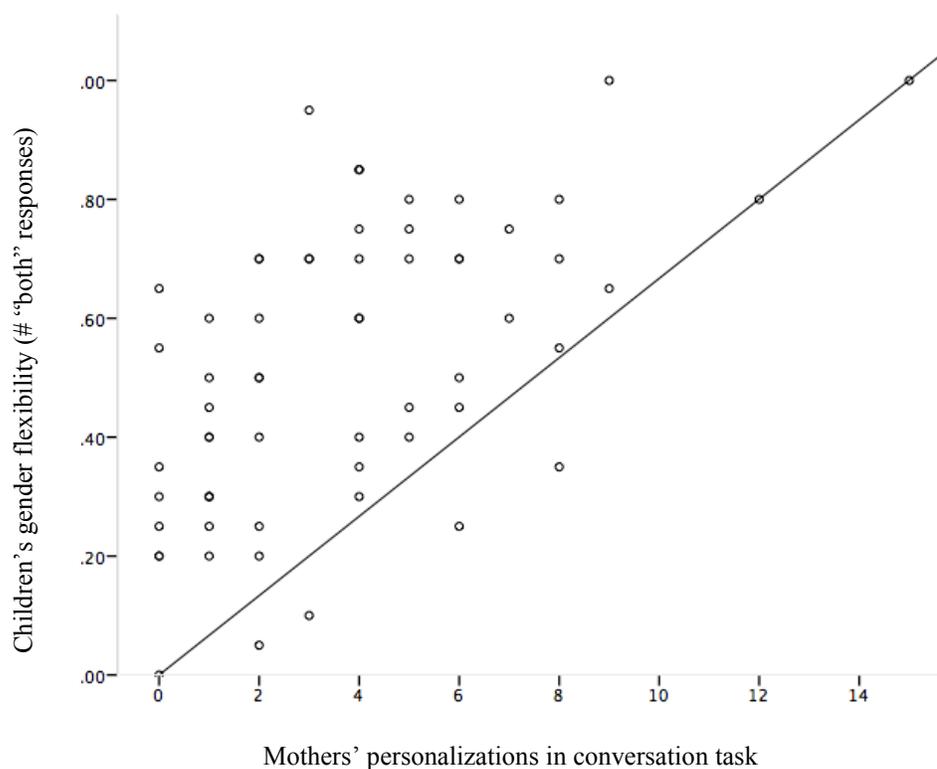
* $p < .05$, ** $p < .01$; Significant findings are bolded.

Maternal age and education did not uniquely predict children's gender attitudes in either steps of the model.

The only significant predictor of children's attitudes was mothers' personalizations in the conversation task, $\beta = .62$, $p < .001$. Children with more flexible gender attitudes were more likely to have mothers who made more frequent personalization-based comments (see Figure 7). Mothers' reported preparation for bias, stereotype-refuting strategies, and fairness-endorsing strategies were not unique predictors of children's gender attitudes.

Figure 7

Scatter Plot of Mothers' Personalizations in Conversation Task and Children's Gender Attitudes



Hypothetical responses to sexist peers. Children's verbal responses to hypothetical cases of peers' sexism were assessed through responses to vignettes in which a child was a target of a sexist response. For the purposes of this study and subsequent analyses, I tallied only children's responses that challenge the sexism inherent in the remark (e.g., "I'd tell him there is no such thing as a girls' color"). Children made a low incidence of challenging remarks overall; 41.9% of children did not make any challenging responses to the hypothetical vignettes and another 30.6% made one challenging remark. Of the remaining, 14.5% made two challenging remarks, 9.7% made six, and 3.2% made two.

Associations between mothers' reported and actual behavior and children's hypothetical responses to sexist peers (Hypothesis 3b). To test the hypothesis that mothers'

reported preparation for bias scores and strategies during the conversation task were associated with children's hypothetical challenging responses to sexist peers, I performed a regression analyses in which maternal age and education were entered in the first step as control variables. Maternal preparation for bias scores and stereotype-refuting, fairness-endorsing, and personalization comments were entered in the second step as a predictor of children's hypothetical challenging responses to sexist peers (see Table 12 for regression summary statistics).

Table 12

Regression Analyses of Mothers' Reported and Actual Behavior Predicting Children's Challenging Remarks with Statistical Controls for Mothers' Age and Education Level

	β	R^2	Adjusted R^2	$F(2, 59)$	f^2
Step 1					
Mothers' age	.16				
Mothers' education level	.19				
		.09	.06	2.93	
Step 2					
				$F(5, 55)$	
Mothers' age	.21				
Mothers' education level	.12				
Reported: Preparation for bias	-.15				
Observed: Stereotype-refuting comments	-.17				
Observed: Fairness-endorsing comments	.26				
Observed: Personalization comments	.37**				
		.27	.19	3.36*	.24

* $p < .05$, ** $p < .01$; Significant findings are bolded.

Maternal age and education did not uniquely predict children's gender hypothetical challenging responses to sexist peers in either step of the model. The only significant predictor of children's attitudes was mothers' personalizations in the conversation task, $\beta = .37, p < .01$.

Children who made more hypothetical challenging remarks in response to sexist peers were more likely to have mothers who made more frequent personalization-based comments. Mothers' reported preparation for bias, stereotype-refuting strategies, and fairness-endorsing strategies were not unique predictors of children's gender attitudes.

Gender-based assignments of novel characters. Children were asked to assign six novel children to the camp activities and told that only two children could attend each of the three activities. Children's responses were recorded and coded based on whether or not children made stereotypic-based reasoning in assigning the novel characters to camps. Children's responses were thus recorded and coded as either stereotypic or non-stereotypic.

When making assignments of novel characters, the majority of children relied on stereotyped information, that is, without any other information given, children made assignments to camp activities based on gender. Eleven children (17.7%) made non-stereotypic assignments based on gender.

Associations between maternal reported and actual behavior and gender-based assignments of novel characters (Hypothesis 3c). To test the hypothesis that mothers' preparation for bias scores and strategies during the conversation task were associated with children's gender-based assignments of novel characters, a logistic regression analysis was conducted. A test of the full model against a constant only model was not statistically significant, indicating that the predictors (preparation for bias scores and mothers' comments during the conversation) do not reliably distinguish between children who made gender-based assignments and those who did not, $\chi^2(1, N = 62) = 4.42, p = ns$.

Chapter 5

Discussion

Although psychologists have studied parents' gender socialization strategies and mechanisms for decades, we know very little about the role of parents in shaping young children's understanding of discrimination and the impact of those messages on children's gender stereotypes. The primary goal of the current study was to examine mothers' approaches to gender-related issues with their children, with particular interest in exploring the ways in which mothers face issues of gender bias and discuss these issues with their children. I explored these questions by completing a multi-method study of mothers and their six- to eight-year-old children. Through this design, I observed mothers' and children's behaviors during an activity designed to elicit conversations about gender bias and unfair treatment.

Three main hypotheses were tested: 1) I predicted that children would be more likely to make stereotype-endorsing comments than mothers and less likely to produce stereotype-refuting and personalizations than their mothers. 2) I predicted that mothers' own gender-based characteristics (specifically, mothers' gender attitudes, feminist beliefs, and gender socializations beliefs), would predict mothers' reported behavior and actual behavior (i.e., comments during the conversation task). Further, I predicted that child's gender would moderate this effect. 3) Lastly, I hypothesized that mothers' behavior in the conversations would relate to children's outcomes such that children with more flexible gender attitudes would be more likely to have mothers who refuted stereotypes, endorsed fairness, and extended beyond the task in the conversations. With the exception of child's gender moderating the effect of mothers' characteristics on mothers' behavior, all hypotheses were at least partially supported by the findings from this study.

In this chapter, I discuss the main findings of the study, highlighting both the contributions of the work, limitations of the study, and potential avenues for future research.

Study Materials and Design

Children and mothers used “Fun at Camp” materials and prompts that were created for the purposes of this study. Although the script was based on previous work on children’s fairness and moral reasoning (e.g., Killen & Stangor, 2001), many components were novel to this study. Anecdotal evidence suggests that the materials were engaging and successful in eliciting the types of conversations for which they were designed. Across participants, mothers and children both reported in debriefing sessions that they found the experience enjoyable. Mothers found it highly relevant to events in their children’s lives, and a frequent response to activity was that it was interesting to hear their child’s responses.

A common thread across mothers from their response to the study was that they enjoyed it in part because they had never talked about these issues with their children prior to the study. Albeit anecdotal, these reactions underscore the importance of this type of work. Mothers’ lack of awareness about their children’s gender attitudes is likely to be both a cause and consequence of mothers’ reluctance to discuss issues of stereotypes and discrimination with their children. Research suggests a similar effect in the racial socialization literature. European Americans strongly prefer a color-blind approach to handling issues of race (e.g., Bonilla-Silva, Forman, Lewis, & Embrick, 2003; Pollock, 2004). Findings from a study designed to elicit conversations about race with European American mothers and their children found that mothers were reluctant to discuss issues of race for fear that it would sensitize their children to racial differences and make them prejudiced (Pahlke, Bigler, & Suizzo, 2012). As suggested by previous work and the current study, if mothers are unaware of their young children’s biased attitudes, they may avoid

conversations about stereotypes and discrimination with their children they otherwise would have chosen to initiate.

Mothers' responses on the measures and their subsequent reactions to learning about their children's gendered attitudes were consistent with this hypothesis. In the preparation for gender bias questionnaire, mothers had an opportunity to respond to an open-ended comment box following the questions. As one mother explained, "At this point in [*Child name's*] development, I feel it best to concentrate on treating ALL people fairly... I don't think she needs to start feeling like she is at a disadvantage because she's a girl." Another mom remarked, "[I] have been afraid to discuss sex/gender discrimination at this time... we have said 'all people are equal/we need to treat all people equal.'" The frequency that mothers reported discussing issues with their children was overall low, averaging from "never" to "rarely" discussing issues of gender discrimination. Upon hearing their children's responses to the conversation prompts, many mothers responded with surprise and disbelief.

The current findings and previous work suggests that parents are hesitant to discuss stereotypes and unfair treatment based on group membership for fear that they will harm their children by introducing negative topics such as discrimination towards others or the potential of discrimination against the child. However, ample evidence shows that young children are quite aware of group differences and hold their own biases about good and bad, high status and low status. Consistent with developmental intergroup theory, children form categories based on others' characteristics and an emphasis of social groups in societal structure. Through these categories, children attach meaning, which form the basis for stereotyping. Children construct their own beliefs about the origin of differences, so without other explanations, then children will likely rely on innate beliefs about individuals of different groups.

One of the mothers in the current study mentioned a situation which had occurred a few weeks prior to participating in the study—a ballet recital—in which there was a boy performing in the ballet recital. The mother said that her sons were sitting in the audience and mocking the boy who was on stage. This incidence speaks to the external validity of the hypothetical camp scenarios in that children are experiencing situations in which gender discrimination occurs. This example is particularly relevant given that the target was a boy in ballet and that the mother overheard the stereotypic comments. Children are often teased and bullied based on gender nonconformity, and how parents choose to respond to this treatment, whether their child is the target or perpetrator or not, likely has a major influence on how children treat those who do not conform to group norms. I do not know how the mother responded to her sons' teasing at the ballet recital, however, the conversations in the study provide a window into how mothers may respond to these types of situation in which gender bias occurs.

Considerations of the Dyadic Design

Influences from child to mother and mother to child are inherent in a dyadic task. For the purposes of the current study, the focus was on mothers' strategies in response to gender bias with their children. Correlation analyses showed that mothers' and children's gender-related comments in the conversations were not related. These analyses were a proxy at determining the effect of child's responses on mothers' comments; however, they do provide some support that mothers' behaviors in the task appear not to directly relate to their child's behaviors. These findings suggest that the task at hand was the primary motivator of discussion; that is, the prompts from the conversation materials were powerful sources of discussion. Future contingent analyses of the transcripts will provide for a more precise and nuanced tactic at understanding the dyadic nature of the mother-child conversations. However, the previous analyses suggest

that although mothers were not influenced by child gender or child remarks during the conversation task, it is likely that mothers were influential in shaping their children's cognitions about the material.

In the absence of contingency analyses of the dyadic conversations, I am not able to demonstrate the immediate impact of the mothers' socialization strategies on their children's behaviors statistically. However, it was not uncommon to see children's viewpoints and language shift throughout the conversation. Illustrative of this process is one example of a mother and her son, discussing the camp director's decisions to use gender as a basis for deciding activities. In the first segment of their conversation (a), the child agrees with the camp director and makes a statement that Olivia would like ballet because she is a girl. Throughout the next few camp examples in their discussion of the camp director's justification, the mother points out that it may not be fair that the camp director made that decision and counters the stereotype that ballet is just for girls. In the middle segment (b), the child agrees that a gender-based decision was fair, and then shortly thereafter decides that it was not, in fact, fair. In the last segment (c), towards the end of the conversation, the child immediately responds that the camp director's decision was not fair and then continues to counter the stereotype assertion.

Below are extracts of their conversation, in chronological order:

(a)

M. Ok pick the next one and pick up her face hand me the card okay this is Olivia.

[*Reading prompt*] The camp director told Olivia to go to ballet... the camp director thinks that girls really like ballet more than boys. So the director put Olivia in the ballet group.

C. Yeah that's probably fair.

M. Ok so you think it was a good decision to put her there?

C. Yeah.

M. What if she didn't like ballet? Like he knows that Allison likes swimming so that seems logical, but he doesn't know that Olivia likes ballet. Maybe she likes rock climbing.

C. She's a girl.

M. That doesn't mean that she will like it. Not all girls like ballet. And not all boys don't like ballet. I think that maybe he should have asked her—he or she; whoever the camp director is—should have asked her. So maybe not as fair as Allison.

C. Yeah.

M. Okay, next one.

C. Leah.

M. Leah.

C. Wait are these all girls?

M. No, all the boys are I see Caleb, Seth, Dylan, Jacob. Ballet. The camp director told Leah to go to ballet.

C. Okay.

M. Wanna put it up there? [*Reading prompt*] The director thinks that girls are better at ballet and that this would be a good place for Leah.

C. It's still not as fair.

M. So kinda similar as Olivia.

C. Yeah.

M. He or she is saying just what he or she thinks... but just because Leah is a girl does not necessarily mean she can do ballet. Ballet is tough work.

C. Okay.

M. Three more, wanna grab Brittany? [*Reading prompt*] The camp director told Brittany to go to ballet. Since there are already only girls in the ballet class, the camp director thought that Brittany would fit best in ballet.

C. Yeah its fair.

M. It's fair?

C. Yeah because there is [*sic*] already girls.

M. Was it Brittany's choice to go ballet? Or is it the camp director's choice?

C. No, it was supposed to be hers, but she didn't make it the camp director did.

M. And why's that fair? Just because there's only girls there?

C. So it's not fair.

M. I mean what if you wanted to do, like Taekwon-Do, that you're doing but there were only girls signed up and they said well no you can't do Taekwon-Do because only girls are signed up. That's not fair.

C. Yeah it's not fair so it's not fair.

M. Right okay.

M. Okay the camp director told Nathan to go to swimming. [*Reading prompt*] The camp director thinks that Nathan is really good at swimming so the best activity would be for him to be in the water.

C. That's it was supposed to be his decision but the camp director made it.

M. So is it fair or not fair?

C. Not fair it's like—it's like these ones—all boys [*in*] that one, all girls [*in that one*], and this is both [*boys and girls*].

M. Sounds to me like this camp director—well I think we’re gonna talk about that on this. Take a look at the board and then we’ll talk about each of these questions. [*Reading prompt*] Was the camp director fair in deciding which kids should go to each activity?

C. No.

M. And why?

C. Because he put he said some stuff—like only boys should do this and only girls should do this—and... he made decisions that other people were supposed to make.

This example shows the process of mechanisms by which parents can shape their children’s reasoning about gender and fairness. The mother in this excerpt engaged in the conversation with her child about why he agreed with a gender-based decision and countered his response by refuting stereotypes and relating the material to her child (e.g., asking how her child would feel if he was told that he could not do tai kwon do if all girls were in it and he was excluded). At the start of the conversation, the child was willing to accept gender-based rationale for activity choice, and yet at the end he refutes that idea and thought that not only should children decide where to go, but assumptions should not be made on the basis of gender.

Mother-Child Conversations Themes

One of the major aims of the study was to catalogue the types of behaviors that mothers and children employ when they are faced with issues of discrimination. Across mothers, very few made comments which directly endorsed gender stereotypes. The finding that only three mothers made explicit stereotypic comments from the prompts is consistent with those reported by Friedman et al. (2007) and Gelman et al. (2004). In these studies of mother-child communication, mothers made frequent references to gender (e.g., labeling boys and girls, pointing out counter-stereotypic information), but did not often directly endorse stereotype found in storybook material.

Although the primary focus of the study was on mothers’ socialization strategies, I also coded children’s behavior during the observational task. Children made more frequent

stereotype-endorsing comments, which is unsurprising given the evidence that children in this age range hold gender-stereotypic attitudes (Miller, Trautner, & Ruble, 2006). Children also relied more heavily on issues of fairness than did their mothers. Research on children's moral and fairness reasoning suggests children in this age range often rely on issues of fairness, but are more frequently considering issues of context in making evaluation of fairness or morality (e.g., Killen & Stangor, 2001). In a study on evaluations of age-related discrimination, Helwig and Jasiobedzka (2001) showed that elementary-aged children are sensitive to issues of biased treatment and identify wrongful treatment as unacceptable. It is interesting that although fairness was a pervasive theme across children's comments in the current study, stereotype-endorsing remarks were produced almost as much. Given children's tendency to promote tenets of justice at this age, findings speak to the widespread and entrenched beliefs about gender and gender norms. Consistent with Bem's (1983) theories on cognitive schemas and pathways described by developmental intergroup theory (Bigler & Liben, 2006), gender is a salient feature by which children attend and by which they filter information.

As further evidence of children's reliance on gender categories, when given the opportunity to take the role of camp director and assign novel characters to the camp activities, the majority of children assigned based on gender stereotypes. Given no other information about the novel character, most children relied on gender in the assignments. It was particularly interesting because this task directly followed the mother-child conversation task. Commonly, children would confess how unfair the camp director was and how anyone should be able to do anything that they choose. Moments after, when I ask children to make a decision as to where novel characters should go in the absence of any information, the majority of children chose to

use gender as the basis for which they made their decision and decide to assign the characters according to the stereotyped activities.

Counter to my hypothesis, child gender did not relate to mothers' socialization strategies during the mother-child conversations, either directly or by moderating the effect of maternal characteristics on mothers' strategies. This is also inconsistent with prior work showing that mothers used more counter-stereotypical speech with daughters and used more stereotypical speech with sons (Friedman, Leaper, & Bigler, 2007). One possibility is that, as in the consideration of the dyadic relationship between mothers' and children's comments, the conversation is driven principally by the camp director scenario and gender-based justifications. It is possible that the structured prompts from the conversation task elicit enough discussion about stereotypes, exclusion, and unfair treatment that any effects of gender or child comments get washed out.

Boys and girls did, however, show differences in their own responses to the material. Boys made more stereotype-endorsing and fewer stereotype-refuting and extension comments than did girls. This finding may be due to a number of factors. Boys may have been more responsive to counter-stereotypic material because — as some studies suggest — boys tend to be more concerned with gender stereotypes than are girls (see Leaper & Friedman, 2007). The type of activities I chose may have also influenced the type of comments that boys and girls made. Whereas many of the girls in the study mentioned that they had tried rock-climbing (the masculine activity), most of the boys did not report having done, or would like to do ballet (the feminine activity). Although rock-climbing did elicit biases about being a masculine activity, it did not evoke as strong of a reaction. When asked by his mom why he would not want to do ballet, one boy remarked, “Duh, Mom. Look at me. What do I look like? I’m a boy.” Although

not all boys had an immediately negative reaction to being in ballet, ballet tended to elicit a more negative response in boys than rock climbing with girls. This is due in part by the selection of the camp activities, but there is also evidence that violations from gender norms are evaluated more negatively for boys than girls (e.g., Blakemore, 2003). Perhaps that boys expressed more dislike for ballet represents an internalized norm about what is appropriate gender-related behavior.

One possibility as to why girls showed significantly more refuting behaviors than boys is that they may be more aware of issues of bias. Girls report higher levels of gender-based discrimination and evaluate exclusion based on gender as more negative to girls than boys (Brown & Bigler, 2004). Similar findings based on children's justification of peer exclusion show that girls rated exclusion as more negative than did boys (Killen & Stangor, 2001). This suggests that boys and girls may be experiencing gender-based exclusion differently and may have different sensitivities to issues of discrimination. Girls may be becoming aware of lower societal status and therefore may have a different attributions and explanations of biased treatment.

Maternal and Child Gender-Related Characteristics

Mothers' gender attitudes were not related to their children's gender attitudes. These findings contribute to a body of work that has found a small but an inconsistent link between parent and child attitudes (see Tenenbaum & Leaper, 2002). In a study predicting young children's gender beliefs from parent behavior, Friedman, Leaper, & Bigler (2007) found that mothers' gender attitudes predicted gender stereotyping in younger (3-5 years), but not older (6-7 years). Children in the current study and in the older age range are likely to be more heavily influenced by peers and media exposure. Another potential reason for mothers' and children's

attitudes being unrelated is that mothers may not be aware of their children's gender attitudes. In fact, many of the mothers remarked that they were surprised at some of their children's responses and had no idea that their child held gender stereotypic beliefs.

Consistent with my hypothesis, mothers' feminist beliefs and gender attitudes predicted mothers' stereotype-refuting behavior in the conversation task. However, mothers' stereotype-refuting behaviors were unrelated to mothers' actual behavior. One hypothesis is that the gender attitude measure is an explicit assessment of "who should" do certain occupations. Although there was variation on the items and across the scale, there is a degree of social desirability inherent in explicit gender endorsement measures (e.g., Theriault & Holmberg, 1998). When mothers were in the conversation task, the "camp director" made explicit gender stereotypes. Mothers were in a laboratory setting in a study on parent-child communication and therefore likely experienced social desirability to refute the given stereotypes as well. Perhaps, then, it is unsurprising that although mothers' explicit characteristics predicted mothers' refuting behaviors and to their *reported* behavior (on preparation for bias scales), refuting behaviors was unrelated to child outcome. If these values are perhaps more explicit and automatic, then other variables are likely to be affecting children's gendered outcomes.

Notably, mothers' use of personalization (i.e., going beyond the task material to relate to the child), was the only strategy that related to children's gender-based outcomes. Consider the following conversation. The mother and child are discussing one of the prompted questions:

M: Okay what would Dylan's friends think if he wanted to go to the ballet group.
Where's Dylan. Here's Dylan. He wants to go to ballet. What would his friends think?
C: He's a girl.
M: They would think he's a girl. Why would they think he's a girl?
C: A tomgirl.

M: Okay well ballet is not necessarily just for girls. If you were the camp director how would you decide who should be in which activity

C: Hmm...

M: If you were the director the teacher how would you decide who should be in which activity?

C: Umm let all them choose.

M: You would let them choose. Okay well...

C: Are we done?

M: I think that's all.

Even though the mother refutes the child's stereotypic comment by stating that ballet is not just for girls, she moves directly into the next question after the remark. On the video during this exchange, the mother makes the comment while looking at the board as her son is turned and looking behind them. She does not elaborate or push the subject further. In contrast, note the following exchange:

M: Are you okay with the camp director saying that because she's a girl she should go to ballet?

C: Yes.

M: Do you think in the end these girls are going to leave this camp and feel badly about the fact that they were excluded from fun things like swimming and rock climbing?

C: I don't know.

M: When we went to that think at shaver's creek and you did that rock climbing, did you remember seeing girls in line for it?

C: Yes.

M: And did they seem to have fun?

C: Yes.

M: Even though they were girls?

C: Yes.

M: So you think that girls can like the same activities as boys?

C: Yes.

In both of these examples, the mother addresses the stereotypic comment that the child makes and refutes it. However, in the latter example, the mother relates the material directly to an experience in the child's life. In doing so, she individualizes the act of exclusion and gives a

point of counter-stereotypic reference from which the child is familiar. Some parents went even further. In the example below, this mother gives a label to the gender-based decisions and justifications the camp director is making:

M: I want to tell you about this. The way that the camp director picked some of these groups is called a stereotype. Have you ever heard that word before?

C: No.

M: It means that the camp director didn't ask each kid, what would you like, what would you enjoy. The camp director said oh you're a boy, you'll like this, oh you're a girl, you'll like this. The camp director decided that everybody who looks similar or has a similar quality should all do the same thing, and didn't take into consideration that they were different people with different interests. It's called a stereotype. So a stereotype is something where you make a judgment, you make an opinion about someone before you even know what they really like or what they're like. So a stereotype might be about girls. So it might be all girls like pink. Is that true? Do all girls like pink?

C: No!

M: So that's called a stereotype. Or all boys are stronger than girls. Is that true?

C: No!

M: That's called a stereotype. It isn't necessarily true. Okay how about this one. Boys are rougher than girls. Is that a stereotype?

C: Addie's brothers are really rough and she's rough like them.

M: Yeah. Sometimes girls can be rough too. How about this.. all girls like coloring better than sports. Is that a stereotype? Is that true?

C: No!

M: No. So this camp director made a judgment about these students just because they were boys or girls. And sometimes that happens. So if you really wanted to do running and everyone in the running group were boys, the director might say, oh, why don't you just do, the crafting group. Is that fair? You really want to do running. How would you respectfully say to the director that you want to do running?

C: I would say, well if that's the sport that you want to put me in, that's fine, but I don't really want to go in that group.

M: You think it would be hard to speak up to an adult like that? it can be hard huh? But you're a good sport, you would probably enjoy the crafting or whatever it was. Alright, do you have any other--

C: I would probably enjoy the coloring thing more than the running.

M: I know I was trying to come up with a different example. What about. What about if I say this statement. Six year olds like building blocks more than riding horses.

C: I like riding horses.

M: Is that a stereotype about 6 year olds?

C: I kinda like riding horses more than building.

M: So when someone makes a judgment or says something that is a stereotype, a lot of times it isn't true about everybody, and it can hurt people's feelings.

The mother then goes on to make discuss a number of other illustrations in defining what a stereotype is for her child. In this example, the mother clearly took this opportunity to use the given prompts as a teachable moment. She defines the term “stereotype” for her child and goes on to give numerous examples of what a stereotype is. When one example does not resonate with the child, she describes other examples that were more relevant or about which her child could answer questions and engage in the discussion. One would expect that the conversations in the laboratory provide a window into everyday conversations, although with this mother, who appears particularly attuned to the issues presented, was introducing the term seemingly for the first time. Findings from this study provide some evidence that parents rarely discuss these issues unless directly confronted with them. When confronted in the current study, although most mothers refuted stereotypes in their discussion, there was great variability as to how comprehensive and personal their stereotype-refuting strategies were, as illustrated in the three previous exchanges.

Consistent with a larger line of research, parents’ and teachers’ elaborations and personalization, specifically those that individualize information to the specific child or adolescent, have been shown to be related to positive child outcomes (e.g., in promoting literacy and language development, Raab & Dunst, 2009; socioemotional competence, Laible, 2004; educational outcomes, Waldeck, 2007, memory over time, Reese, Haden, Fivush, 1993; and successful substance abuse interventions, Henggler, Pickrel, Brondino, & Crouch, 1996). In addition, recent work is focused on identifying how parent socialization strategies link to children’s interests in STEM (science, technology, engineering, and math) careers. Janet Hyde and her colleagues examined longitudinal associations of valuing math early in high school to STEM academic and career interests later in high school (Hyde, Peterson, Harackiewicz, Allison,

& Rozek, 2011). Data came from a longitudinal study in which they coded qualitative interviews looking for measures regarding how parents discussed their values about different STEM interests with their adolescent children. Investigators described maternal personalization as when the parent linking the school subject to their child's interests in their conversations. In this work, they found that mother's values predict interest in STEM, but the way the mother communicated—specifically, connecting it to the child's interests and personalizing it—was of particular importance. In the current study, personalizations revealed a very strong link to children's gender attitudes and hypothetical responses to sexist peers. Future investigations will be necessary to unpack the specific process by which children attend to, resonate with, and later apply personalization strategies.

There are several limitations of the study that should be noted. First the study is limited by sample. Sampling only mothers resulted in a limited view of parents' influence on their children's gender attitudes. In families where mothers and fathers have different gender attitudes, children may receive mixed messages. A few mothers mentioned as such after the discussion task was completed; some mentioned that the child's father would react more strongly to counter-stereotypic prompts, particularly for boys and ballet. Mothers and fathers display differential treatment based on gender across many domains (e.g., Blakemore et al., 2009), and therefore fathers may show different patterns than the mother in this sample. Specifically, because fathers are less likely to experience gender discrimination in daily occurrences, they may be less sensitive to the topics at hand and therefore less reactive to exclusion based on gender. Given that fathers show, on average, greater approval for gender nonconforming behaviors in children, fathers may be less likely to use multiple and personalizing strategies that refute stereotypes. This study does not investigate how children come to understand and balance the

messages about gender norms nor does it investigate the relative importance of same- or other-gender socialization. A study of mothers and fathers was not viable for this study given issues of recruitment and cost, but a study of fathers should be undertaken in the future. It would be important to test the relative influence of parent characteristics and gender on children's gender attitudes.

The mothers who participated in this study were also not representative of all mothers along the key dimensions of race, ethnicity, education, sexuality, and socio-economic status. Almost all of the mothers in the study had graduated from college. It may be that mothers from different backgrounds or with less education would approach issues of responding to gender bias differently with their children. Although the current sample cannot address these issues, it nevertheless reveals considerable diversity of differential beliefs about gender and maternal strategies during the conversation task.

Finally, related to limitations with the sample, the mothers in the study are predominantly European American. A comparative study with African American, Asian American, and Latino families would provide interesting information about the extent to which racial/ethnic groups differentially approach these issues with their children. Given that parents of ethnic minority group members are discussing issues of racial discrimination, it may be that parents are heightened to other biases (i.e., gender) and therefore are engaging in discussions about both gender and racial biases. Issues of intersectionality (e.g., considering the dual processes of race and gender) are highly relevant within the domain of parent socialization, specifically in discussions about discrimination. Child gender impacts family-level processes and which ultimately influence gendered task which also interact with race and ethnicity (Leventhal & Brooks-Gunn, 2005; Thomas & King, 2007). For example, researchers have found that ethnic

minority boys are more likely to be viewed as threatening by others and report receiving more discrimination than are ethnic minority girls (Fisher & Shaw, 1999; Stevenson, Cameron, Herrero-Taylor, & Davis, 2002). In a review of the racial socialization literature, Hughes et al. (2006) argues, “one might expect ethnic-racial socialization messages to differ for boys versus girls because of the possibility that parents anticipate their differential experiences in external contexts” (p. 759). Acknowledging children’s intersections of identities more broadly (e.g., race/ethnicity, religion, sexuality) will be important considerations for future work investigating parental perception of their children’s bias and the facilitation of discussion about discrimination.

Despite these limitations, the current work is an important contribution within the areas of research on intergroup processes, parent socialization, and issues of social justice. Results confirm previously untested hypotheses about gender-related messages in response to bias mothers send to their children, though it will be necessary to expand the scope of these findings to other social, contextual, and cultural factors related to the multidimensional nature of gender development.

Findings from this study will provide a foundation for future investigations of the association between parent and child characteristics and the impact of parent socialization on how children process information about social groups, biases, and discrimination. Through this work, I provided a catalogue of the types of behaviors that mothers and children employ when faced with gender stereotypes and unfair treatment. Results showed that mothers’ with more flexible gender attitudes and endorsed feminist beliefs were more likely to refute stereotypes with their children in response to biased material. Children of mothers who personalized the material, related topics to the child, and extended beyond the task were more likely to have flexible gender attitudes and make challenging remarks to hypothetical sexist peers. Findings

from this study suggest that conversations which bear directly on issues of discrimination, and in particular, those which individualize messages to children, can help children identify discrimination as problematic, process gender-related material, and help guide future responses to bias.

References

- About, F. E. (1988). *Children and prejudice*. Oxford: Basil Blackwell.
- Abrams, D., & Rutland, A. (2008). The development of subjective group dynamics. In S. Levy & M. Killen (Eds.), *Intergroup relations: An integrative developmental and social psychological perspective*. New York: Oxford University Press.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.
- Apfelbaum, E. P., Pauker, K., Sommers, S. R., & Ambady, N. (2011). In blind pursuit of racial equality? *Psychological Science, 21*, 1587-1592.
- Arthur, A. E., Bigler, R. S., Liben, L. S., Gelman, S. A., & Ruble, D. N. (2008). Gender stereotyping and prejudice in young children: A developmental intergroup perspective. In S. R. Levy & M. Killen (Eds.), *Intergroup relations: An integrative developmental and social psychological perspective*. New York: Oxford University Press.
- Ayres, M. M., Friedman, C. K., & Leaper, C. (2009). Individual and situational factors related to young women's likelihood of confronting sexism in their everyday lives. *Sex Roles, 61*, 449-460.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.
- Baumrind, D. (1967). Child-care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs, 75*, 43-88.
- Bem, S. L. (1983). Gender schema theory and its implications for child development: Raising gender-aschematic children in a gender-schematic society. *Signs, 84*, 598-616.

- Benner, A. D., & Graham, S. (2010). The transition to high school as a developmental process among multi-ethnic urban youth. *Child Development, 80*, 356-376.
- Bigler, R. S., & Liben, L. S. (2006). A developmental intergroup theory of social stereotypes and prejudice. In R. V. Kail (Ed.), *Advances in child development and behavior*, Vol. 34 (pp. 38-89). San Diego: Elsevier.
- Bigler, R. S., & Liben, L. S. (2007). Developmental intergroup theory: Explaining and reducing children's social stereotyping and prejudice. *Current Directions in Psychological Science, 16*, 162-166.
- Blakemore, J. E. O. (2003). Children's beliefs about violating gender norms: Boys shouldn't look like girls, and girls shouldn't act like boys. *Sex Roles, 48*, 411-419.
- Blakemore, J. E. O. (1998). The influence of gender and parental attitudes on preschool children's interest in babies: Observations in natural settings. *Sex Roles, 38*, 73-95.
- Blakemore, J. E., Berenbaum, S. A., & Liben, L. S. (2009). *Gender development*. New York, NY: Psychology Press.
- Blakemore, J. E. O., & Hill, C. A. (2008). The Child Gender Socialization Scale: A measure to compare traditional and feminist parents. *Sex Roles, 58*, 192-207.
- Bonilla-Silva, E., Forman, T., Lewis, A., & Embrick, D. (2003). It wasn't me!: How will race and racism work in 21st Century America. *Research in Political Sociology, 12*, 111-134.
- Bowlby, J. (1969). *Attachment and loss, Vol. 1: Attachment*. New York: Basic Books.
- Bowman, P. J., & Howard, C. (1985). Race-related socialization, motivation, and academic achievement: A study of Black youths in three-generation families. *Journal of the American Academy of Child Psychiatry, 24*, 134-141.

- Brody, G. H., Chen, Y-F., Murry, V. M., Ge, X., Simons, R. L., Gibbons, F. X., et al. (2006). Perceived discrimination and the adjustment of African American youths: A five-year longitudinal analysis with contextual moderation effects. *Child Development, 77*, 1170-1189.
- Brown, C. S., & Bigler, R. S. (2004). Children's perceptions of gender discrimination. *Developmental Psychology, 40*, 714-726.
- Brown, C. S., & Bigler, R. S. (2005). Children's perceptions of discrimination: A developmental model. *Child Development, 76*, 533-553.
- Brown, C. S., Bigler, R. S., & Chu, H. (2010). An experimental study of the correlates and consequences of perceiving oneself to be the target of gender discrimination. *Journal of Experimental Child Psychology, 107*, 100-117.
- Bugental, D. B., & Grusec, J. E. (2006). Socialization theory. In N. Eisenberg (Vol. Ed.), *Handbook of child psychology. Volume 3: Social, emotional, and personality development* (pp. 366-428). New York: Wiley.
- Bugental, D. B., & Johnston, C. (2000). Parental and child cognitions in the context of the family. *Annual Review of Psychology, 51*, 315-344.
- Caldera, Y. M., Huston, A. C., & O'Brien, M. (1989). Social interactions and play patterns of parents and toddlers with feminine, masculine, and neutral toys. *Child Development, 60*, 70-76.
- Collins, W. A., Maccoby, E.E., Steinberg, L., Hetherington, E.M., Bornstein, M.H. (2000). Contemporary research on parenting: The case for nature and nurture. *American Psychologist, 55*, 218-232.

- Coltrane, S. (2000). Research on household labor: Modeling and measuring the social embeddedness of routine family work. *Journal of Marriage and Family*, 62, 1208–1233.
- Crouter, A. C., Manke, B. A., & McHale, S. M. (1995). The family context of gender intensification in early adolescence. *Child Development*, 66, 317–329.
- Cunningham, M. (2001). Parental influences on the gendered division of housework. *American Sociological Review*, 66, 184-203.
- Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin*, 113, 487-496.
- Eccles, J. S., Jacobs, J. E., & Harold, R. D. (1990). Gender role stereotypes, expectancy effects, and parents' socialization of gender differences. *The Journal of Social Issues*, 46, 183-201.
- Ex, C., & Janssens, J. (1998). Maternal influence on daughter's gender role attitudes. *Sex Roles*, 38, 171-186.
- Fabes, R. A., Martin, C. L., Hanish, L. D. (2009). Children's behaviors and interactions with peers. In *Handbook of Peer Interactions, Relationships, and Groups*, edited by Rubin, K. H., Bukowski, W. M., Laursen, B., 45-62. New York, NY, US: Guilford Press.
- Fagot, B. I. (1981). Stereotypes versus behavioral judgments of sex differences in young children. *Sex Roles*, 7, 1093-1096.
- Fagot, B. I., & Leinbach, M. D. (1995). Gender knowledge in egalitarian and traditional families. *Sex Roles*, 32, 513-526.
- Feldman-Barrett, L., & Swim, J.K. (1998). Appraisals of Prejudice and discrimination. In J.K., Swim, & C. Stangor, C. (Eds). *Prejudice: The target's perspective* (pp. 11-36). New York: Academic Press.

- Fisher, A. R., & Shaw, C. M. (1999). African American's mental health and perceptions of racist discrimination: The moderating effects of racial socialization and self-esteem. *Journal of Counseling Psychology, 46*, 395-407.
- Foster, J. (2000). Utilization of global attributions in recognizing and responding to gender discrimination among college women. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues, 19*, 57-69.
- Friedman, C. K., Leaper, C., & Bigler, R. S. (2007). Do mothers' gender-related attitudes or comments predict young children's gender beliefs? *Parenting: Science and Practice, 7*, 357-366.
- Gelman, S. A., & Taylor, M. G. (2000). Gender essentialism in cognitive development. In P. H. Miller & E. Kofsky Scholnick (Eds.), *Toward a feminist developmental psychology* (pp. 169–190). Florence, KY: Taylor & Frances/Routledge.
- Gelman, S. A., Taylor, M. G., & Nguyen, S. (2004). Mother-child conversations about gender: Understanding the acquisition of essentialist beliefs. *Monographs of the Society for Research in Child Development, 69*.
- Greene, M., Way, N., & Pahl, K. (2006). Trajectories of perceived adult and peer discrimination among Black, Latino, and Asian American adolescents: Patterns and psychological correlates. *Developmental Psychology, 42*, 218-238.
- Helwig, C. C., & Jasiobedzka, U. (2001). The relation between law and morality: Children's reasoning about socially beneficial and unjust laws. *Child Development, 72*, 1382–1393.
- Henggler, S. W., Pickrel, S. G., Brondino, M. J., & Crouch, J. L. (1996). Eliminating (almost) treatment dropout of substance abusing or dependent delinquents through home-based multisystemic therapy. *American Journal of Psychiatry, 153*, 427-428.

- Hilliard, L. J., & Liben, L.S. (2010, April). *Addressing discrimination with children: Young adults' past experiences and current beliefs*. Poster presented at the Gender Development Research Conference, San Francisco, CA.
- Hughes, J. M., Bigler, R. S., & Levy, S. R. (2007). Consequences of learning about historical racism among European American and African American children. *Child Development*, 78, 1689-1705.
- Hughes, D., & Chen, L. (1997). When and what parents tell children about race: An examination of race-related socialization among African American families. *Applied Developmental Science*, 1, 200-214.
- Hughes, D., & Chen, L. (1999). The nature of parents' race-related communications to children: A developmental perspective. *Child Psychology: A Handbook of Contemporary Issues*, 467-490.
- Hughes, D., Rodriguez, J., Smith, E. P., Johnston, D. J., Stevenson, H. C., & Spicer, P. (2006). Parents' ethnic-racial socialization practices: A review of research and directions for future study. *Developmental Psychology*, 42, 747-770.
- Hyde, J. S., Peterson, J., Harackiewicz, J. M., Allison, & Rozek, C. (2011). Gender, utility values, and adolescents' interest in STEM careers. Paper presented in R. Bigler paper symposium. Finding Meaningful Work: Values, Gender, and the Pursuit of Academic and Occupational Interest. Society for the Research in Child Development, Montreal.
- Jacobs, J., & Eccles, J. S. (1992). The impact of mothers' gender-role stereotypic beliefs on mothers' and children's ability perceptions. *Journal of Personality and Social Psychology*, 63, 932-944.

- Johnson, D. (2001). Parental characteristics, racial stress, and racial socialization processes as predictors of racial coping in middle childhood. In A. M. Neal-Barnett, J. M. Contreras, & K. A. Kerns (Eds.), *Forging links: African American children clinical developmental perspectives* (pp. 57-74). Westport: Prager.
- Kaiser Family Foundation and International Communications Research (2001). *Talking with kids: National survey of parents and kids*. Retrieved December 18, 2011 from <http://www.kff.org/mediapartnerships/upload/Talking-With-Kids-About-Tough-Issues-A-National-Survey-of-Parents-and-Kids-Chart-Pack-2.pdf>.
- Katz, P. A. (1996). Raising feminists. *Psychology of Women Quarterly*, *20*, 323-340.
- Killen, M., Kelly, M. Richardson, C., & Jampol, N. (2010). Attributions of intentions and fairness judgments regarding interracial peer encounters. *Developmental Psychology*, *46*, 1206–1213.
- Killen, M., & Smetana, J. G. (2010). Future directions: Social development in the context of social justice. *Social Development*, *19*, 642-657.
- Killen, M., & Stangor, C. (2001). Children's social reasoning about inclusion and exclusion in gender and race peer group contexts. *Child Development*, *72*, 174–186.
- Laible, D. (2004). Mother–child discourse in two contexts: Links with child temperament, attachment security, and socioemotional competence. *Developmental Psychology*, *40*, 979-992.
- Lamb, L., Bigler, R.S., Liben, L. S., & Green, V. A. (2009). Teaching children to confront peers' sexist remarks: Implications for theories of gender development and educational practice. *Sex Roles*, *61*, 361-382.

- Leaper, C. (2002). Parenting boys and girls. In *Handbook of parenting: Vol. 1: Children and parenting (2nd ed.)*, edited by Bornstein, M. H., 189-225. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Leaper, C., Anderson, K. & Sanders, P. (1998). Moderators of gender effects on parents' talk to their children: A meta-analysis. *Developmental Psychology*, *34*, 3-27.
- Leaper, C., & Brown, C. S. (2008). Perceived experiences with sexism among adolescent girls. *Child Development*, *79*, 685-704.
- Leaper, C., & Friedman, C. K. (2007). The socialization of gender. In *Handbook of socialization: Theory and research*, edited by Grusec, J. E., Hastings, P. D., 561-587. New York, NY, US: Guilford Press.
- Leinbach, M. D., & Fagot, B. I. (1993). Categorical habituation to male and female faces: Gender schematic processing in infancy. *Infant Behavior and Development*, *16*, 317-322.
- Leventhal, T., & Brooks-Gunn, J. (2005). Neighborhood and gender effects on family process: Results from the Moving to Opportunity program. *Family Relations*, *54*, 633-643.
- Liben, L. S., & Bigler, R. S. (2002). The developmental course of gender differentiation: Conceptualizing, measuring, and evaluating constructs and pathways. *Monographs of the Society for Research in Child Development*, *67* (2).
- Lytton, H., & Romney, D. M. (1991). Parents' differential socialization of boys and girls: A meta-analysis. *Psychological Bulletin*, *109*, 267-296.
- Maccoby, E. E. (1988). Gender as a social category. *Developmental Psychology*, *24*, 755-765.
- Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In P. H. Mussen (Ed.) & E. M. Hetherington (Vol. Ed.), *Handbook of child*

- psychology: Vol. 4. Socialization, personality, and social development (4th ed., pp. 1-101). New York: Wiley.
- Manke, B., Seery, B. L., Crouter, A. C., & McHale, S. M. (1994). The three corners of domestic labor: Mothers', fathers', and children's weekday and weekend housework. *Journal of Marriage & the Family*, *56*, 657-668.
- Martin, C. L., & Fabes, R. A. (2001). The stability and consequences of young children's same-sex peer interactions. *Developmental Psychology*, *37*, 431-446.
- Martin, C. L., & Ruble, D. N. (2004). Children's search for gender cues: Cognitive perspectives on gender development. *Current Directions in Psychological Science*, *13*, 67-70.
- Mazer, D., & Percival, E. (1989). Ideology or experience? Relationships among perceptions, attitudes, and experiences of sexual harassment in university students. *Sex Roles*, *20*, 135-147.
- McHale, S. M., Crouter, A. C., & Tucker, C. J. (1999). Family context and gender role socialization in middle childhood: Comparing girls to boys and sisters to brothers. *Child Development*, *70*, 990-1004.
- McHale, S. M., Crouter, A. C., & Whiteman, S. D. (2003). The family contexts of gender development in childhood and adolescence. *Social Development*, *12*, 125-148.
- McKown, C., & Weinstein, R. S. (2003). The development and consequences of stereotype consciousness in middle childhood. *Child Development*, *74*, 498-515.
- Miller, C. L. (1983). Developmental changes in male/female voice classification by infants. *Infant Behavior and Development*, *6*, 313-330.
- Miller, C. F., Trautner, H. M., & Ruble, D. N. (2006). The role of gender stereotypes in children's preferences and behavior. In *Child Psychology: A Handbook of Contemporary*

- Issues*. New York: CRC Press.
- Moen, P., Erickson, M.A., & Dempster-McClain, D. (1997). Their mother's daughters? The intergenerational transmission of gender attitudes in a world of changing roles. *Journal of Marriage and the Family*, 59, 281-293.
- Pahlke, E., Bigler, R. S., & Suizzo, M. A. (2012). Relations between colorblind socialization and children's racial bias: Evidence from European American mothers and their preschool children. *Child Development*, 83, 1164-1179.
- Parke, R., & Buriel, R. (1998). Socialization in the family: Ethnic and ecological perspectives. In W. Damon (Ed.), *Handbook of child psychology: Volume 3. Social, emotional, and personality development*. (5th ed. pp. 463-552) New York: Wiley.
- Pollock, M. (2004). *Colormute: Race talk dilemmas in an American school*. Princeton, NJ: Princeton University Press.
- Pomerleau, A., Bolduc, D., Malcuit, G., & Cossette, L. (1990). Pink or blue: Environmental gender stereotypes in the first two years of life. *Sex Roles*, 22, 359-367.
- Poulin-Dubois, D., Serbin, L., & Derbyshire, A. (1998). Toddlers' intermodal and verbal knowledge about gender. *Journal of Developmental Psychology*, 44, 338-354.
- Raab, M., & Dunst, C. J. (2007). *Influence of child interests on variations in child behavior and functioning* (Winterberry Research Syntheses Vol. 1, No. 21). Asheville, NC: Winterberry Press.
- Reese, E., Haden, C. A., & Fivush, R. (1993). Mother-child conversations about the past: Relationships of style and memory over time. *Cognitive Development*, 8, 403-430.
- Robinson, C., Mandlco, B., Olsen, S. F., & Hart, C. H. (1995). Authoritative, authoritarian, and permissive parenting practices: Development of a new measure. *Psychological Reports*,

77, 819-830.

- Rose, A. J., & Rudolph, K. D. (2006). A review of gender differences in peer relationship processes: potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin, 132*, 98–131.
- Ruble, D. N., Martin, C. L., & Berenbaum, S. A. (2006). Gender development. In W. Damon (Series Ed.) & N. Eisenberg (Volume Ed.), *Handbook of child psychology: Volume 3. Social, emotional, and personality development*. (6th ed.). New York: Wiley.
- Rutland, A., Killen, M., & Abrams, D. (2010). A new social-cognitive developmental perspective on prejudice: The interplay between morality and group identity. *Perspectives on Psychological Science, 5*, 279-291.
- Schwartz, J. I. (2004). An observational study of mother/child and father/child interactions in story reading. *Journal of Research in Childhood Education, 19*, 105-114.
- Shearer (2007). *Gender socialization in the family*. (Doctoral dissertation).
- Signorella, M. L., Bigler, R. S., & Liben, L.S. (1993). Developmental differences in children's gender schemata about others: A meta-analytic review. *Developmental Review, 13*, 147–83.
- Sinclair, S., Dunn, E., & Lowery, B. S. (2005). The relationship between parental racial attitudes and children's implicit prejudice. *Journal of Experimental Social Psychology, 41*, 283-289.
- Sinno, S., & Killen, M. (2009). Moms at work and dads at home: Children's evaluations of parental roles. *Applied Developmental Science, 13*, 16-29
- Smetana, J. G. (1995). Parenting styles and conceptions of parental authority during adolescence. *Child Development, 66*, 299-316.

- Spencer, M. B. (1983). Children's cultural values and parental child rearing strategies. *Developmental Review, 3*, 351-370.
- Sroufe, A. L., Bennett, C., Englund, M., & Urban, J. (1993). The significance of gender boundaries in preadolescence: Contemporary correlates and antecedents of boundary violation and maintenance. *Child Development, 64*, 455-466.
- Stevenson, H., Cameron, R., Herrero-Taylor, T., & Davis, G. (2002). Development of the teenager experience of racial socialization scale: Correlates of race-related socialization frequency from the perspective of Black youth. *Journal of Black Psychology, 28*, 2, 84-106.
- Suizzo, M. A., Robinson, C., & Pahlke, E. (2008). African American mothers' socialization beliefs and goals with young children: Themes of history, education, and collective independence. *Journal of Family Issues, 29*, 287-315.
- Swim, J. K., Cohen, L. L., & Hyers, L. L. (1998). Experiencing everyday prejudice and discrimination. In J.K. Swim, & C. Stangor, C. (Eds). *Prejudice: The Target's Perspective* (pp. 37-60). New York, NY: Academic Press.
- Swim, J. K. & Hyers, L. L. (1999). Excuse me--What did you just say?!: Women's public and private reactions to sexist remarks. *Journal of Experimental Social Psychology, 35*, 68-88.
- Swim, J. K., Gervais, S. J., Pearson, N., & Stangor, C. (2009). Managing the message: Using social influence and attitude change Strategies to confront interpersonal discrimination. Butera, F., & Levine, J.M. (Eds.). *Coping with Minority Status: Responses to Exclusion and Inclusion*. New York: Cambridge University Press.

- Swim, J. K., Hyers, L. L., Cohen, L. L., & Ferguson, M. J. (2001). Everyday sexism: Evidence for its incidence, nature, and psychological impact from three daily diary studies. *Journal of Social Issues, 57*, 31-53.
- Tenenbaum, H. R., & Leaper, C. (2002). Are parents' gender schemas related to their children's gender-related cognitions?: A meta analysis. *Developmental Psychology, 38*, 615-630.
- Theimer, C. E., Killen, M., & Stangor, C. (2001). Young children's evaluations of exclusion in gender-stereotypic peer contexts. *Developmental Psychology, 37*, 18-27.
- Theriault, S. W., & Holmberg, D. (1998). The new old-fashioned girl: effects of gender and social desirability on reported gender-role ideology. *Sex Roles, 39*, 97-112.
- Thomas, A., & King, C. (2007). Gendered racial socialization of African American mothers and daughters. *The Family Journal: Counseling and Therapy for Couples and Families, 15*, 137-142.
- Thorne, S. E. (1993). *Gender play: Girls and boys in school*. Piscataway, NJ: Rutgers University Press.
- Verkuyten, M., Kinket, B., & van der Weilen, C. (1997). Preadolescents' understanding of ethnic discrimination. *The Journal of Genetic Psychology: Research and Theory on Human Development, 158*, 97-112.
- Waldeck, J. (2007). Answering the question: Student perceptions of personalized education and the construct's relationship to learning outcomes. *Communication Education, 56*, 409-432.
- Weisgram, E. S., & Bigler, R. S. (2007). Effects of learning about gender discrimination on adolescent girls' attitudes toward and interest in science. *Psychology of Women Quarterly, 31*, 262-269.

- Witt, S. D. (2000). The influence of peers on children's socialization to gender roles. *Early Child Development and Care, 162*, 1-7.
- Yeung, W. J., Sandberg, J. F., Davis-Kean, P. E. & Hofferth, S. L. (2001). Children's time with fathers in intact families. *Journal of Marriage and Family, 63*, 136-154.
- Zemore, S. E., Fiske, S. T., & Kim, H. J. (2000). Gender stereotypes and the dynamics of social interaction. In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 207-241). Mahwah, NJ: Lawrence Erlbaum Associates.
- Zosuls, K. M., Ruble, D. N., Tamis-LeMonda, C. S., Shrout, P. E.; Bornstein, M. H., & Greulich, F. K. (2009). The acquisition of gender labels in infancy: Implications for gender-typed play. *Developmental Psychology, 45*, 688-701.
- Zucker, K. J., & Bradley, S. J. (1995). *Gender identity disorder and psychosexual problems in children and adolescents*. New York, NY: Guilford Press.

Appendix A
Recruitment Materials

Letter to Parents:

PENNSSTATE



Cognitive and Social Development Lab
Department of Psychology
The Pennsylvania State University
University Park, PA 16802
Phone: 814-863-7391
Email: libenlab@gmail.com

Parent/Guardian Name
Address

Date

Dear *Parent/Guardian Name*:

You or members of your family have been identified as possible participants in a research study that is being conducted by researchers at Penn State. We would like to invite you and your child to participate in a study together.

In our lab, we are interested in understanding how parents and children communicate when given the opportunity to discuss materials and various situations. First, we will ask you to fill out a questionnaire online. We will send you a link and you will fill it out at home. Then, about a week later, you and your child will be asked to come to campus for a visit. During the visit, you will work together on an activity in which you will be shown pictures and stories of children and be asked to discuss and answer questions together. This activity will be video recorded. Your child will then do some activities and be asked a few questions by one of the researchers. Data from this study will show how parents and children discuss material and come to a decision together, as well as how parents and children think about various beliefs and topics.

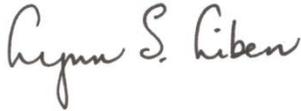
Participation involves a one-time visit to campus, and the session typically takes under an hour. Children typically find these activities to be fun, as the tasks are designed like a game. You will receive a \$10 gift certificate for participating in this research and your child will receive a certificate of participation and a gift certificate to Meyer Dairy for a free ice cream cone.

We are currently recruiting mothers (age 18 or older) and children who are 6 to 8 years old, and our records indicate that (*Child name*) is eligible for participation. If your family is interested in participating in the study, we will of course ensure that your child agrees to participating, and we will obtain written consent from you (the parent or guardian).

We would like to call you and give you more information about our research in the next few days. The phone number we have on file for you is (*phone number*). Please feel free to call us at (814)867-3110 or email the graduate assistant in charge of the project, Lacey Hilliard, at hilliard@psu.edu.

We thank you in advance for your time.

Sincerely,

Handwritten signature of Lynn S. Liben in cursive script.

Lynn S. Liben, Ph. D
Distinguished Professor of Psychology

Handwritten signature of Lacey Hilliard in cursive script.

Lacey J. Hilliard, M. S.
Graduate Assistant

Penn State Newswire Recruitment:

**Mothers with 6-8 year olds
sought for research study!**

Researchers in developmental psychology at Penn State is looking for mothers and children aged 6-8 to participate in a short one-time visit on parent-child communication.

During the activity, you and your child will be shown pictures and asked to read short stories and talk about the material. The activity will be video recorded. It is set up like a game with points of discussion, so kids typically find it fun, and it can be interesting to see what the conversation brings up!

The visit typically takes only under an hour of your time and we also ask that you complete an online survey prior to the visit. Visits will take place at a time convenient to you on campus. To thank you for your participation, we have \$10 to Walmart for you and a Meyer Dairy gift certificate for your child.

Please contact Lacey Hilliard at hilliard@psu.edu if you are interested or have any questions. At that point we can set up a time for you to come in, and I will send you a link to an online survey for you to fill out before the visit.

Follow-up call script:

Making Calls and Scheduling Appointments

- Open the excel file for the appropriate cohort.
- Make sure you know the parent's name and child's name, and dial the number.
- Call only between 9am and 9pm – often between 5pm and 8pm is a good time to catch people at home.
- Be friendly & professional!
- If you talk to a person...
 - Ask for the parent by first name. (I find this works better than asking for Mr. or Ms.—the use of the formal title puts people on the offensive for telemarketers, I think.)
 - Use the child's name as well. This helps to ensure that you're talking about the same kid (in case they have several) and also this makes them less likely to treat you like a telemarketer.
 - First, give them a little information to remind them of the email/letter they received, and ask if they are interested in hearing more about the study:

Hi, this is _____ from the Penn State Cognitive & Social Development Lab. I'm calling to follow up on an email/letter we sent you last week describing one of a child development study on parent-child communication that (Child's first name) is the right age to participate in. Does the study sound like something you and your child would be interested in?

- For people we have already contacted and are rescheduling, you could say:

We talked to you a couple months ago about participating in a study. We would love to reschedule the visit for you and (Child's first name). As you recall, we are doing a study on parent-child communication that (Child's first name) is the right age to participate in. We would like to reschedule at this time if you are still interested.

- If they want more information about the study:

"We're enrolling mothers and children for the study on parent-child communication. First, we will ask you to fill out a questionnaire online. We will send you a link and you will fill it out at home.

Then, about a week later, you and your child will be asked to come in for an activity, during which you and (NAME of child) will be asked to work together on an activity. You will be shown pictures and read stories and be asked to make a decision together. This activity will be video recorded. Then your child will do some activities and be asked a few questions by one of the researchers. The tasks we use are set up like games for children to play, and children typically enjoy participating. Does that sound like something you and your child would be interested in?

Through participation, we provide a \$10 gift certificate to Walmart to you, an ice cream gift certificate to your child, and parking reimbursement."

- IF they do not have email or internet, then tell them that we can mail them a packet of the questionnaire.
- If you leave a message, say:

“Hi, this is _____ from the Penn State Cognitive & Social Development lab. I’m calling to follow up on a letter we sent you describing one of a child development study on parent-child communication that (Child’s first name) is the right age to participate in. It involves an internet questionnaire and one-time visit to our office on the Penn State campus and takes less than an hour. If you’re interested in participating, you can give us a call back at 867-3110 or you can e-mail us as libenlab@gmail.com. We’ll also try to contact you a few more times, and hope to talk with you soon.”

- Commonly asked questions:
 - **Q: What is your scheduling like? When would you need us to come in?** A: We are flexible with times. Typically weekday afternoons and evenings are best, but we can work with your schedule for whatever is easiest for you.
 - **Q: What is the time commitment?** A: The study takes under an hour, often about 30 minutes.
 - **Q: I’ll have his/her siblings too. Can I bring them?** A: Sure you can. We can set you up in one of our lab rooms with some paper and markers, or you can bring toys and books from home. We can arrange for one of the research assistants to look after them.
 - *NOTE: make sure you note if they will be bringing in siblings and tell Lacey so that can be arranged.
 - **Q: Will I find out results of how my child did?** A: We can send you results of the study after we’re done, but we’re not looking at what any individual child does at any one time.
 - **Q: Am I or child being judged or tested?** A: “No. We are looking at how families *in general* communicate and work on things together. So, we will combine what we learn from you and your child with many other parents and children.
 - **Q: Is there any gift or monetary compensation?** A: Children will receive a Meyer dairy gift certificate and a Penn State Young Scientist certificate
- Scheduling: if family is interested in participating...
 - **IF they are interested, then you will talk to them about scheduling and set a date for the visit (it should be about a week and a half out to make sure they have time to fill out the survey). Also make sure you confirm or get their email address!**
 - **Tell them that first, we will email them a link to the survey to complete. In that email we will also send a confirmation of the visit date and time, and will include directions and contact information for when they arrive.**

- When parents are willing to participate in the study, **schedule a time for the appointment on the spot.**
- Give parents directions to the Moore Building if they ask.
- **DIRECTIONS:** from Atherton, turn onto Park Ave, going toward the stadium. Turn right at the first road that you get to (Fischer Rd). Turn left at the stop sign --the Nittany Lion Inn will be in front of you. Turn right into the Nittany Parking Deck into the far left lane. Tell the attendant that you are here for a study in the Moore building. Get a ticket, and we will give you parking money when you arrive.
- To see what times the lab is available for participant scheduling, check the google calendar “Lacey Recruitment”
 - Leave a space of at least 30 minutes between participants, to allow for unexpected delays and room resetting time
 - Tell them they will receive a confirmation call the day before the study
 - Immediately, put the visit in the google calendar
 - In the title, be sure to indicate the parent and child’s name. In the notes, include the child’s birthday and the parent’s name and phone number (so it is handy for making the confirmation call).
 - When you’re finished calling & scheduling participants, remember to send Lacey an e-mail with all of the information about when you’ve scheduled them!
- Also be sure you update the First families spreadsheet AND the participant list (under General Lab Items, Recruitment) each time you send a letter/call a participant!
- If a number or address is out of order, try to find new contact information online to update the database & track down participants.

- **The day before, do a CONFIRMATION CALL,** to remind them of the visit
 - Identify yourself as (name) from Penn State.
 - Identify the parent by first name or title (Ms. _____) and make sure you say the child’s name – in case they have multiple children, we want them to bring the correct child!
 - Always say “I’m calling to confirm our apt” instead of “I’m calling to make sure this is still ok.” If people need to change their appointments that’s fine, but the second wording makes it seem like it is ok to change the appointment on a whim.

Appendix B
Mother-Child Conversation Task Protocol

Materials checklist:

Camera (set up in room)

New disc, formatted and on LP setting

Mounted on stand

Parent consent form

Child assent form

Experimenter script

Interaction materials

Instructions

Magnet board

Magnets/prompts

Parent questionnaire packet

Child questionnaire packet

Creamery gift certificate

Child completion certificate

Procedure

Greet mom & child on the first floor of Moore building in the lobby area by the front office. Have clipboard ready with consent form. Lead them up to the 2nd floor and into the testing room.

For the first part of the study, the two of you are going to be in this room for an activity. During this activity, you will sit and talk together about these cards and pictures. You will start with reading this first card (point to card that says “read first”). The cards will orient you to the board and explain what to talk about together!

I have a consent form for you to sign before you get started. (Hand mom consent form with pen). Feel free to read over it, but the first page just outlines the study procedures. On the second

page, you have the options of checking off whether or not you are okay with us using the data for future research and for professional settings. It's completely up to you. The bottom of the second page is the regular consent for participating.

(to child) After you and your mom are finished, I am going to talk with you for a few minutes while your mom is in the other room filling out a form. Is that okay with you?

See if they have any questions, and if not, then start the video camera to "record." (Bottom left hand corner of touch screen.

The conversations take various amounts of time, so whenever you are finished, you can just open the door. I'll be just across the hall and will hear you come out. Thanks and have fun!

The chat usually takes between 15-20 minutes. Just listen for the door to open and greet them when they come out.

So now I will talk to (child) for a few minutes. (Mom) you can come in here (247A) and fill out a couple short forms. We will just be right in here and talk for a few minutes.

The mom will go in 247A and fill out the forms. Sit next to the child in the testing room in front of the board. You can say something like:

I'm just interested in what you thought about all of this, so I'm going to ask you a few questions, okay?

Administer:

Assignments of novel characters

Activities subscale of COAT-AM

Hypothetical responses to sexist peers

Thanks so much for talking with me! It was really fun to hear what you thought about all of this. Let's go in the other room where your mom is. I have a couple of things to give you to thank you for helping us.

Meet the mom in 247A, give the child the participation certificate and the gift certificate to Myer Dairy. Give the mom the Walmart gift card. Debrief & thank them both for taking the time to come in and for their participation, and that should be it!

Study Materials:

First card:

(top side)

1. Read first!

(other side)

This board in front of you shows activities from a local summer camp. At this camp there are a lot of different activities for kids like you to play in.

Take a look at the board and the activities! You can see that 3 of the activities for kids to do at the camp are ballet, rock climbing, and swimming.

Question:

If you were at the camp, which activity would you like to play in the most? Which activity would you like to play in the least? Why?

Talk with your mom about what seems fun or not fun about each of the activities.

Second card:

(top side)

2. Read second!

(other side)

Take a look at the pictures of kids under the pieces of paper. All of these kids decided to come to the summer camp and are excited to play.

The camp director has assigned each kid to play in one of the activities. Flip over the cards for each kid one at a time to read which activity the camp director sent the kid to and the reason why.

Place the picture of the kid on the board next to the activity that he or she was assigned to. As you place the kid on the board, talk to each other and see what you think about each of the camp director's decisions.

What do you think about what the camp director said?

Do you think it was fair?

Third card:

(top side)

3. Read third!

(other side)

Questions! Take a look at the board, read these questions, and talk to each other about what you think.

Was the camp director fair in deciding which kids should go to which activity? Why or why not?

If you went to this camp, how would you want the director to put you in groups?

If Seth really liked ballet and wanted to go join the ballet group, what do you think the camp director should do?

What do you think would happen if Seth joined the ballet group? Do you think that he would be teased or would it be okay? Why do you think that?

If Allison was good at rock climbing, do you think she should be able to join the group of all boys? Why or why not?

What would Dylan's friends think if he wanted to go to the ballet group?

If you were the camp director, how would you decide who should be in which activity?

Three camp activities shown:

Ballet (feminine)

Rock-climbing (masculine)

Swimming (gender-neutral)

Director Decisions and Rationale:

Name	Gender	Director Decision	Director reason	Gender-based disc?	Decision Justification
Dylan	Boy	Rock climbing	Boys are stronger; better at climbing	Yes	Ability
Caleb	Boy	Rock climbing	Boys like rock climbing	Yes	Interest
Seth	Boy	Rock climbing	Only boys in rock-climbing group	Yes	Group cohesion
Nathan	Boy	Swimming	Thinks child is good at swimming	No	Ability
Jacob	Boy	Swimming	Thinks child likes swimming	No	Interest
Leah	Girl	Ballet	Girls are better at ballet	Yes	Ability
Olivia	Girl	Ballet	Girls like ballet	Yes	Interest
Brittany	Girl	Ballet	Only girls in ballet group	Yes	Group cohesion
Allison	Girl	Swimming	Thinks child is good at swimming	No	Ability
Nicole	Girl	Swimming	Thinks child likes swimming	No	Interest

Photograph of Conversation Materials:



Education

2012	Ph.D., Developmental Psychology, The Pennsylvania State University
2008	M. S., Developmental Psychology, The Pennsylvania State University
2005	B. A., Psychology; B. S., Communication Studies, The University of Texas at Austin

Publications

- Hilliard, L. J., & Liben, L. S. (invited chapter, in preparation). Fairness in the face of gender stereotypes: Examining the nature and impact of mother-child conversations. In *Talking about Right and Wrong: Parent-Child Conversations as Contexts for Moral Development*. Cambridge University Press.
- Hilliard, L. J., & Liben, L. S. (in preparation). Addressing bias with children: Young adults' past experiences and current beliefs.
- Liben, L. S., Bigler, R. S., & Hilliard, L. J. (under review). Gender development: From universality to individuality. In *Societal Contexts of Child Development: Pathways of Influence and Implications for Practice and Policy*. Oxford University Press.
- Liben, L. S. & Hilliard, L. J. (under review). Classroom gender distinctions increase children's social-group vigilance and stereotypes.
- Hilliard, L. J., & Liben, L. S. (2010). Differing levels of gender salience in preschool classrooms: Effects on children's gender attitudes and group bias. *Child Development, 81*, 1787-1798.

Conference Presentations

Selected Papers

- Hilliard, L. J., & Liben, L. S. (2011, August). Beliefs and Practice: Addressing Bias with Children. Paper presented at the American Psychological Association Conference, Washington, D.C.
- Liben, L. S., & Hilliard, L. J. (2011, August). Parenting In and About Diverse Contexts. Coauthors of paper symposium presented at the American Psychological Association Conference, Washington, D.C.
- Hilliard, L. J., & Liben, L. S. (2009, April). Exacerbating preschoolers' gender attitudes and biases through classroom structure. Paper presented at the Society for Research in Child Development Conference, Denver.
- Hilliard, L. J., Hilliard, J. E., Bigler, R. S., & Liben, L. S. (2008, November). Developing anti-biased curriculum: The importance of gender-neutral preschool classrooms. Paper presented in round-table discussion at the National Association of the Education of Young Children Conference, Dallas.

Selected Posters

- Hilliard, L. J., & Liben, L. S. (2012, April). No boys in ballet! Response to gender bias in mother-child conversations. Poster presented at the Gender Development Research Conference, San Francisco.
- Hilliard, L. J. & Liben, L. S. (2012, March). Conversations about gender stereotypes: An observational study of maternal strategies and children's perceptions. Poster presented at the Penn State Graduate School Exhibition, University Park, PA.
- Hilliard, L. J., & Liben, L. S. (2010, April). Addressing discrimination with children: Young adults' past experiences and current beliefs. Poster presented at the Gender Development Research Conference, San Francisco.

Selected Honors and Awards

- 2012: Department Travel Award, Penn State; 3rd Place, Penn State Graduate School Exhibition
- 2011: APA Travel Award for APA Conference; APA Travel Award for Advanced Training Institute; Departmental Travel Award, Penn State
- 2010: Penn State Psychology Department Award, Outstanding Publication by a Graduate Student

Training

- 2012: Planning for Qualitative Research: Design, Analysis and Software Integration; Temple University, Philadelphia, PA
- 2011: APA Advanced Training Institute: Research Methods with Diverse Racial and Ethnic Groups; East Lansing, MI
- 2010: Schreyer Teaching Institute Course in College Teaching: Course toward Graduate School Teaching Certificate

Teaching Experience

Instructor

- 2010-2012: Elementary Statistics in Psychology; Introduction to Personality Psychology; Developmental Psychology