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**What Is Beautiful Is Sex-Typed: A Developmental Examination**

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**What Is Beautiful Is Sex-Typed: A Developmental Examination**

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## **Dedication**

This dissertation is dedicated to all those who have supported and guided me in my quest for a graduate degree in psychology, including my loving husband Chance Lawson, my unconditionally supportive parents William and Patricia Hoss, my exceptional adviser Judith Langlois, and the numerous friends and colleagues I have made at the Children's Research Laboratory.

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# **What Is Beautiful Is Sex-Typed: A Developmental Examination**

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Stereotypes about attractiveness and gender seem to implicate each other in various ways. Previous research has found that adults rate highly attractive targets as being more sex-typed than less attractive targets. This phenomenon has been identified as the “beauty-is-sex-typed” stereotype and has been examined only in adults and with a limited number of sex-typed attributes. The studies reported here extend previous research and provide important developmental data by having adults (Experiment 1) and 7-9-year-old children (Experiment 2) rate more and less attractive target faces for the likelihood of having feminine, masculine, and gender-neutral attributes. Attributes used in ratings included items from three different gender stereotype domains (i.e., traits, activities, and occupations) in order to provide a more complete examination of the beauty-is-sex-typed stereotype than has been assessed previously. Results showed that both adults and children subscribe to the beauty-is-sex-typed stereotype, but for female

targets only: All participants rated high attractive females significantly higher than low attractive females on having feminine traits, activities, and occupations. Additionally, children but not adults rated attractive females higher than unattractive females on gender-neutral attributes. In contrast, all participants rated males, regardless of attractiveness, as equally masculine and gender-neutral in attributes. Children's results did not appear to depend on the cognitive skill of multiple classification even though expressing a beauty-is-sex-typed stereotype conceptually requires noticing both a target's gender and attractiveness. Secondary results included that all participants showed stronger cross-sex-typed stereotypes for activities and occupations than traits. Taken together, these results have important implications for the development of both attractiveness stereotyping and gender stereotyping. Even in young children, attractiveness stereotypes consist of both sex-relevant ("beauty is good") and sex-irrelevant ("beauty is sex-typed") components, and these components include traits, activities, and occupations. Moreover, gender stereotypes of female targets, at least for adults and children in middle childhood, seem to depend on the attractiveness of the targets.

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## **Chapter 1: Introduction**

When evaluating others, adults and children alike rely on aspects of appearance such as gender, race, and facial attractiveness to provide cues about a person's underlying disposition. Often, these cues trigger a network of stereotyped beliefs, and two of the most commonly studied networks of stereotyped beliefs concern attractiveness and gender. Attractiveness stereotypes can be summed up by the phrase "what is beautiful is good" (Dion, Berscheid, & Walster, 1972). Gender stereotypes include the notion that women have expressive or communal attributes, whereas men have instrumental or agentic attributes (Bem, 1974; Deaux & Kite, 1993; Spence & Helmreich, 1978). Attractiveness and gender stereotypes are similar in that they appear early in life, are entrenched by the preschool years, and show limited signs of fading over adulthood (Deaux & Kite, 1993; Langlois et al., 2000; Ruble & Martin, 1998).

Stereotypes about facial attractiveness and gender seem to implicate each other in various ways. Specifically, research with adults has shown that facially attractive people generally are perceived as more sex-typed (i.e., feminine if female and masculine if male) than facially unattractive people; however, the relationship between a target's attractiveness and rated sex-typed attributes appears stronger for female targets than for male targets (Brown, Cash, & Noles, 1986; Cash & Duncan, 1984; Cash & Trimer, 1984; Drogosz & Levy, 1996; Gillen, 1981; Jackson, 1983a; Jackson & Cash, 1985). As a whole, the set of beliefs that attractive individuals are more sex-typed than unattractive individuals

has been labeled the “beauty-is-sex-typed” stereotype (Gillen, 1981). Consequences of this stereotype include effects on hiring decisions such that attractive people are deemed more appropriate than unattractive people for sex-typed jobs (Cash, Gillen, & Burns, 1977; Heilman & Saruwatari, 1979). Because of important potential consequences of the beauty-is-sex-typed stereotype (e.g., hiring practices) and because of the importance of determining the current relevance of this stereotype given today’s cultural expectations, I investigated whether adults continue to believe that beauty is sex-typed in Experiment 1.

Additionally, because the only direct investigations of the use of the beauty-is-sex-typed stereotype have been conducted with adults, I also investigated in Experiment 2 whether even children ages 7-9-years-old express the belief that attractive people are more sex-typed than unattractive people. Evidence for early use of this stereotype would show that children’s gender stereotypes are influenced by the attractiveness of the targets they evaluate. Although no other research has investigated children’s expression of the beauty-is-sex-typed stereotype, a few studies have found relationships between children’s facial attractiveness and their actual or assumed sex-typed behaviors. The limited findings indicate that attractive girls behave more sex-typed than unattractive girls, whereas attractive boys seem to behave less sex-typed than unattractive boys (Dion & Stein, 1978; Langlois & Downs, 1979; LaVoie & Andrews, 1976). Given this indirect evidence for relationships between attractiveness and sex-typed behaviors in children in combination with the importance of understanding whether children’s gender stereotypes depend on the attractiveness of target faces,

an investigation into when the beauty-is-sex-typed stereotype develops is worthwhile.

### **THE DEVELOPMENT OF ATTRACTIVENESS STEREOTYPING**

The stereotype that beauty is good-- that attractive people have positive, pleasant qualities-- has been found repeatedly in studies of adults and children. Generally, adults judge both known and unknown attractive individuals (both female and male) as more likely than unattractive individuals to be friendly and outgoing (for a review, see Berscheid & Walster, 1974; Eagly, Ashmore, Makhijani, & Longo, 1991; Langlois et al., 2000). Adults also rate attractive children as having greater academic ability, higher IQs, and a greater capacity for and interest in receiving further education than unattractive children (for a review, see Ritts, Patterson, & Tubbs, 1992). Although adults generally rate attractive targets as having many positive qualities, one meta-analysis found that attractive targets are associated only moderately with being well-adjusted or having high intellect and are not associated at all with caring for others (Eagly et al., 1991). This same meta-analysis also found that attractive people are attributed arguably negative characteristics such as being more vain and less modest than unattractive people. Though beauty is not always good, the evidence that a person's attractiveness leads to positive judgments of many of his or her personal characteristics is overwhelming. Judgments of attractiveness even lead to behavioral reality in that attractive and unattractive individuals may take on the positive or negative characteristics that they are assumed to possess (Snyder,

Tanke, & Berscheid, 1977). Thus, a person's attractiveness provides information, whether correct or not, about his or her underlying disposition.

Adults are not the only age group that attends to appearance cues such as attractiveness. Several studies of infants have found that young infants prefer to look longer at adult-rated attractive versus unattractive faces (Langlois et al., 1987; Samuels & Ewy, 1985; Slater et al., 1998). Moreover, infants prefer attractive to unattractive faces across several face categories including Caucasian female adults, Caucasian male adults, African-American female adults, and Caucasian infants (Langlois, Ritter, Roggman, & Vaughn, 1991).

Infants not only have visual preferences for attractive faces, but they also react differently to attractive versus unattractive faces and even demonstrate associations between attractive faces and pleasant voices and unattractive faces and unpleasant voices. In one study, 12-month-old infants approached and preferred to play with a female adult stranger wearing an attractive mask and withdrew from the same stranger wearing an unattractive mask (Langlois, Roggman, & Reiser-Danner, 1990). In a second study, 12-month-olds increased their looking times to attractive faces when a pleasant voice was speaking and similarly increased their looking times to unattractive faces when an unpleasant voice was speaking (Rubenstein & Langlois, 2000). This latter study provides evidence that infants may have a rudimentary beauty-is-good stereotype in that they associate attractive faces with other attractive characteristics (i.e., a pleasant tone of voice) and unattractive faces with other unattractive characteristics.

Overall, these studies suggest that infants develop early associations between attractiveness and “goodness,” and unattractiveness and “badness.”

Children's attractiveness stereotypes become more evident by the time they reach the preschool years. Toddlers as young as 30-36-months-old choose attractive children more often than unattractive children as likely to own an attractive toy, be nice, and be likeable (Hoss & Langlois, 2000). Toddlers also express preferences to play with attractive children much like the 12-month-olds preferred to play with an attractive stranger in the study by Langlois et al. (1990). Slightly older children (3-5-years-old) select attractive peers as friendly and popular; conversely, they select unattractive peers as scary and likely to hit or be mean (Dion, 1973; Dion & Berscheid, 1974; Styczynski & Langlois, 1977). Preferences for attractive peers also are evident in school-age children who may be more influenced by attractiveness than ethnicity when deciding on such preferences (Langlois & Stephan, 1977). Thus, visual preferences for attractive versus unattractive faces during infancy seem to develop into full-fledged stereotypes during childhood that continue into adulthood (Langlois et al., 2000).

#### **THE DEVELOPMENT OF SEX-TYPING**

Like attractiveness stereotypes, gender stereotypes originate in infancy and are well developed by middle childhood. Infants as young as 9-months-old form categories of male and female faces (Leinbach & Fagot, 1993), and infants as young as 12-months-old match female faces with female voices (Poulin-Dubois, Serbin, Kenyon, & Derbyshire, 1994). Once infants have formed the categories of “male” and “female,” they soon begin to associate females with



feminine objects and characteristics, and males with masculine objects and characteristics. For example, Levy and Haaf (1995) found that 10-month-olds form gender-related categories of social information by detecting relationships between gender and gender-related attributes (e.g., they notice when a female face is paired with a feminine object and will generalize that association to other female faces). Additionally, children as young as 2-years-old demonstrate the ability to understand and use the categorical labels associated with males and females (Etaugh, Grinnell, & Etaugh, 1989; Fagot & Leinbach, 1989; Levy, 1999; Weintraub et al., 1984).

Just as strong attractiveness stereotypes have been found among preschoolers, strong gender stereotypes have been found among the same age group. Children, particularly girls, associate males and females with culturally sex-typed objects and toys (e.g., dolls and trucks) by three years of age and with adult occupations and activities by three to five years of age (O'Brien et al., 2000; for a review, see Ruble & Martin, 1998). Early associations with gender, however, do not depend on a child's awareness of gender constancy or on a child's ability to exhibit a majority of sex-typed behaviors, although gender stereotypes become more advanced as children are able to classify their own selves into the appropriate gender category (Martin & Little, 1990; Reis & Wright, 1982). Children usually do not sex-type traits (e.g., "gentle") prior to 5-years-old; however, they learn such associations quickly thereafter, and they reach ceiling on various measures of sex-typing by about the second grade (Serbin et al., 1993; Williams, Bennett, & Best, 1975). In sum, children are quite successful

at determining what traits, activities, and occupations are stereotypically associated with females and males by the beginning of middle childhood.

Why do children show evidence of sex-typing so early? Although this topic is a matter of significant debate and few data, one possible reason is that preschoolers are motivated to attend to gender and its related roles because gender is both perceptually salient and commonly used in the environment (“you’re such a good boy!”). Gender is a primary way for children to group themselves into a social category, and therefore it may be an important component in the self-concept of young children (Bem, 1983; Kohlberg, 1966; Martin & Halverson, 1981). Children may want to act in ways deemed appropriate for their own gender because society emphasizes the functional importance of gender and because gender-appropriate behaviors help form their identities. Moreover, gender-appropriate behaviors and aspirations are both modeled and reinforced by families, peers, teachers, and the media (Block, 1983; Deaux & Kite, 1993; Langlois & Downs, 1980; Ruble & Martin, 1998). Because gender is so salient to preschoolers, young children likely pay special attention to it in both self-perception and other-perception tasks.

Of course, extensive gender role knowledge does not equate with gender role endorsement. Just because children can easily identify which attributes are stereotypically associated with males and females does not mean that they agree with or even act according to those associations. Indeed, just as knowledge of gender roles increases throughout childhood, knowledge that gender roles are not immutable also increases (Carter & Patterson, 1982). For example, one study

found that 6<sup>th</sup> graders, in comparison to 2<sup>nd</sup> graders, were more flexible in their applications of gender stereotypes (Serbin et al., 1993). An additional study found that 8-year-olds, in comparison to younger children, were more likely to agree that people can sometimes be like the other gender (i.e., girls can sometimes be masculine; Leahy & Shirk, 1984).

A developing cognitive skill that affects children's reliance on gender stereotypes is the ability to engage in multiple classification of social stimuli. Children who are able to engage in multiple classification of social stimuli understand that individuals can be in more than one social category at a time (e.g., being a female and being a truck-lover) and therefore give more egalitarian responses on a gender-stereotyping measure (Bigler & Liben, 1992). Hence, as children grow older and gain cognitive skills such as multiple classification, they tend to be more flexible in their applications of gender stereotypes.

Although developing cognitive skills such as multiple classification are associated with increased flexibility in stereotyped attributions, there has been historically little change in even adults' adherence to sex-typed attitudes. As a review of the literature by Deaux and Kite (1993) pointed out, current stereotypes still resemble gender stereotypes of 10-20 years ago (i.e., women are still associated with expressive and communal traits while men are still associated with instrumental and agentic traits). In addition, any traditional gender stereotypes that have been eradicated seem to have been replaced by "modern" sexism such as a lack of support for policies that help women (Swim, Aikin, Hall, & Hunter, 1995). Not all research paints such a negative outlook on society's

changing attitudes towards gender, though. A recent study by Diekmann and Eagly (2000) suggests that, as a result of women moving into more managerial jobs, adults believe that women of the present are more masculine and less feminine than women of the past. This study did not find evidence, however, that men are believed to be more feminine now than in years before; furthermore, this study only investigated how attitudes towards the “average” person have changed over time. Do current sex-typed attitudes towards the average woman or man generalize to attitudes towards specific women and men who vary in characteristics such as facial attractiveness? This question is the central research question investigated in Experiment 1.

If people make different sex-typed attributions to an individual (e.g., a specific woman) versus a group (e.g., women in general), then they might make these differential attributions based on specific, defining personal characteristics such as appearance. As evidence for this idea, Deaux and Lewis (1983) found that physical appearance was one of four independent domains of sex stereotypes (with the three other domains being traits, role-behaviors, and occupations) influencing judgments of sex-typed attributes. In Deaux and Lewis’ study with adults, verbal information about a target’s sex-typed appearance (e.g., broad shoulders for a masculine appearance, delicate and soft features for a feminine appearance) was more informative than knowledge of the target’s gender alone for making judgments about possible other sex-typed attributes. In other words, a more sex-typed appearance increased the likelihood that a target would be rated as highly masculine or highly feminine on the three other domains of gender

stereotypes. Other research with children ranging from kindergarten age to 10<sup>th</sup> grade has found that there is a developmental pattern in children's use of gender in combination with other individuating information about targets (e.g., height or occupational interests) to determine whether a target is feminine or masculine (Biernat, 1991; Levy, 1998; Martin, 1989). These studies have demonstrated that 5-6-year-old children rely solely on information about a target's gender, whereas 8-9-year-old children take into account other information about a target, when deciding whether that target has other feminine or masculine attributes.

When making sex-typed judgments, do children by 8-9-years-old take into account facial attractiveness information about a target, much like they take into account information about a person's sex-typed interests? The primary purpose of Experiment 2 was to investigate this question. Although Deaux and Lewis (1983) did not directly test whether the appearance variable of facial attractiveness influences sex-typed attributions, several studies with adults have shown that targets who are more attractive receive increased attributions of sex-typed characteristics (e.g., Cash & Trimer, 1984; Gillen, 1981; Jackson & Cash, 1985). Because these studies assessed only a limited number of sex-typed attributes and are 20 years old on average, the purpose of Experiment 1 was to determine whether adults still believe that high attractive people are more sex-typed than low attractive people for several domains of gender stereotypes.

#### **EVIDENCE FOR THE BEAUTY-IS-SEX-TYPED STEREOTYPE IN ADULTS**

Given that individuals regularly use facial attractiveness and gender information separately to make judgments about others, it is no surprise that they

use such information in combined ways. Evidence indicates that attractive and unattractive individuals are not perceived as equally likely to have characteristics that society considers appropriate for their sex. For example, attractive women have been rated as having more feminine characteristics and as being more qualified for feminine jobs than unattractive women; similarly, attractive men have been rated as having more (and sometimes less) masculine traits and as being more qualified for masculine jobs than unattractive men (Gillen, 1981; Cash, Gillen, & Burns, 1977; Unger, Hilderbrand, & Madar, 1982).

One important caveat to all findings that suggest that beauty is sex-typed, however, is that studies have yet to tease apart whether an attractive facial appearance predicts the attribution of sex-typed characteristics or whether a sex-typed facial appearance predicts both rated attractiveness and the attribution of sex-typed characteristics. Unfortunately, disentangling facial attractiveness and sex-typed facial appearance is extremely difficult given that the two variables are highly correlated, especially for female faces. For example, Bronstad, Ramsey, and Langlois (2002) found that, with repeated random sampling of 147 female faces and 150 male faces, the correlation between attractiveness and femininity in female faces is relatively high and consistent (average  $r = .70$ ), whereas the correlation between attractiveness and masculinity in males is more moderate and inconsistent (average  $r = .36$ ). Although there is no evidence that an attractive facial appearance *causes* greater attributions of sex-typed characteristics, there is evidence that an attractive facial appearance predicts greater attributions of sex-typed characteristics. This evidence is important because it demonstrates that

target gender is not the only appearance cue that predicts whether a target will be sex-typed.

### **Early Research Showing that Beauty Is Sex-typed**

One of the earliest studies to investigate whether attractive and unattractive women are perceived differently in terms of gendered attitudes is by Goldberg, Gottesdiener, and Abromson (1975), who found that unattractive women were more likely than attractive women to be rated as supporting the feminist movement in the 1970s. Goldberg et al. (1975) attributed these findings to a generally unfavorable attitude towards women in society at the time. Supporting the feminist movement at a time when women were struggling for equal rights would certainly be considered an unfeminine (or, at the very least, non-traditional) attitude to hold.

A follow-up study by Jacobson and Koch (1978) partially replicated Goldberg et al.'s (1975) findings. That study found that both attractive and unattractive women were perceived as supporting the feminist movement but for different reasons. More negative reasons (e.g., "hates men") were attributed to unattractive women. Several other follow-up studies, however, either did not replicate Goldberg et al.'s results (for a meta-analysis, see Beaman & Klentz, 1983), or determined that their findings depended on several rater variables. Two such studies showed that people's perceptions of attractive and unattractive women's support for the feminist movement depended on how similar to the women the raters perceived themselves to be (in attitudes towards feminism or other attitudes), with targets of similar attitudes rated as more attractive (Banziger

& Hooker, 1979; Klentz, Beaman, Mapelli, & Ullrich, 1988). A third study found differences between raters in that men and non-students rated unattractive women as more likely to support the feminist movement, whereas women and students rated attractive women as more likely to support the feminist movement (Johnson, Doiron, Brooks, & Dickinson, 1978). Finally, at least one study found, in essence, the opposite of Goldberg et al.: Attractive women but not unattractive women were seen as supporting the feminist movement (Johnson, Holborn, & Turcotte, 1979). Combined, these results from the follow-up studies offer conflicting evidence about the suspected feminism stance of attractive and unattractive women. Nonetheless, they provide early evidence that attributions of a sex-relevant characteristic such as being a feminist may depend on facial attractiveness.

Research following Goldberg et al.'s (1975) study has examined more directly how attractive and unattractive individuals are attributed different levels of sex-typed attributes. Studies by Cash et al. (1977) and Gillen (1981) determined that there are two types of "goodness" that contribute to the beauty-is-good stereotype: sex-relevant goodness (e.g., feminine attributes for attractive females and masculine attributes for attractive males) and sex-irrelevant goodness (e.g., social desirability for attractive individuals of both sexes). In terms of sex-relevant goodness, attractive women and men should differ from one another as well as from their unattractive counterparts in the extent to which feminine and masculine traits and behaviors are attributed to them. In terms of sex-irrelevant goodness, attractive men and women should be equally assigned non-sex-typed or



gender-neutral pleasant qualities, as would be predicted by the more general beauty-is-good stereotype.

Supporting the idea that beauty is sex-typed, several studies have found that the higher a target's physical attractiveness, the higher his or her attributed level of sex-typed characteristics or overall masculinity/femininity (Brown et al., 1986; Cash & Duncan, 1984; Cash & Trimer, 1984; Drogosz & Levy, 1996; Gillen, 1981; Jackson, 1983a; Jackson & Cash, 1985). Specifically, highly attractive women are rated as having more feminine traits than unattractive women, whereas highly attractive men are rated as having more masculine traits than unattractive men. Similarly, Locher, Unger, Sociedade, and Wahl (1993) found that even when a photograph is seen for just 100 milliseconds, level of attractiveness is detected and, furthermore, low attractive women and men are seen as less sex-typed than either medium or high attractive women and men. These results are important because they seem to contradict the more general sex-typing research that has found that women as a group are assumed to have feminine attributes just as men as a group are assumed to have masculine attributes (e.g., Deaux & Kite, 1993). Unfortunately, studies that form the basis of sex-typing research (e.g., Diekman & Eagly, 2000) usually have adults make attributions to targets without providing concrete images (e.g., photographs of the targets) on which to base these attributions. One consequence of this methodology could be that adults judge "typical" women and men as being highly sex-stereotyped, but that such judgments may not generalize to attributions to specific individuals in real life settings.

Additional research on the relationship between attractiveness and attributions of sex-typed characteristics has found that people attribute more positive sex-typed traits to attractive people and more negative sex-typed traits to unattractive people. In one study, women of three facial attractiveness levels were all rated as likely to have feminine traits, but positive feminine traits (e.g., “affectionate”) were assigned to high attractive women more often than to medium or low attractive women. Conversely, negative feminine traits (e.g., “obedient”) were assigned to low attractive women more often than to high or medium attractive women (Gillen & Sherman, 1980). These researchers also found that positive masculine traits were assigned with greater frequency to men of increasing attractiveness levels. Another study found that whereas highly attractive women were rated as more feminine than either medium or low attractive women, low attractive women were rated as more masculine than either medium or high attractive women (Jackson & Cash, 1985). Likewise, low attractive women have been rated as more likely than high attractive women to have certain positive masculine attributes such as more power and greater integrity (Friedman & Zebrowitz, 1992; Heilman & Stopeck, 1985a). Thus, although women generally are viewed as more feminine than men, and men generally are viewed as more masculine than women, the strength to which sex-typed traits are associated with both sexes may depend on the facial attractiveness of the women and men.

### **Consequences of Beauty Being Sex-typed in Females**

One of the consequences of perceiving attractive individuals as being very sex-typed is that attractive women, in particular, may be penalized when trying to pursue jobs or complete tasks that require traits not usually associated with stereotypical femininity. Much research relevant to the beauty-is-sex-typed stereotype has found that attractive women may be perceived as too feminine to be taken seriously and therefore may not be treated fairly in situations requiring masculine traits for success. For example, one study showed that whereas high attractiveness was consistently advantageous for hypothetical male candidates seeking a high- or low-ranking position, it was only advantageous for female candidates seeking a low-ranking position (Sigelman, Thomas, Sigelman, & Ribich, 1986).

Heilman (1983) suggested that there may be a “lack of fit” between one’s perceived skills and attributes and a job’s perceived requirements, which may cause a liability for attractive women trying to enter a masculine job. As evidence for this liability, Heilman and Saruwatari (1979) asked adults to make hiring recommendations for both non-managerial and managerial positions. Although attractive men were viewed as equally qualified for both types of positions, attractive women were rated as highly feminine and only qualified for non-managerial positions. Follow-up studies found that high attractiveness was a liability for women, but not for men, in: 1) attributions of ability as contributing to job success (Heilman & Stopeck, 1985a), and 2) work-related evaluations and pay raise decisions for managerial jobs (Heilman & Stopeck, 1985b). A more recent

study by Drogosz and Levy (1996), however, found that attractiveness was an asset for any type of job despite gender. Thus, this study concluded that the lack-of-fit hypothesis is likely outdated. Clearly, more extensive research on whether attractive women are seen as particularly suited for feminine jobs and unsuited for masculine jobs is necessary.

Additional support that attractive women are seen as more fit for feminine versus masculine roles includes that attractive women are perceived as likely to be more successful than unattractive women at feminine tasks, and that attractive women who write about a stereotypically masculine versus feminine topic are downgraded in their performance (Cash & Trimer, 1984; Hill & Lando, 1976). The implication of the latter result is that attractive women are viewed negatively if they perform an “out of role” behavior. In sum, attractiveness is not an asset to women when trying to complete a non-feminine task or when applying for a masculine job such as a managerial position. Attractive women are not seen as having sufficient masculine attributes, such as decisiveness, that are necessary for managerial success.

Just as attractive women are viewed as more traditionally feminine, unattractive women are generally viewed as less traditionally feminine and thus may receive unfavorable treatment in contexts that value feminine roles (e.g., Jackson & Cash, 1985). In addition to being perceived as less feminine than attractive women, unattractive women are viewed as more politically radical and more likely to be homosexual than attractive women (Dew, 1985; Dunkle & Francis, 1990, 1996; Unger et al., 1982). Studies have yet to address the

implications of the relationship between a woman's unattractiveness and her political beliefs or sexual preference, but these relationships could lead to negative, and even discriminatory, behaviors. In short, attractive women often are perceived as too feminine, and unattractive women often are perceived as not feminine enough. Consequently, a woman's appearance, whether attractive or unattractive, could affect others' sex-typed judgments and may even create a liability for her success in sex-typed occupations or tasks.

### **Is Beauty *Really* Sex-typed in Males?**

The relationship between attributions of sex-typed traits or behaviors and facial attractiveness does not seem as straightforward for males as it is for females. Although one study found that unattractive men were viewed as less masculine in that they were categorized as more likely than attractive men to have a feminine career (Unger et al., 1982), several other studies have found no differences between attractive and unattractive men's likelihood of being successful at masculine tasks or jobs (Dickey-Bryant, Lautenschlager, Mendoza, & Abrahams, 1986; Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985b; Hill & Lando, 1976). Attractiveness does not seem to significantly affect perceptions of men's ability to be successful at any kind of task, sex-typed or not.

Perhaps attractiveness does not affect perceptions of men's abilities because the relationship between attractiveness and sex-typed appearance is not as strong for men as it is for women. Some studies examining the relationship between facial attractiveness and beliefs about masculinity in men have found that increased attractiveness leads to increased attributions of masculinity and that

increased masculinity often leads to increased attributions of attractiveness (e.g., Drogosz & Levy, 1996; Gillen, 1981; Keating, 1985). Other studies, however, have found that attractiveness in men does not correlate with ratings of masculinity as positively as attractiveness in women correlates with ratings of femininity (Bronstad et al., 2002; Cash & Kilcullen, 1985; Heilman & Stopeck, 1985b; O'Toole et al., 1998). The relationship between male attractiveness and male masculinity may even be weak. For example, attractive men are more likely than unattractive men to be categorized as homosexual, which is an attribute associated with femininity for men (Dunkle & Francis, 1990, 1996; Kite & Deaux, 1987). Consequently, attractive men have been viewed as being both very masculine and not very masculine with little consistency across the literature.

The findings that attractive men are not always associated with masculinity fit with a current debate in the literature as to whether facially masculine attractive men are perceived as more attractive than facially feminine attractive men or vice versa. On one side of the debate, Cunningham, Barbee, and Pike (1991) argue that women perceive men as more attractive when they have “mature” (and arguably masculine) facial features such as prominent cheekbones and a large chin. Conversely, Perrett et al. (1998) have found that both Caucasian and Japanese adults choose averaged male faces that are transformed to look more feminine as being more attractive than averaged male faces that are transformed to look more masculine. Perrett et al. also showed that masculinized males are perceived as being more dominant (a masculine trait) but less warm, emotional, honest, cooperative, and effective as a parent (feminine traits) than feminized

males. Unfortunately, because of conflicting results, neither Cunningham et al.'s nor Perrett et al.'s studies provide resolution for understanding the relationship between male attractiveness and femininity or masculinity. This ongoing debate about the relationship between male facial attractiveness and attributions of masculinity to male targets suggests the need for additional research on whether gender stereotypes are differentially attributed to attractive versus unattractive males.

### **When Beauty Is Not Sex-typed: The Role of Context**

Attractiveness seems to affect men and women similarly for jobs perceived as gender-neutral. In a study that examined hiring decisions for feminine, masculine, and gender-neutral jobs, Cash et al. (1977) found that attractive people were rated as having greater potential overall and as being more qualified than unattractive people for gender-neutral jobs. In contrast, a more recent study by Spencer and Taylor (1988) found that high attractiveness was a liability for both men and women in ratings of job performance in a gender-neutral occupation: Attractive men and attractive women generally were rated lower than their unattractive counterparts on overall job performance. Moreover, when attractive women were rated higher on job performance than their unattractive peers, their performance was often attributed to good luck and favoritism rather than to effort or ability. Whereas attractiveness may be a liability for women trying to succeed in masculine jobs, it can be either an asset or a liability for both women and men trying to succeed in gender-neutral jobs.

Whether attractiveness is a liability or an asset for a job, however, may depend on whether appearance is the only information known about a person. If more information is provided about a person's characteristics, then attractiveness and gender information are given less weight in judgment tasks. For example, information about a job applicant's sex role personality (masculine, feminine, or androgynous) seems to be more influential than either the applicant's sex or attractiveness when the applicant is evaluated for sex-typed jobs (Jackson, 1983b) or assessed for promotion and assigned tasks once on the job (Jackson, 1983c). Additionally, a study by Jackson (1983a) suggests that someone with high attractiveness, combined with an androgynous personality, is perceived as having the most pleasant combination of personal traits on the job (i.e., highest likeability, best adjustment, etc.). Often, though, perceivers have no access to information about a person's personality or actual sex-typed behaviors when making initial judgments about that person. Therefore, additional research into understanding how and when attractiveness influences perceptions and attributions of sex-typed characteristics seems especially important.

### **Attractiveness and Sex-typed Behavior**

Research has found that differential attractiveness leads to behavioral reality in that people labeled as attractive first are treated preferentially and then consequently exhibit more pleasant behaviors (Snyder et al., 1977). If attractive individuals show more pleasant behaviors than unattractive individuals, then perhaps attractive individuals show more sex-typed behaviors than unattractive individuals. No research yet has addressed this topic, although some research has



found that sex-typed as compared with androgynous individuals appear to focus more on other people's attractiveness when making judgments. For example, sex-typed individuals are more likely than androgynous individuals to rely on attractiveness information when evaluating the severity of a target's transgressions (Moore, Graziano, & Millar, 1987), when hiring job applicants (Cash & Kilcullen, 1985), or when interacting with a person of the opposite sex (Andersen & Bem, 1981). Additionally, feminine women who value traditional sex roles place greater emphasis on physical appearance in themselves and others (Cash, Ancis, & Strachan, 1997). Masculine individuals also seem particularly focused on appearance. Specifically, high masculine men are particularly likely to focus on appearance cues in women after being primed with sexually explicit materials (McKenzie-Mohr & Zanna, 1990), and both high masculine women and men rate themselves higher on looks and appeal than feminine or androgynous individuals (Downs, 1990). Consequently, raters who themselves are highly sex-typed seem to place a greater premium on attractiveness when evaluating themselves or others.

### **IS BEAUTY SEX-TYPED IN CHILDREN?**

Although several studies have examined how adults' sex-typed attributions are affected by both facial attractiveness and gender information, none have examined how children's sex-typed judgments are affected by both these appearance characteristics. This lack of research is unfortunate for the literature on the development of attractiveness and gender stereotypes because knowing whether children believe that beauty is sex-typed would provide much-needed

information about whether children's gender stereotypes depend on attractiveness of targets. A recent review of the current literature on the development of sex-typing shows that by age 5-7-years-old, children are quite successful at associating stereotypically masculine attributes with males and stereotypically feminine attributes with females (Ruble & Martin, 1998). The development of sex-typing, however, is often assessed by having children make sex-typed attributions to schematic drawings of males and females that are highly stereotypical in gendered appearance (e.g., Carter & Patterson, 1982; Kuhn, Nash, & Brucken, 1978; Serbin et al., 1993; Williams et al., 1977) or to girl and boy dolls (Picariello, Greenberg, & Pillemer, 1990). The few studies that have used photographs of males and females to investigate children's sex-typed knowledge or attitudes have relied on magazine photographs or other photographs in which the masculine or feminine facial appearance of the targets depicted was very obvious and, indeed, exaggerated (e.g., Fagot & Leinbach, 1989; Fagot, Leinbach, & O'Boyle, 1992; O'Brien & Huston, 1985).

If children instead had the option of looking at photographs of everyday people when deciding who might exhibit a certain feminine or masculine attribute, their gender stereotypes might be somewhat different than what is suggested by existing developmental sex-typing literature. For example, like adults, children might think that an attractive female is more likely than an unattractive female to participate in a feminine occupation or activity or to have a feminine trait. Research already has shown that, by 8-9-years-old, children use multiple sources of information about a target including physical appearance (but

not attractiveness specifically), traits, and occupational interests when making sex-typed attributions about that target (Biernat, 1991; Martin, 1989). Subsequently, attractiveness information, in addition to gender information, about targets should also affect children's sex-typed attributions by the time they reach middle childhood.

Although no research has investigated how facial attractiveness information affects children's attributions of sex-typed characteristics, a few studies have found relationships between children's attractiveness and their sex role behaviors. In particular, research has shown that attractive girls may be more feminine than their unattractive peers. For example, Dion and Stein (1978) found that attractive girls were more successful than unattractive girls at influencing male peers, even though unattractive girls used more persistent attempts. These results suggest that attractive girls positively affect boys without using very assertive techniques.

Other studies that involve observations of children provide further support that attractive girls show more sex-typed behaviors than unattractive girls, but that, surprisingly, attractive boys seem to do just the opposite. One study of toddlers found that adults interacted with attractive girls (but not attractive boys, unattractive boys, or unattractive girls) in ways that encouraged dependency, a traditionally feminine trait (Leinbach & Fagot, 1991). Also, Langlois and Downs (1979) found that dyads of low attractive females (ages 3-5-years-old) were as active in aggressive and high activity play as similarly aged boys. Conversely, dyads of high attractive females were the least active and showed the most

feminine sex-typed behaviors. Dyads of high attractive males also engaged in more feminine play behaviors than their less attractive peers.

If, as suggested earlier by Perrett et al.'s (1988) findings, attractive males are associated with feminine attributes such as being cooperative, then it is not surprising that attractive boys are prone to engage in feminine play behaviors. Attractive boys may internalize such associations and begin to behave in accordance with them, despite evidence that adults believe that attractive boys are likely to have masculine behaviors (Dion, 1974). As support for the possibility that the actual behaviors of attractive boys are not very masculine, LaVoie and Andrews (1976) found that low attractive 3- to 5-year-old males scored higher on measures of masculine sex role adoption than high attractive 3- to 5-year-old males. This same study showed that low attractive 5- to 7-year-old females scored higher on measures of masculine sex role adoption than high attractive 5- to 7-year-old females. In addition, Zucker et al. (1993) found that an attractiveness composite score in boys correlated significantly and positively with a femininity composite score, which provides further evidence for the possibility that attractiveness, even in boys, is often linked to femininity.

#### **INVESTIGATION OF THE DEVELOPMENT OF THE BEAUTY-IS-SEX-TYPED STEREOTYPE**

The expression of attractiveness and gender stereotypes is pervasive in both children and adults; furthermore, adults seem to show reasonable connections between their attractiveness stereotypes and their gender stereotypes, and these connections may have implications for everyday judgments such as hiring or pay-raise decisions. To summarize, the core of existing research on the

relationship between attractiveness and sex-typing is that an attractive person is often perceived as more sex-typed than an unattractive person, although the strength of this association may depend on whether the attractive person is female or male and whether any other information is known about the person. As the preceding literature review shows, there is considerable evidence for the belief that beauty is sex-typed; however, many questions still remain as to how extensively beauty is sex-typed for both females and males and whether children believe that beauty is sex-typed. The goals of the following studies were to address many of these questions.

Do adults currently perceive women but not men as less sex-typed than in the past as suggested by Diekmann and Eagly (2000), and do these perceptions depend on attractiveness of targets? Or, do adults continue to express gender stereotypes that depend on attractiveness of targets as would be predicted by the bulk of existing beauty-is-sex-typed literature? Examining this research question is essential for establishing the beauty-is-sex-typed stereotype as a current phenomenon. Additionally, if the beauty-is-sex-typed stereotype persists in adults, does its expression depend on whether the stereotype is of a trait, an activity, or an occupation? Existing beauty-is-sex-typed research with adults has primarily tested gender stereotypes of traits and job suitability to the exclusion of other gender stereotype domains such as activities.

To investigate questions about the current relationship between a target's attractiveness and adults' attributions of gender stereotypes, Experiment 1 examined whether adults of the 21<sup>st</sup> century are similar to adults from 20 years

ago in viewing attractive people as more sex-typed than unattractive people. Therefore, Experiment 1 investigated whether adults continue to perceive attractive women as more feminine than unattractive women in three domains of gender stereotyping including traits, activities, and occupations. These three domains comprise three of four domains of gender stereotypes outlined by Deaux and Lewis (1983) and are the three domains investigated by Liben and Bigler (2002) in a new scale of gender differentiation for children and adults. As a group, these domains provide a more complete examination of gender stereotypes than any of the domains by themselves. They also provide a more complete examination of gender stereotypes than has been conducted in previous research on the beauty-is-sex-typed stereotype. In addition to assessing whether adults perceive attractive females as more feminine than unattractive females, Experiment 1 assessed whether attractive men are perceived as more sex-typed than unattractive men, an important question given the inconsistent findings that attractive males sometimes are associated with femininity and sometimes are associated with masculinity.

Based on both previous evidence for the beauty-is-sex-typed stereotype and the bulk of current evidence for the continuing prevalence of gender and attractiveness stereotypes, I predicted that adults would believe that attractive women are more sex-typed than unattractive women by rating them higher on feminine attributes. Adults, however, should not perceive a lack of fit between female attractiveness and masculinity by rating attractive women as lower in masculine attributes than unattractive women because the most recent research on

this topic suggests that adults should perceive female attractiveness as an asset for both masculine and feminine traits and behaviors (Drogosz & Levy, 1996). These attributions might depend on stereotype domain, though, because although many previous studies establishing the beauty-is-sex-typed stereotype as a real phenomenon examined only trait attributions, recent research on sex-typing in general has shown that children and adults are less sex-typed in attributions of traits versus other gender stereotype domains (Liben & Bigler, 2002).

In terms of how adults would perceive attractive men versus unattractive men in terms of sex-typed attributes, specific predictions were difficult because previous research has shown that ratings of masculinity do not correspond as well to attractive men as ratings of femininity correspond to attractive women (e.g., O'Toole et al., 1998). Attractive men might be seen as both more masculine and more feminine than unattractive men, but these relationships could depend on which domain (i.e., traits versus activities versus occupations) of sex stereotypes is being assessed. This prediction was based on the limited research suggesting that attractive males are perceived as being equally suitable for feminine and masculine jobs (e.g., Heilman & Saruwatari, 1979) but as being sometimes more feminine and sometimes more masculine than unattractive males in traits and behaviors (e.g., Dunkle & Francis, 1996; Gillen & Sherman, 1980).

Finally, I predicted that adults would respond according to the beauty-is-good stereotype when deciding whether targets have gender-neutral attributes. Numerous studies have shown greater attributions of positive, gender-neutral traits (e.g., "friendly") to attractive over less attractive targets, regardless of

gender (e.g., Eagly et al., 1991; Langlois et al., 2000); thus, I predicted that adults would demonstrate a beauty-is-good stereotype at least for the domain of traits. Minimal research, however, has examined attributions of gender-neutral activities and occupations to attractive versus unattractive individuals, but at least one study has found that attractive people are rated as having greater potential overall and as being more qualified than unattractive people for gender-neutral jobs (Cash et al., 1977). Therefore, I included gender-neutral items in order to disguise the true purpose of the study as investigating gender stereotypes and also to assess whether participants rate attractive individuals, regardless of gender, higher only on gender-neutral traits or on several domains of gender-neutral attributes.

In Experiment 2, the primary research question was: Do even children express beauty-is-sex-typed beliefs by rating attractive targets higher on sex-typed traits, activities, and occupations than unattractive targets? Specifically, are attributions consistent with the beauty-is-sex-typed stereotype present in children as young as 7-9-years-old? Although children have not been assessed previously for use of the beauty-is-sex-typed stereotype, I predicted that children would show evidence of using attractiveness information when making judgments about whether or not a particular person is sex-typed by middle childhood. Until children reach about 8-years-old, they tend to rely on information about a person's gender over other attribute information when making gender-related judgments about that person (Biernat, 1991; Martin, 1989; Ruble & Martin, 1998). Because children younger than about 8-years-old should focus more on gender information than attractiveness information when deciding whether or not



someone exhibits a certain sex-typed attribute, I predicted that 7-9-year-olds might be especially likely to express a beauty-is-sex-typed stereotype with potential age differences in stereotype use between 7-year-olds and 9-year-olds. I also expected that all the 7-9-year-olds, like adults, should rely more on attractiveness information than gender information when deciding whether or not someone has a gender-neutral attribute and especially whether someone has a gender-neutral trait.

Given children's developing cognitive abilities between 7- and 9-years-old, I also hypothesized that children's use of the beauty-is-sex-typed stereotype might depend on their level of multiple classification ability. Specifically, children who are able to engage in the cognitive skill of multiple social classification (regardless of age) should be able to take into account both attractiveness and gender information when evaluating males and females for having sex-relevant attributes. Children who fail at multiple classification tasks may be unable to utilize attractiveness information in addition to gender as being a cue to a target's sex-typed disposition and preferences.

Thus, the following studies extend existing literature by examining attributions of the beauty-is-sex-typed stereotype for several gender domains and for both adults (Experiment 1) and children (Experiment 2).

## Chapter 2: Experiment 1

### METHOD

#### Participants

Thirty-six introductory psychology students (17 women; mean age = 19.00 years) participated in the study for class credit. This sample included participants of Caucasian (58.3%), Hispanic (13.9%), Asian-Pacific Islander (11.1%), and African American (8.3%) descent. The remaining participants (8.3%) were either mixed race or “other.”

#### Stimuli

The stimuli consisted of images of 36 adult Caucasian faces taken from an existing database of facial images. Images included nine high attractive females, nine low attractive females, nine high attractive males, and nine low attractive males. These facial images represented a wide range of attractiveness within normal faces and had been rated previously for attractiveness by at least 40 adults (20 female) from various ethnic backgrounds on a 5-point Likert scale (1 = very unattractive, 5 = very attractive); the ratings were highly reliable (alphas = .90 or higher).

In case raters used different standards for rating the attractiveness of females versus males, the average attractiveness score for each image was transformed to a z-score. The ratings of the facial images in the low and high attractive conditions were significantly different from one another,  $ps < .0001$  for both the female and male facial images. For the female facial images, the

transformed ratings for the low attractive faces ranged from -1.21 to -.72, and the ratings for the high attractive faces ranged from .81 to 1.25. For the male facial images, the ratings for the low attractive faces ranged from -1.34 to -.66, and the ratings for the high attractive faces ranged from .63 to 1.30. All facial images were standardized for size, color, brightness, contrast, and background using Adobe Photoshop™. Additionally, all facial images had neutral expressions, and all clothing cues were masked.

### **Procedure**

Participants sat in front of a computer screen, which displayed the facial images. A computer program (Superlab™) presented the images one at a time in one of 36 orders. Orders were constrained so that no more than three female (or male) faces would be shown in a row and so that no more than three high attractive (or low attractive) faces would be shown in a row. The on-screen size of each facial image was 700 by 700 pixels, just smaller than life-size. As each facial image appeared, the participants responded to a question about a feminine, masculine, or gender-neutral trait, activity, or occupation. Questions were presented in the following format in one of 36 orders: "How \_\_\_\_\_ do you think this person is?" (traits); "how much do you think this person likes to \_\_\_\_\_?" (activities); or "how likely do you think this person is a \_\_\_\_\_?" (occupations). The only constraint in forming the 36 question orders was that each target image would be associated with each question once across orders. Participants rated the targets on the following scale: 1 = not at all to 5 = extremely. They had unlimited

time to make ratings; however, they were encouraged to answer as quickly as possible.

The trait, activity, and occupation items were taken from a set of items used to develop the COAT-AM scale of children's beliefs about others' sex-typed traits, activities, and occupations (Liben & Bigler, 2002). As part of the scale's development, the items were rated for gender stereotypicality by college students on a scale from 1 ("would only be chosen for a male") to 7 ("would only be chosen for a female"). The trait items (with their mean ratings in parentheses) used in the questions included four *feminine* traits: affectionate (5.7), gentle (5.5), helpful (5.0), and emotional (5.8); four *masculine* traits: brave (2.5), strong (2.2), adventurous (2.6), and dominant (2.4); and four *gender-neutral* traits: curious (4.1), friendly (4.5), truthful (4.5), and creative (4.2). The activity items included four *feminine* activities: babysit (5.9), sew from a pattern (6.3), take ballet class (6.1), and go shopping (5.4); four *masculine* activities: use tools to build (2.0), fix cars (1.8), go fishing (2.1), and play basketball (2.4); and four *gender-neutral* activities: ride a bicycle (3.9), go to the movies (4.1), play cards (3.7), and listen to music (4.0). The occupation items included four *feminine* occupations: hair stylist (5.6), librarian (6.1), nurse (6.0), and secretary (6.0); four *masculine* occupations: auto mechanic (1.6), construction worker (1.6), firefighter (1.7), and scientist (2.8); and four *gender-neutral* occupations: artist (4.0), writer (3.8), baker (3.7), and comedian (3.5).

## RESULTS

### Beauty-is-sex-typed Interactions

If adults express a beauty-is-sex-typed stereotype for females, then they should give higher ratings of feminine attributes to attractive versus unattractive female targets but should rate attractive versus unattractive males similarly on feminine attributes. Conversely, if adults express a beauty-is-sex-typed stereotype for males, then they should give higher ratings of masculine attributes to attractive versus unattractive male targets but should not differentiate attractive versus unattractive females on masculine attributes. To test these predictions, I conducted separate repeated measures analyses of variance (ANOVAs) for responses to the feminine and masculine attributes. Each ANOVA consisted of a 2 (participant gender) x 2 (target attractiveness) x 2 (target gender) x 3 (stereotype domain-- traits, activities, or occupations) mixed model design<sup>1</sup>. The between-participants variable was participant gender<sup>2</sup>; the within-participants variables were target attractiveness, target gender, and stereotype domain. In interpreting all significant interactions, I conducted paired comparison contrasts while controlling

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<sup>1</sup> Because almost 42% of the adult sample was non-Caucasian, I conducted preliminary repeated measures ANOVAs including race (i.e., Caucasian or non-Caucasian) as a between-participants variable. Race of participant significantly interacted with target attractiveness and stereotype domain in the analysis of feminine attributes,  $F(2, 68) = 5.60, p < .01$  but did not affect any results of primary interest. Contrast analyses indicated that the significant three-way interaction was the result of non-Caucasian participants rating attractive individuals higher than Caucasian participants on feminine occupations,  $p < .01$ . Because race of participant did not have any other effect for feminine attributes nor any effect in the analyses for either the masculine or gender-neutral attributes, I collapsed data across this variable for further analyses.

<sup>2</sup> The analysis for the feminine attributes showed no effect of participant gender; therefore, I collapsed data across this variable for this analysis. The analysis for masculine attributes resulted in one significant interaction involving participant gender, which I subsequently interpreted and included in the additional results discussed in the Appendix.

for Type 1 error across multiple comparisons by using Sidak adjustments, which are similar to Bonferonni adjustments but more precise for multiple comparisons of repeated measures.

The analysis of the feminine attributes showed that adults perceived beauty as sex-typed for females as evidenced by a significant two-way interaction between target attractiveness and target gender,  $F(1, 35) = 5.87, p < .05, \eta^2 = .14$ . This interaction was not qualified by any higher order interactions. In interpreting this interaction, contrast analyses showed that adults rated the high attractive females ( $M = 3.36, SD = .75$ ) significantly higher on feminine attributes than the low attractive females ( $M = 3.02, SD = .50$ ),  $p < .05$ . In contrast, adults evidenced no difference in how they rated the high attractive males versus the low attractive males,  $p = \text{n.s.}$ , on feminine attributes (see Figure 1).

To test whether adults' perceptions of females depended on the individual attractiveness ratings of the females, I conducted Pearson correlations between the mean ratings of the female targets on feminine attributes and both the averaged non-transformed attractiveness ratings of the attractive females ( $r = -.10$ ) and the average non-transformed attractiveness ratings of the unattractive females ( $r = .25$ ). These two correlations, however, were not different from one another,  $\chi^2(df = 1) = .70, p = \text{n.s.}$ , suggesting that adults' beauty-is-sex-typed attributions for females did not depend on the specific attractiveness ratings of the targets.

Because adults rated the high attractive females higher than the low attractive females but did not differentiate between high and low attractive males on feminine attributes, their ratings support the prediction that adults continue to

express a beauty-is-sex-typed stereotype for female targets. Moreover, because this stereotype did not depend on domain of attribute, adults' beauty-is-sex-typed attributions to females held for the three stereotype domains of traits, activities, and occupations.

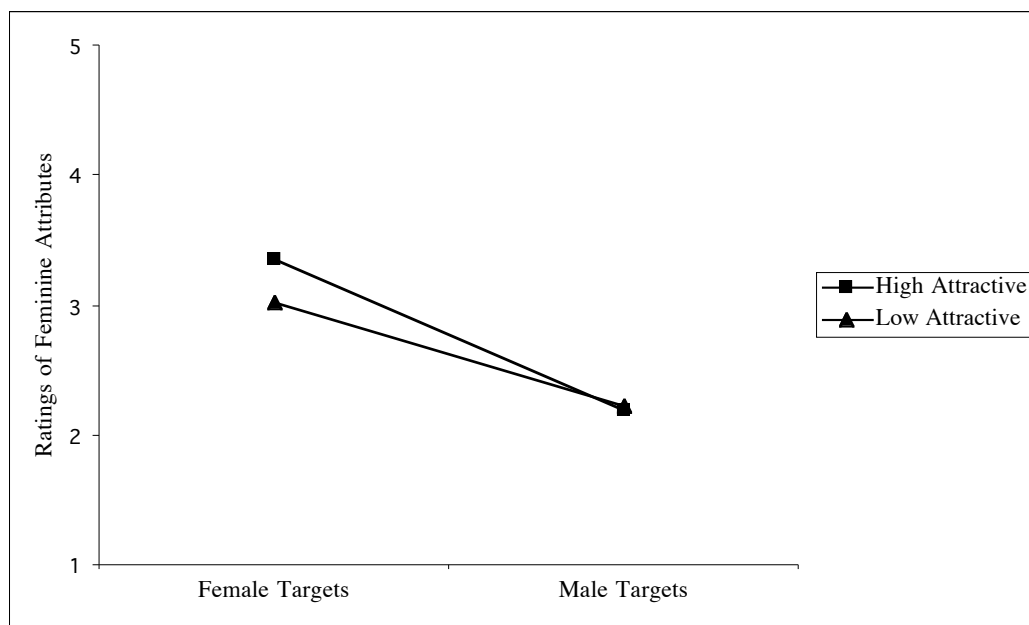


Figure 1: Adults' Mean Ratings of Feminine Attributes to High and Low Attractive Female and Male Targets

In contrast to the results for the feminine attributes, the results for the masculine attributes did not support a beauty-is-sex-typed stereotype for male targets given that attractiveness of target did not interact with target gender in the masculine attributes analysis,  $p = \text{n.s.}$  Because attractive and unattractive males were rated equally high on masculine attributes, adults do not appear to perceive beauty as being sex-typed for males. Target attractiveness, however, significantly interacted with stereotype domain,  $F(2, 70) = 8.93, p < .001, \eta^2 = .21$ .

Comparisons showed that adults rated high attractive targets ( $M = 3.46$ ,  $SD = .58$ ) higher on masculine traits than low attractive targets ( $M = 2.93$ ,  $SD = .85$ ),  $p < .001$  (see Figure 2). Attractiveness of target did not affect ratings for masculine activities or occupations. Although this interaction was not predicted, it was not surprising that more attractive targets were rated higher than less attractive targets on traits given that the masculine traits included in the stereotyping measure were relatively positive in valence.

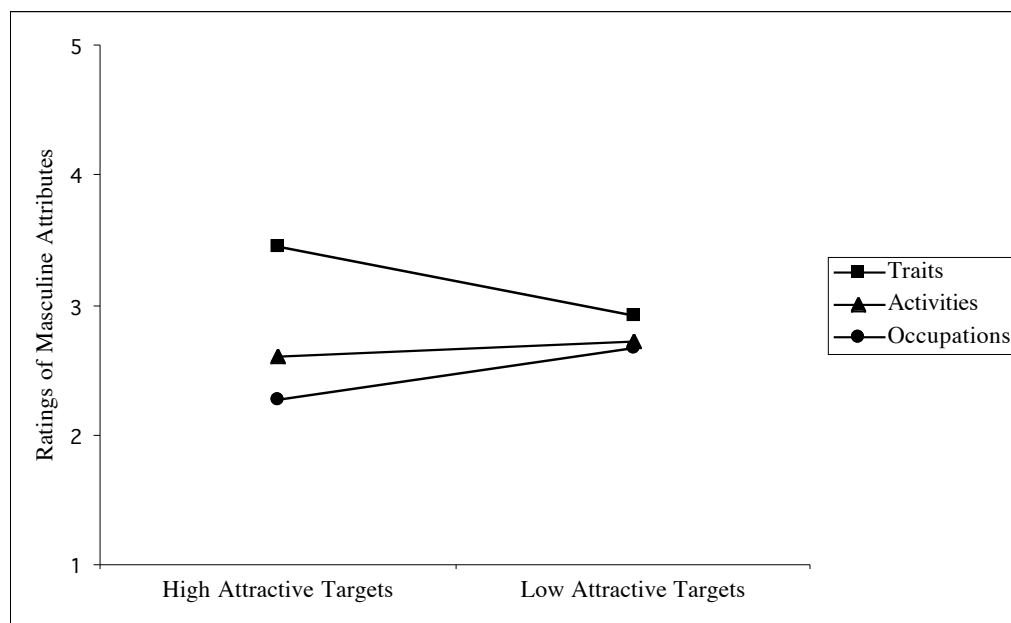


Figure 2: Adults' Mean Ratings of Masculine Traits, Activities, and Occupations to High and Low Attractive Targets

To determine whether adults' attributions of masculinity to males depended on the individual attractiveness ratings of the males, I also conducted Pearson correlations between the mean ratings of the male targets on masculine



attributes and both the averaged non-transformed attractiveness ratings of the attractive males ( $r = -.40$ ) and the average non-transformed attractiveness ratings of the unattractive males ( $r = -.11$ ). Because these two correlations were not different from one another,  $\eta^2$  ( $df = 1$ ) = .12,  $p = n.s.$ , adults' attributions of masculine traits, activities, and occupations to males did not seem to depend on the specific attractiveness ratings of the males.

### **Beauty-is-sex-typed Main Effects**

Expected significant main effects qualified by higher order interactions included that adults rated female targets ( $M = 3.19$ ,  $SD = .49$ ) higher on feminine attributes than male targets ( $M = 2.21$ ,  $SD = .57$ ),  $F(1, 35) = 61.11$ ,  $p < .001$ ,  $\eta^2 = .64$ , and that adults rated male targets ( $M = 3.22$ ,  $SD = .37$ ) higher on masculine attributes than female targets ( $M = 2.33$ ,  $SD = .55$ ),  $F(1, 35) = 84.84$ ,  $p < .001$ ,  $\eta^2 = .71$ . Also, they rated both male and female targets higher on the likelihood of having feminine traits ( $M = 3.18$ ,  $SD = .52$ ) than on the likelihood of doing feminine activities ( $M = 2.45$ ,  $SD = .59$ ) or occupations ( $M = 2.47$ ,  $SD = .58$ ),  $F(2, 70) = 23.41$ ,  $p < .001$ ,  $\eta^2 = .41$ . Similarly, they rated both male and female targets higher on the likelihood of having masculine traits ( $M = 3.19$ ,  $SD = .59$ ) than on the likelihood of doing masculine activities ( $M = 2.66$ ,  $SD = .58$ ) or occupations ( $M = 2.47$ ,  $SD = .56$ ),  $F(1, 35) = 15.95$ ,  $p < .001$ ,  $\eta^2 = .32$ . See Appendix for significant interactions involving stereotype domain that are not directly related to the beauty-is-sex-typed stereotype.

### **Beauty-is-good Results**

A separate repeated measures ANOVA on the gender-neutral items tested the prediction that the attractive targets, regardless of being male or female and in accordance with the beauty-is-good stereotype, would elicit higher ratings on sex-irrelevant attributes. The results, however, showed neither a main effect for target attractiveness nor any interaction involving target attractiveness,  $ps = n.s.$  That target attractiveness did not interact with stereotype domain was particularly surprising because many previous studies have shown that adults consistently make beauty-is-good attributions for traits (e.g., Eagly et al., 1991; Langlois et al., 2000).

The only significant finding in the analysis of gender-neutral attributes was a main effect for stereotype domain,  $F(2, 70) = 21.23, p < .001, \eta^2 = .38.$  Adults rated both male and female targets as more likely to have a gender-neutral trait ( $M = 3.16, SD = .49$ ) and as more likely to engage in a gender-neutral activity ( $M = 3.35, SD = .48$ ) than to do a gender-neutral occupation ( $M = 2.65, SD = .54$ ),  $ps < .001.$  Ratings for traits did not differ from ratings for activities. These results fit with the expectation that a person can have many traits and engage in many activities but can only do one occupation; thus, it is not surprising that the targets were rated lower on doing a gender-neutral occupation than on having a gender-neutral trait or doing a gender-neutral activity.

### **DISCUSSION**

The results of Experiment 1 suggest that adults continue to express a beauty-is-sex-typed stereotype for attractive females but not for attractive males.

The adults in this study believed that attractive females are more feminine in traits, activities, and occupations than unattractive females. Conversely, they did not differentiate attractive males from unattractive males in attributions of masculine-typed items. Instead, they rated all attractive targets (males and females) higher than unattractive targets on masculine-typed traits (but not activities or occupations). These results, taken together, suggest that the beauty-is-sex-typed stereotype is as relevant today for adults' judgments of female targets, but not male targets, as it was 20 years ago. Moreover, these results extend existing literature on the beauty-is-sex-typed stereotype by showing that the attributions hold for three stereotype domains.

Interestingly, adults did not rate attractive targets higher on gender-neutral attributes than unattractive targets as would be expected by the beauty-is-good stereotype. Perhaps the items investigating gender-neutral attributes were unusual in some way such as not being positive enough or relevant enough to the beauty-is-good stereotype to elicit stereotyping. For example, the gender-neutral trait terms may have been less positive in valence than the sex-typed trait terms, especially given that the masculine-typed traits evoked stereotyping for both female and male targets. Additionally, although previous research has shown that gender-neutral traits and some gender-neutral occupations elicit beauty-is-good stereotypes, no research has demonstrated whether gender-neutral activities also elicit such stereotypes. As a result, there may be insufficient precedence in the literature to expect beauty-is-good stereotyping for several of the gender-neutral items tested.

Given that Experiment 1 showed that the beauty-is-sex-typed stereotype is apparent in adults' current judgments of female targets on three stereotype domains, I conducted Experiment 2 to assess whether even children make judgments about targets according to the beauty-is-sex-typed stereotype. Significant results with children would show that the beauty-is-sex-typed stereotype influences judgments prior to adulthood. I tested 7-9-year-olds because, by this age, children should have the cognitive skills necessary to notice multiple aspects of a target stimulus at one time. As a result, children should be able to take into account a target's attractiveness information along with that target's gender information when making sex-typed attributions.

### **Chapter 3: Experiment 2**

#### **METHOD**

##### **Participants**

Participants were 40 seven-year-olds (13 girls; mean age = 7.19 years), 40 eight-year-olds (22 girls; mean age = 8.13 years), and 42 nine-year-olds (21 girls; mean age = 9.14 years), including children of Caucasian (80.3%), Hispanic (5.7%), Asian-Pacific Islander (2.5%), and African American (0.8%) descent. The remaining participants (10.7%) were either mixed race or "other." An experimenter first contacted parents of potential participants with a letter explaining the experiment and then followed up with a telephone call to schedule an appointment. Children received a small gift for their participation. The data from four children were excluded from data analyses due to experimenter error;

therefore data were analyzed for 118 children (54 girls; 38 seven-year-olds, 40 eight-year-olds, and 40 nine-year-olds).

### **Stimuli and Procedure for the Stereotyping Task**

The stimuli and procedure for the stereotyping task were identical to those in Experiment 1 except that children occasionally needed definitions for the trait terms “emotional,” “affectionate,” and “dominant,” and for the occupation terms “secretary” and “comedian.” The experimenters used the same definitions for any children who needed them (e.g., “emotional” was defined as “gets happy or sad easily,” and “secretary” was defined as “someone who takes notes and answers the phone for the boss”). Also, the 1-5 Likert rating scale for making responses was slightly modified so that 1 = not at all, 2 = a little bit, 3 = in the middle, 4 = very, and 5 = very, very. Children practiced with the rating scale prior to doing the task in order to ensure that they understood the procedure. The practice consisted of the experimenter asking each child to identify his or her favorite food, his or her least favorite food, and a food that he or she thought was okay; the child then rated how much they liked each of these foods using the rating scale. All children used the scale appropriately.

### **Stimuli and Procedure for the Multiple Classification Task**

Following the stereotyping task, the children completed a multiple classification task similar to one used by Bigler and Liben (1992), in which children sorted sets of pictures into the appropriate cells of a 2 x 2 matrix. This task was included to determine whether children’s ability to sort pictures along two dimensions was related to their ability to notice and stereotype on two aspects

of a target's face (i.e., gender and attractiveness) in the stereotyping task. Prior to the testing portion of the task, an experimenter crossed two strips of paper to form a 2 x 2 matrix and then demonstrated how to sort a set of randomly ordered pictures (i.e., 16 playing cards that included four black kings, four red kings, four black aces, and four red aces) into this matrix. The experimenter sorted the pictures into the four piles and explained why the pictures were sorted together.

The child then sorted three sets of randomly ordered pictures. The first set included schematic drawings of orange and blue boats and cars (boats/cars), the second set included schematic drawings of men and women reading and talking on the phone (reading/talking on the phone), and the third set included photograph images of female and male children and adult faces that were not seen in the stereotyping task (gender/age of faces). Children always sorted boats and cars first and faces last. As per Bigler and Liben, children demonstrated multiple classification ability if they sorted each set of pictures along two dimensions (e.g., color and type of vehicle for the first set of pictures) and if they could justify why they sorted the pictures the way they did. If the pictures were sorted incorrectly, the experimenter corrected the arrangements and asked for a justification for the corrected arrangement. Scoring for each set of pictures was 3 points for a correct sort and appropriate justification, 2 points for an incorrect sort but an appropriate justification of the experimenter's sort, 1 point for a correct sort but an inappropriate justification, and 0 points for an incorrect sort and an inappropriate justification of the experimenter's sort.

To test whether stereotyping was related to a second form of classification skill, children also completed a hierarchical sorting task in which the experimenter randomly laid out a set of seven pictures of schematically drawn animals including three gray bears, two brown bears, and two gray elephants. The experimenter asked each child two questions: “Are there more gray elephants or more gray animals?” (gray elephants/gray animals), and “Are there more bears or more brown bears?” (bears/brown bears). Although the two questions always occurred in this order, the order of response options within each question were randomized across participants. Children received a score of 1 for each correct response and 0 for each incorrect response.

## **RESULTS**

### **Beauty-is-sex-typed Interactions**

Similar to Experiment 1, if children express a beauty-is-sex-typed stereotype for females, then they should give higher ratings of feminine attributes to attractive versus unattractive female targets but should rate attractive versus unattractive males similarly on feminine attributes. Conversely, if children express a beauty-is-sex-typed stereotype for males, then they should give higher ratings of masculine attributes to attractive versus unattractive male targets but should not differentiate attractive versus unattractive females on masculine attributes. To test these predictions, I conducted separate repeated measures analyses of variance (ANOVAs) for responses to the feminine and masculine attributes. Each ANOVA consisted of a 3 (participant age—7, 8, or 9 years) x 2 (participant gender) x 2 (target attractiveness) x 2 (target gender) x 3 (stereotype

domain-- traits, activities, or occupations) mixed model design. The between-participants variables were participant age and participant gender; the within-participants variables were target attractiveness, target gender, and stereotype domain. All analyses showed some interaction effects of participant age and gender, so I did not collapse data across either variable (see Appendix for additional results involving participant age and gender that were not related to the beauty-is-sex-typed stereotype). In interpreting all significant interactions, I conducted paired comparisons while controlling for Type 1 error across multiple comparisons by using Sidak corrections.

The analysis of the feminine attributes showed that, like adults, children evidenced a beauty-is-sex-typed stereotype for females but not for males as shown by a significant two-way interaction between target attractiveness and target gender,  $F(1, 112) = 15.02, p < .001, \eta^2 = .12$ . Comparisons showed that children, like adults, rated the high attractive females ( $M = 3.54, SD = .84$ ) significantly higher on feminine attributes than the low attractive females ( $M = 2.90, SD = .90$ ),  $p < .001$ ; there was no significant difference in ratings of high versus low attractive male targets on feminine attributes,  $p = \text{n.s.}$ , once corrected for multiple comparisons (see Figure 3). This interaction between target attractiveness and target gender was not qualified by any higher order interactions; thus, children's beauty-is-sex-typed attributions to females did not depend on age and held for the three stereotype domains of traits, activities, and occupations suggesting that children as young as 7-years-old express a beauty is sex-typed stereotype for females.



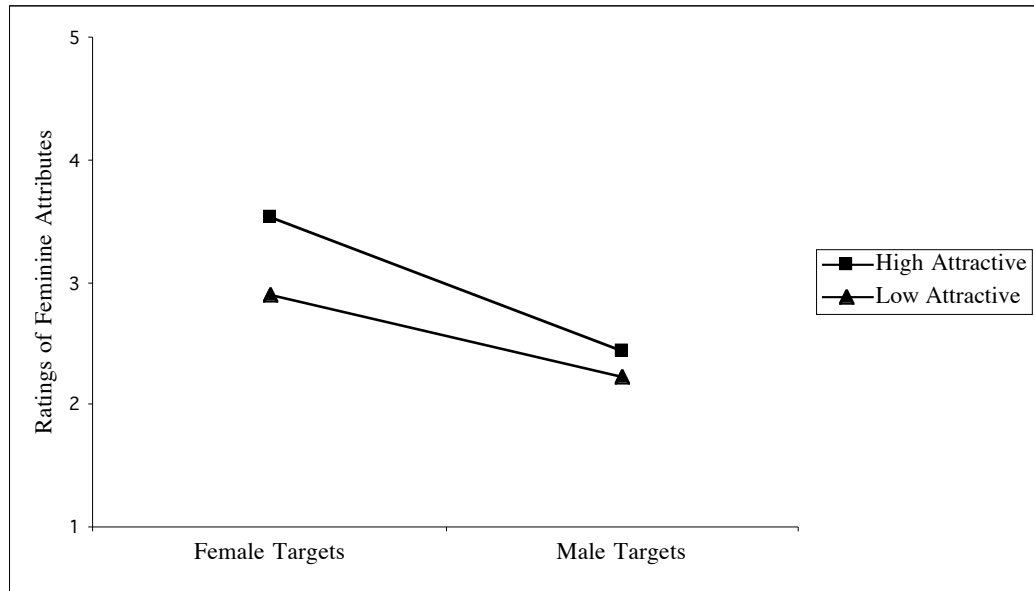


Figure 3: Children’s Mean Ratings of Feminine Attributes to High and Low Attractive Female and Male Targets

For feminine attributes, there was also one significant three-way interaction between stereotype domain, target attractiveness, and participant gender,  $F(2, 224) = 3.57, p < .05, \eta^2 = .03$ : Boys rated high attractive targets significantly higher than low attractive targets on feminine traits ( $p < .001$ ) whereas girls did not, and girls rated high attractive targets significantly higher than low attractive targets on feminine activities ( $p < .001$ ) whereas boys did not (see Figures 4 and 5). Both boys and girls rated high attractive individuals significantly higher on feminine occupations than low attractive individuals,  $ps < .01$ .

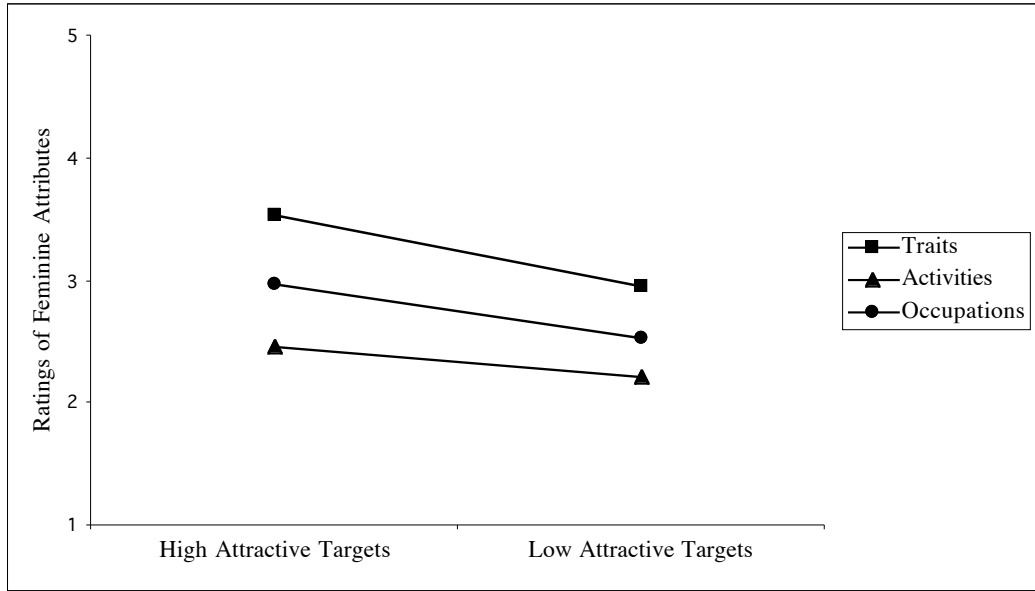


Figure 4: Boys' Mean Ratings of Feminine Attributes to High and Low Attractive Targets

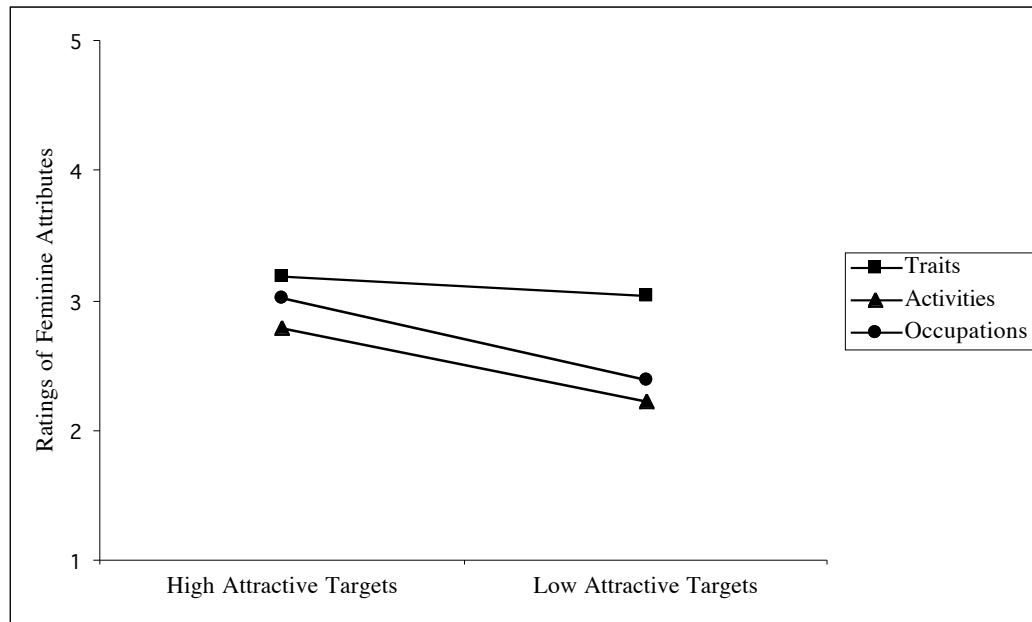


Figure 5: Girls' Mean Ratings of Feminine Attributes to High and Low Attractive Targets

To determine whether children's perceptions of females depended on the individual attractiveness ratings of the faces, I conducted Pearson correlations between the mean ratings of the female faces on feminine attributes and both the averaged non-transformed attractiveness ratings of the attractive female faces ( $r = -.24$ ) and the average non-transformed attractiveness ratings of the unattractive female faces ( $r = .67$ ). These two correlations were near significantly different from one another,  $\chi^2 (df = 1) = 3.76, p = .05$ , suggesting that children's beauty-is-sex-typed attributions to females were related to the attractiveness scores of the individual facial images, at least for the unattractive females.

Similar to the adults and in contrast to the results for the feminine attributes, the results for the masculine attributes did not support a beauty-is-sex-typed stereotype for male faces given that attractiveness of target did not interact with target gender in the masculine attributes analysis,  $p = \text{n.s.}$  Moreover, Pearson correlations between the mean ratings of the male faces on masculine attributes and both the averaged non-transformed ratings of the attractive male faces ( $r = -.09$ ) and the average non-transformed ratings of the unattractive male faces ( $r = -.15$ ) were not different from one another,  $\chi^2 (df = 1) = .20, p = \text{n.s.}$  As a result, children's attributions of masculine traits, activities, and occupations did not depend on specific faces. Because attractive and unattractive males were rated equally high on masculine attributes, this lack of findings suggests that even children do not perceive beauty as being sex-typed for males.

### **Beauty-is-sex-typed Main Effects**

As predicted, significant main effects that were superceded by higher order interactions included that children rated female targets ( $M = 3.22, SD = .73$ ) higher on feminine attributes than male targets ( $M = 2.34, SD = .62$ ),  $F (1, 112) = 248.31, p < .001, \eta^2 = .69$ , and that they rated male targets ( $M = 3.19, SD = .79$ ) higher on masculine attributes than female targets ( $M = 2.41, SD = .66$ ),  $F (1, 112) = 133.50, p < .001, \eta^2 = .54$ . Additionally, they rated all high attractive targets ( $M = 3.00, SD = .73$ ) higher on feminine attributes than low attractive targets ( $M = 2.56, SD = .69$ ),  $F (1, 112) = 39.27, p < .001, \eta^2 = .26$ . They also rated all high attractive targets ( $M = 2.87, SD = .75$ ) higher on masculine

attributes than low attractive targets ( $M = 2.72$ ,  $SD = .71$ ),  $F(1, 112) = 4.95$ ,  $p < .05$ ,  $\eta^2 = .04$ .

Finally, children rated both male and female targets higher on: 1) having feminine traits ( $M = 3.18$ ,  $SD = .78$ ) than on doing feminine activities ( $M = 2.43$ ,  $SD = .73$ ) and occupations ( $M = 2.74$ ,  $SD = .86$ ),  $F(2, 224) = 42.06$ ,  $p < .001$ ,  $\eta^2 = .27$ ; and 2) having masculine traits ( $M = 3.11$ ,  $SD = .78$ ) than on doing masculine activities ( $M = 2.70$ ,  $SD = .74$ ) and occupations ( $M = 2.60$ ,  $SD = .88$ ),  $F(2, 224) = 23.43$ ,  $p < .001$ ,  $\eta^2 = .17$ . See Appendix for significant interactions involving stereotype domain that are not directly related to the beauty-is-sex-typed stereotype.

### **Beauty-is-good Results**

This separate analysis of responses to the gender-neutral attributes tested the prediction that the attractive targets, regardless of being male or female, would elicit higher ratings on gender-neutral items. Results demonstrated a main effect for target attractiveness: Children rated high attractive targets ( $M = 3.29$ ,  $SD = .62$ ) higher than low attractive targets ( $M = 3.01$ ,  $SD = .64$ ) on gender-neutral attributes,  $F(1, 112) = 22.41$ ,  $p < .001$ ,  $\eta^2 = .17$ . This main effect for target attractiveness, though, was qualified by a two-way interaction between target attractiveness and target gender,  $F(1, 112) = 14.87$ ,  $p < .001$ ,  $\eta^2 = .12$ , and a three-way interaction between target attractiveness, target gender, and participant age,  $F(2, 112) = 5.01$ ,  $p < .01$ ,  $\eta^2 = .08$ . Comparisons to interpret these interactions show that 7-year-olds and 9-year-olds, but not 8-year-olds, rated high attractive females significantly higher on gender-neutral attributes than low

attractive females,  $ps < .01$  for both age groups (see Figure 6). None of the age groups differentially rated male targets on gender-neutral attributes as an effect of their attractiveness. Taken together, these results suggest that the majority of the children expressed a beauty-is-good stereotype, but for female targets only.

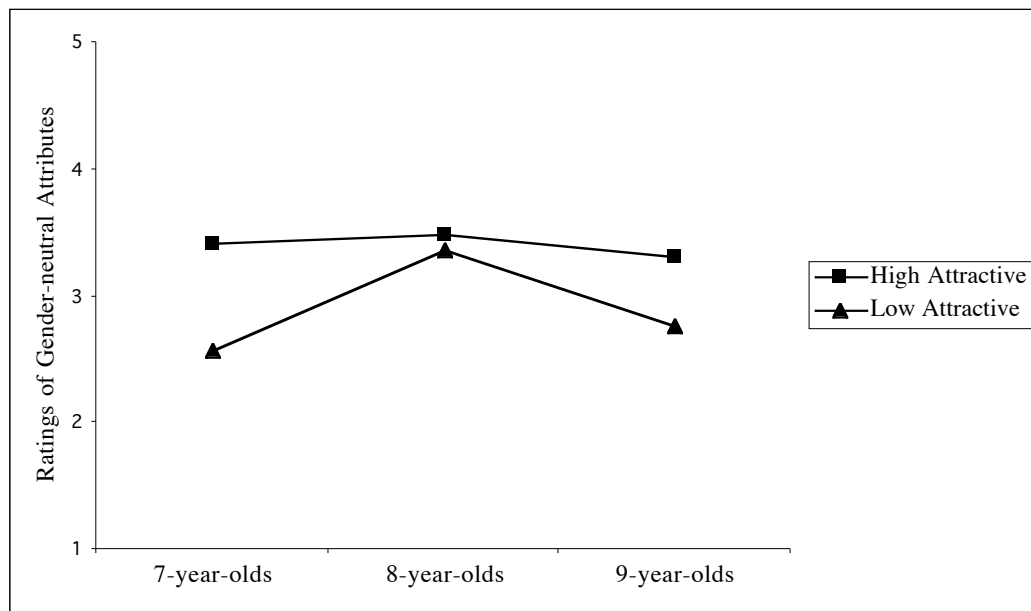


Figure 6: Children's Mean Ratings of Gender-neutral Attributes to High and Low Attractive Female Targets as a Function of Participant Age

The analysis of the gender-neutral attributes also resulted in a main effect for stereotype domain,  $F(2, 224) = 20.87, p < .001, \eta^2 = .16$ . Like adults, children rated all targets as more likely to have a gender-neutral trait ( $M = 3.37, SD = .72$ ) and to engage in a gender-neutral activity ( $M = 3.23, SD = .68$ ) than to do a gender-neutral occupation ( $M = 2.84, SD = .87$ ),  $p < .001$ . Ratings for traits did not differ from ratings for activities. Thus, similar to adults' beliefs, children rated

targets consistent with the expectation that a person can have many traits and engage in many activities but can only do one occupation.

### **Analyses of Multiple and Hierarchical Classification as Predictors of Beauty-is-sex-typed Attributions**

To determine if multiple classification ability predicted 7-9-year-olds' expression of a beauty-is-sex-typed stereotype for female targets, I first conducted a multiple regression analysis. The four predictor variables were children's individual scores on all three multiple classification tasks (boats/cars, reading/talking on the phone, gender/age of faces) and just one hierarchical classification task (bears/brown bears)<sup>3</sup>. The dependent variable was a difference score calculated by subtracting the summed ratings of feminine attributions to low attractive female targets from the summed ratings of feminine attributions to high attractive female targets; therefore, high, positive difference scores reflect the greatest differentiation in ratings of high versus low attractive females on feminine attributes.

Only difference scores from ratings of female targets on feminine attributes were used because children evidenced a beauty-is-sex-typed stereotype for female targets only. Difference scores ranged from -6 to 9 ( $M = 2.03$ ,  $SD = 2.77$ ). The linear combination of the four predictors was not significantly related to the difference scores,  $F(4, 113) = .80$ ,  $p = \text{n.s.}$ ; additionally, none of the predictors by themselves significantly predicted the difference scores (all  $ps = \text{n.s.}$ ), suggesting an overall lack of relationship between multiple or hierarchical

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<sup>3</sup> I did not include children's scores on the first hierarchical classification task (gray elephants/gray animals) because all children but one responded correctly on that task.

classification ability and expression of a beauty-is-sex-typed stereotype for female targets.

Because two of the predictors (i.e., reading/talking on the phone and gender/age of faces) were significantly correlated with one another ( $r = .24, p < .01$ ), and because the individual predictors may have underestimated the relationship between overall classification ability and beauty-is-sex-typed stereotyping, I also summed across scores on the four multiple and hierarchical classification test to create an index of classification ability for each child. Scores ranged from 3 to 11 ( $M = 9.32, SD = 1.42$ ). This index did not predict a linear relationship with the difference scores,  $F(1, 116) = 1.34, p = \text{n.s.}$  Moreover, indices from only children with the lowest classification scores (i.e., scores ranging from 3 to 8;  $n = 24$ ) and children with the highest classification scores (i.e., a score of 11;  $n = 19$ ) also did not predict a linear relationship with the difference scores,  $F(1, 41) = 1.14, p = \text{n.s.}$  Contrary to the hypothesis, multiple and hierarchical classification skill did not seem to be related to children's expression of the beauty-is-sex-typed stereotype for female targets.

## **DISCUSSION**

Like the adults in Experiment 1, the children in Experiment 2 expressed a beauty-is-sex-typed stereotype for attractive females but not for attractive males. Again, stereotype domain (traits versus activities versus occupations) did not influence children's expression of a beauty-is-sex-typed stereotype for females, although stereotype domain in combination with child gender influenced attributions of feminine-typed items to high and low attractive targets in general



(i.e., girls rated attractive targets higher than unattractive targets on feminine activities, and boys rated attractive targets higher than unattractive targets on traits). This interaction, however, was not directly related to the beauty-is-sex-typed stereotype because it did not depend on the gender of the targets. Beauty did not appear to be sex-typed for children's ratings of males on masculine-typed items because such attributions also did not depend on the gender of the targets. Rather, males were rated as more masculine than females, and attractive targets were rated as more masculine in attributes than unattractive targets, with the effect size for target gender stronger than the effect size for target attractiveness.

Unlike the adults in Experiment 1, the children in Experiment 2 expressed a beauty-is-good stereotype when making attributions of gender-neutral traits, activities, and occupations. These attributions, however, depended on both the attractiveness of the targets and the age of the participants. Children 7 and 9 years of age (but not 8 years of age) rated attractive female targets, but not attractive male targets, higher than their unattractive counterparts on gender-neutral attributes. These results seem to contradict existing literature suggesting that the beauty-is-good stereotype is as relevant in attributions to males as in attributions to females (Eagly et al., 1991).

Finally, children's expression of the beauty-is-sex-typed stereotype was not related to their multiple or hierarchical classification ability. Regardless of children's multiple classification scores (which were sufficiently variable upon inspection of the data) or age in years, they expressed a beauty-is-sex-typed stereotype for females. Thus, although multiple classification skill indicates how

well a child can take into account multiple information about a stimulus at one time, it appears to have no relation to how likely a child incorporates facial attractiveness information into his or her judgments of targets on sex-typed attributes. Because the 7-9-year-old children expressed the stereotype that beauty is sex-typed despite varying multiple classification scores, larger age differences such as those between children in early childhood versus children in middle childhood may be a better predictor of the likelihood of rating attractive female targets higher than unattractive female targets on feminine attributes. Testing younger children is needed to validate this hypothesis.

## **Chapter 4: General Discussion**

This research found evidence for a beauty-is-sex-typed stereotype in both adults and children but for attributions to females only. Previous research has demonstrated that adults attribute greater sex-typed traits and behaviors to more facially attractive individuals versus less facially attractive individuals (Cash et al., 1977; Gillen, 1981; Goldberg et al., 1975; Unger et al., 1982), but that the attributions of femininity to attractive females appears to be stronger than the attribution of masculinity to attractive males (Brown et al., 1986; Cash & Duncan, 1984; Cash & Trimer, 1984; Drogosz & Levy, 1996; Gillen, 1981; Jackson, 1983a; Jackson & Cash, 1985). The first experiment reported here replicates these findings with adults by showing that the beauty-is-sex-typed stereotype is still relevant but is expressed only for females and not males. Additionally, the first

experiment shows that adults' beauty-is-sex-typed stereotype for attractive females holds for three domains of gender stereotypes, which is a new addition to the beauty-is-sex-typing literature. The second experiment reported here extends previous research by demonstrating that even children make attributions according to the beauty-is-sex-typed stereotype and also for female targets only. Indeed, 7-9-year-olds are surprisingly adult-like in their ratings of attractive versus unattractive females on feminine attributes and in their ratings of all males on masculine attributes. In the studies reported here, children only differed from adults in their attributions of gender-neutral traits, activities, and occupations to attractive targets in that they made some responses consistent with the beauty-is-good stereotype (e.g., Eagly et al., 1991; Langlois et al., 2000), whereas adults did not. The remaining discussion explores these interesting consistencies between children and adults in the use of the beauty-is-sex-typed stereotype and describes the implications of the beauty-is-sex-typed stereotype for everyday interactions and for understanding the development of attractiveness and gender stereotypes.

### **IS BEAUTY SEX-TYPED FOR FEMALES?**

As demonstrated in these studies and earlier research, both adults and children perceive attractive females as more feminine than unattractive females in three gender stereotype domains (i.e., traits, activities, and occupations), and the effect sizes for these results are similar between the two age groups<sup>4</sup>. Use of the beauty-is-sex-typed stereotype is apparent by at least 7-years-old, which suggests that children's gender stereotypes of females during middle childhood are

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<sup>4</sup> Effect size comparisons between previous research and the studies reported here were not possible because previous studies did not report sufficient statistics for calculating effect sizes.

differentiated in a way that has not been previously explored in the literature. Although several studies have shown that children's gender stereotypes become more flexible around 8-9-years-old (Ruble & Martin, 1998) and that this flexibility includes taking into account a target's personal preferences when making sex-typed attributions (Biernat, 1991; Martin, 1989), no study until now has shown that this flexibility also includes taking into account a target's facial attractiveness when making sex-typed attributions. Just as children eventually are able to take into account knowledge about a target's feminine or masculine interests when making judgments of that target's other sex-typed attributes, they also are able, by 7 years of age, to take into account knowledge about a female's facial attractiveness when making judgments of that female's sex-typed attributes.

Children's attributions to unattractive females, though, may depend on the specific attractiveness rating of a female target given that, in Experiment 2, children rated the most unattractive females lowest on feminine attributes. In contrast, children rated all high attractive females, including those with attractiveness ratings close to the middle of the scale, as highly feminine. This finding is similar to recent research suggesting that medium attractiveness is sufficient to warrant beauty-is-good attributions to female targets (Griffin & Langlois, 2003).

Unlike previous studies (e.g., Heilman & Stopeck, 1985b; Jackson & Cash, 1985) showing that unattractive women are rated as more masculine than attractive women, the studies reported here did not result in greater attributions of masculine traits, activities, or occupations to unattractive versus attractive women

by either children or adults. In contrast, children rated all attractive individuals, including females, as higher in masculine attributes than unattractive individuals, and adults simply did not distinguish attractive from unattractive females when rating targets on masculine attributes. One possibility for why children rated both attractive females and males as higher in masculinity than their unattractive counterparts could be that they perceived the masculine attributes as positive in valence, thus conflating gender stereotypes with attractiveness stereotypes. Indeed, several gender stereotype theorists have noted that masculine traits are often perceived as more desirable than feminine traits for both males and females and that masculine activities are often viewed as more fun and less chore-like than feminine activities (e.g., Bigler, 1997; Serbin, et al., 1993). Hence, children, and adults when making attributions of masculine traits, appear to express a beauty-is-good stereotype rather than a beauty-is-sex-typed stereotype in judgments of masculine attributes.

Whatever the reason for why children and adults did not downgrade attractive women on masculine attributes, the results from these studies provide further support for Drogosz and Levy's (1996) argument that the "lack of fit" hypothesis, or the idea that attractive women are viewed as inappropriate for masculine activities or occupations (Heilman, 1983), is indeed outdated. Neither children nor adults currently perceive female attractiveness as being a liability for engaging in masculine activities or occupations.

What, if any, are the consequences of both adults and children thinking that attractive females are more feminine and of children thinking that attractive

females are more masculine than unattractive females? One consequence could be that attractive females are perceived as more appropriate for both feminine-typed and masculine-typed roles and occupations than unattractive females, thus resulting in appearance-based discrimination in everyday activities and hiring practices. Indeed, unlike some previous findings suggesting that attractive women are not taken seriously for masculine-typed roles (e.g., Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985a; Sigelman et al., 1986), the results here suggest that children and adults identify attractive females as more likely than unattractive females to have both feminine and masculine traits and that children perceive attractive females as more likely than unattractive females to engage in both feminine and masculine activities and occupations. Subsequently, as Jackson and Cash (1985) found, consequences of the stereotype that beauty-is-sex-typed likely include forming unfounded expectations about unattractive women's dispositions or abilities and discriminating against unattractive females for sex-typed jobs. Future research needs to assess whether the perception that unattractive women are less sex-typed than attractive women indeed leads to unwarranted expectations by children (such as in perceptions of a teacher) and adults (such as in perceptions of a job candidate).

One important limitation to the conclusion that adults and children express a beauty-is-sex-typed stereotype for females is that the results cannot show whether children's and adults' attributions of feminine traits, activities, and occupations to facially attractive females really reflect their awareness of attractiveness or of facial femininity or of both. Ratings of facial attractiveness

and facial femininity in female faces are highly and positively correlated (e.g., Bronstad et al., 2002), and therefore determining whether it is facial attractiveness or facial femininity that is driving these results is not possible. Regardless of whether it is facial attractiveness or facial femininity that leads to differential gender stereotyping of low and high attractive females, it is important to note that a target's facial appearance affects children's and adults' stereotyped attributions.

Future research, though, could attempt to untangle the influence of facial attractiveness and facial femininity by employing stimuli in which one factor is kept constant while the other factor varies. Such stimuli could include real faces that naturally vary in attractiveness and femininity; however, because of the positive relationship between facial attractiveness and facial femininity, it could be difficult to find faces that are, for example, high in attractiveness but low in femininity. To remedy this problem, stimuli could be manipulated experimentally to appear more or less attractive and more or less feminine via computer imaging techniques (e.g., Perrett et al., 1998; Rhodes, Hickford, & Jeffery, 2000). These techniques, however, have the unique problem of external validity in that computer-manipulated faces may not be representative of those in the everyday world. Nonetheless, employing images of female faces that vary in both levels of attractiveness and facial femininity would provide a better understanding as to whether beauty is sex-typed, whether femininity is sex-typed, or whether these two possibilities cannot be disentangled.

Interestingly, children's likelihood of rating attractive females higher on feminine attributes than unattractive females does not seem to depend on having

the cognitive ability to engage in either multiple or hierarchical classification. Multiple classification ability may not have predicted children's expression of the beauty-is-sex-typed stereotype in the study of children reported here because it may be cognitively easier for children to incorporate two perceptual characteristics (i.e., gender and attractiveness) of a target into gender stereotypes than would be expected. Also, unlike the stereotyping measure used by Bigler and Liben (1992), the stereotype measure used in the studies reported here asked children to decide how likely it is that a person has a particular sex-typed attribute rather than to decide "who can..." have a particular sex-typed attribute. Thus, the two tasks may have been too different to reach similar conclusions. Nonetheless, it is interesting that children notice both gender and attractiveness information about a target by at least 7-years-old and subsequently make beauty-is-sex-typed attributions based on this information, even when they have primitive multiple classification skills.

### **IS BEAUTY SEX-TYPED FOR MALES?**

Results from these studies with children and adults indicate that neither group seems to believe that attractive males are more masculine in attributes than unattractive males. Specifically, children and adults alike appear to perceive all males as equally masculine to one another in three domains of masculinity stereotypes, regardless of facial attractiveness. Moreover, both studies had sufficient power to detect the expression of a beauty-is-sex-typed stereotype for male targets if such a stereotype existed, especially given the evidence found for a beauty-is-sex-typed stereotype for female targets. This finding that neither



children nor adults express a beauty-is-sex-typed stereotype for males fits with and extends much of the previous literature investigating this stereotype in adults (Dickey-Bryant et al., 1986; Heilman & Saruwatari, 1979; Heilman & Stopeck, 1985b; Hill & Lando, 1976), yet contradicts some studies investigating the relationship between attractiveness and masculinity in male targets (Drogosz & Levy, 1996; Gillen, 1981; Keating, 1985).

Why do some studies find greater attributions of masculinity to males when several do not? One reason that some studies have found evidence for attributions of a beauty-is-sex-typed stereotype to males could be that those studies inadvertently tap a “masculine-is-sex-typed” stereotype by using stimuli that vary in *both* facial attractiveness and facial masculinity. Because facial masculinity is not as highly correlated with male facial attractiveness as facial femininity is correlated with female facial attractiveness (e.g., Bronstad et al., 2002), attractive males likely vary widely in degree of facial masculinity, whereas attractive females vary less in degree of facial femininity. Experiments 1 and 2 used male facial images that varied in ratings of facial masculinity. If some earlier studies, though, employed only stimuli consisting of images of attractive males high in facial masculinity and unattractive males low in facial masculinity, then attractiveness may have been confounded with masculinity in attributions of masculine-typed items. Although pilot research for Experiment 1 did not find that adults make differential attributions of the beauty-is-sex-typed stereotype for attractive males who are high in facial masculinity versus attractive males who are low in facial masculinity, the power needed to conclude that facial masculinity is

irrelevant in ratings of attractive versus unattractive males on masculine attributes may have been too low. Thus, future research should more carefully test whether facial masculinity affects expression of the beauty-is-sex-typed stereotype for male targets.

Children and adults also perceived attractive and unattractive males as equally likely to have feminine attributes. Unlike previous studies (e.g., Dunkle & Francis, 1990, 1996; Unger et al., 1982), the studies here demonstrate that attractive men are not perceived as more feminine in traits than unattractive men, and unattractive men are not perceived as more appropriate for a feminine occupation than attractive men. By examining three domains of gender stereotypes and by assessing both children's and adults' ratings of males on feminine and masculine attributes, the results of these studies provide additional evidence suggesting that the beauty-is-sex-typed stereotype is currently not applied to males.

#### **IS BEAUTY GOOD IN ATTRIBUTIONS OF GENDER-NEUTRAL TRAITS, ACTIVITIES, AND OCCUPATIONS?**

Whereas most children partially expressed a beauty-is-good stereotype for females (but not males) in rating the attractive females higher than the unattractive females on the gender-neutral attributes, adults did not differentiate between attractive and unattractive individuals in ratings of gender-neutral attributes. That children did not apply a beauty-is-good stereotype to male attractive targets and that adults did not apply the same stereotype to either female or male attractive targets is surprising given the prevalence of literature demonstrating that attractive individuals, regardless of being male or female, are

judged higher on positive traits (e.g., Eagly et al., 1991; Langlois et al., 2000) and as more appropriate for gender-neutral occupations (Cash et al., 1977) than unattractive individuals.

Perhaps children and adults did not rate all attractive targets higher on gender-neutral traits because the trait items included in the measure either were not sufficiently positive (e.g., riding bikes) or unintentionally reflected attributes associated with adjustment and intellectual competence rather than attributes associated with social competence. In their meta-analysis of attributions to strangers, Eagly et al. (1991) found that the beauty-is-good stereotype is stronger for attributions of traits reflecting social competency than for traits reflecting adjustment, intellectual competency, or integrity. In constructing my measure, I deliberately chose gender-neutral traits items seemed positive in valence; however, I included only one trait item (i.e., “friendly”) that reflected social competence. Indeed, when I analyzed only participants’ ratings for “friendly,” results showed that both adults and children rated the high attractive targets significantly higher on this attribute than the low attractive targets,  $p < .05$  for adults and  $p < .001$  for children. Thus, I may not have found an overall effect for attractiveness because the majority of questions about gender-neutral attributes (e.g., being curious or being a writer) were either not positive enough or involved attributions of adjustment and intellectual competence over social competence.

Although the preceding explanation suffices for the lack of beauty-is-good attributions by adults, it does not explain why children rated attractive females, but not attractive males, higher than their unattractive counterparts on gender-

neutral attributes. Whereas Ramsey and Langlois (2002) found that attractive females are more likely than attractive males to be remembered as having positive characteristics, thus indicating that the beauty-is-good stereotype might be more relevant for attributions to females versus males, a meta-analysis by Eagly et al. (1991) showed that attractiveness stereotypes are equally relevant for attributions to females and males. Because there is no clear explanation for why children applied the beauty-is-good stereotype to females but not males, further research is needed to determine whether this finding is replicable for gender-neutral attributes.

#### **IMPLICATIONS OF RESULTS FOR ATTRACTIVENESS AND SEX-TYPING RESEARCH**

The results of this investigation of the expression of a beauty-is-sex-typed stereotype in children and adults are an important addition to both attractiveness stereotyping literature and gender stereotyping literature for several reasons. First, the results demonstrate that both children's and adults' attributions of attractiveness stereotypes include a sex-relevant component comprised of three sex stereotype domains; thus attractiveness stereotypes are not limited to attributions of positive and negative characteristics (i.e., beauty is good). Second, the results show that both children's and adults' attributions of gender stereotypes to females, but not males, depend on facial attractiveness. Because no study until now has investigated children's gender stereotypes using photographs of both high and low facially attractive individuals, previous sex-typing development research using schematic drawings (e.g., Carter & Patterson, 1982; Serbin et al., 1993), dolls (Picariello et al., 1990), or only high attractive facial images from

catalogs or magazines (e.g., Fagot et al., 1992) as stimuli is somewhat limited in its conclusions about the development of children's gender stereotypes about females. Unlike the results of previous studies of gender stereotype development (see Ruble & Martin for a review, 1998), the findings from Experiment 2 suggest that children do not stereotype females in general as highly feminine. Instead, by 7-years-old, children already perceive high attractive females as more feminine (and masculine) in attributes than low attractive females, thus suggesting that all females are not perceived as alike in sex-typed attributes. This finding that children make differential sex-typed attributions to attractive and unattractive women hints at an untapped form of flexibility in children's developing gender stereotypes that does not appear to be related to multiple classification ability; however, further research using additional sex-typed attributes and other multiple classification tasks is clearly necessary to support this claim.

#### **ADDITIONAL LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH**

One additional limitation of this research is that it does not provide information about when children begin to use attractiveness information in addition to gender information when making stereotyped attributions. It only shows that they do use this information by 7-years-old. Previous studies have found that children begin to take into account a target's sex-typed interests or preferences in judgments of other sex-typed attributes around 8-9-years-old (Biernat, 1991; Martin, 1989). Such studies also demonstrated that, prior to middle childhood, children tend to use gender information over other individuating information (e.g., preferences) to decide how sex-typed a person is.

Younger children may have age-related cognitive limitations that prevent them from processing and making use of both gender and preference information at the same time. The use of both gender and attractiveness information when making judgments about a person's sex-typed attributes may follow this same developmental trajectory. Hence, additional research on children younger than 7-years-old is needed to determine whether even preschoolers make differential gender stereotypes to attractive versus unattractive women, or whether they rely on gender information only.

Additional research is also needed to determine the relative weight of various information that children know about a target when making judgments of sex-typed traits, activities, or occupations. For example, is knowledge of a target's facial attractiveness more influential than knowledge of a target's interests or preferences? Research by Jackson (1983b) with adults suggests that information about preferences and interests is more influential than information about attractiveness at least in judgments of job suitability. Perhaps knowledge of preferences is more important than knowledge of attractiveness in children's judgments as well. Additional research is needed to investigate this possibility.

Finally, although the results for female targets clearly reflect higher attributions of feminine traits, activities, and occupations to attractive versus unattractive females, the large effect sizes demonstrating strong gender stereotypes cannot be overlooked. Despite differential attributions of sex-typed items to attractive versus unattractive females, children and adults rated even unattractive females much higher on feminine attributes and much lower on

masculine attributes than males, providing additional evidence for the continuing prevalence of gender stereotypes. Thus, the beauty-is-sex-typed stereotype, as expressed in these studies, reflects only perceived differences of targets within a gender group and not of targets between gender groups.

## **CONCLUSIONS**

This research provides evidence for both adults' and children's beliefs that beauty is sex-typed for females but not for males. Specifically, these studies show that attractive women are perceived as more feminine than unattractive women in traits, activities, and occupations. Although previous research of attractiveness stereotyping has shown that both children and adults believe that beauty is good, especially for judgments of social competency, this research shows that, even for children 7-9-years-old, attractiveness stereotyping also includes a sex-relevant ("beauty is sex-typed") component. Additionally, this research shows that gender stereotyping depends on target attractiveness. Perhaps children pick up on relationships between attractiveness and gendered attributes very early given that attractive children, especially girls, act in highly sex-typed ways at even 3-5-years-old (e.g., Langlois & Downs, 1979) and that parents treat attractive children, especially girls, in more sex-typed ways (Leinbach & Fagot, 1979). Now that evidence exists showing that children express a beauty-is-sex-typed stereotype for females, future research should continue to assess the implications of this stereotype on children's everyday interactions and psychological functioning.

## Appendix

### ADDITIONAL RESULTS FOR STEREOTYPE DOMAIN

Results showed that stereotype domain interacted with target gender in ratings of feminine attributes by both adults,  $F(2, 70) = 3.63, p < .05, \eta^2 = .09$ , and children,  $F(2, 224) = 34.46, p < .001, \eta^2 = .24$ . Contrast analyses demonstrated that adults and children did not differentiate in their ratings for females on attributions of feminine traits, activities, or occupations, all  $ps = n.s.$  Adults, however, rated males significantly higher on having feminine traits ( $M = 2.88, SD = .57$ ) than on the likelihood of engaging in a feminine activity ( $M = 1.82, SD = .88$ ) or occupation ( $M = 1.94, SD = .80$ ),  $ps < .001$  (ratings for males on feminine activities and occupations did not differ from one another; see Figure 7). Similar to adults, children rated male targets significantly higher on the likelihood of having feminine traits ( $M = 3.00, SD = .96$ ) than on the likelihood of doing a feminine occupation ( $M = 2.38, SD = 1.09$ ) or activity ( $M = 1.64, SD = .75$ ),  $ps < .001$  (ratings for male targets on occupations versus activities were also significantly different,  $p < .001$ ; see Figure 8).



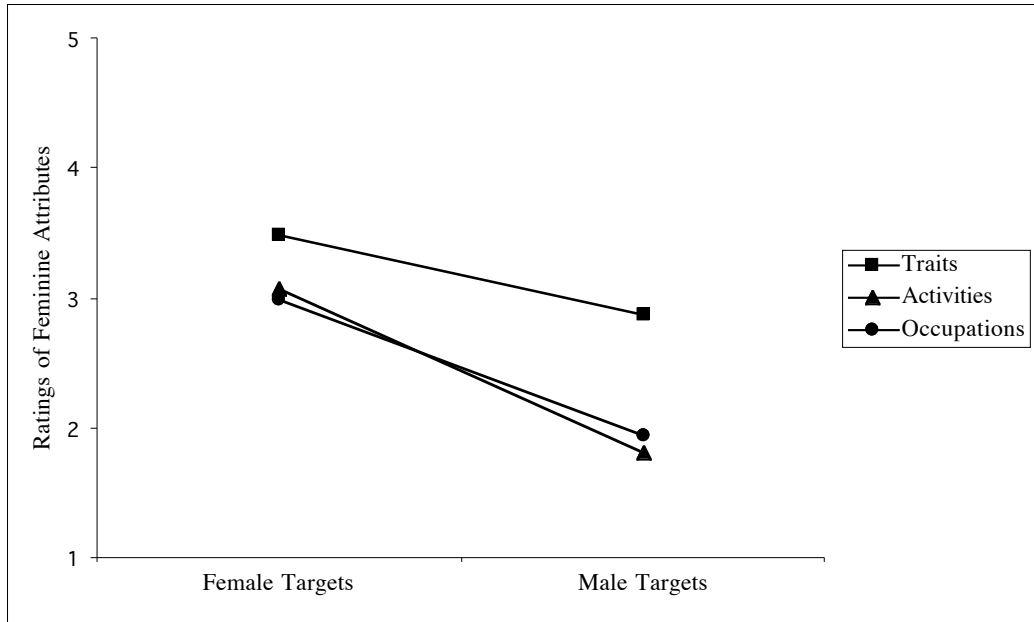


Figure 7: Adults' Mean Ratings of Feminine Traits, Activities, and Occupations to Female and Male Targets

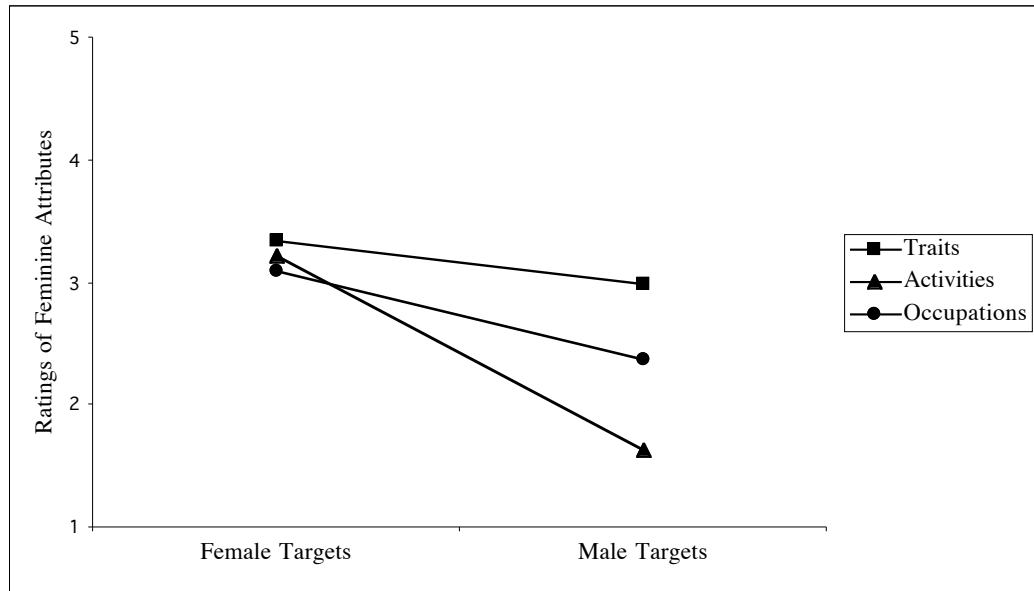


Figure 8: Children's Mean Ratings of Feminine Traits, Activities, and Occupations to Female and Male Targets

An analysis of children's responses to the feminine attributes also evidenced a significant interaction between participant age and stereotype domain,  $F(4, 224) = 3.22, p < .05, \eta^2 = .05$ . Contrasts showed that all children rated targets significantly higher on feminine traits than activities ( $ps < .001$ ) but that 7-year-olds also rated targets significantly higher on feminine traits than occupations,  $p < .001$  (7-year-olds' ratings for feminine activities versus occupations did not differ). Eight-year-olds rated targets significantly higher on feminine occupations than activities, whereas their ratings for feminine traits and occupations did not differ; nine-year-olds' ratings for feminine occupations did not differ from either their ratings of traits or activities (see Figure 9). An interpretation of the meaning of these age differences is difficult because they do

not show a clear age progression and are not related directly to the primary hypotheses.

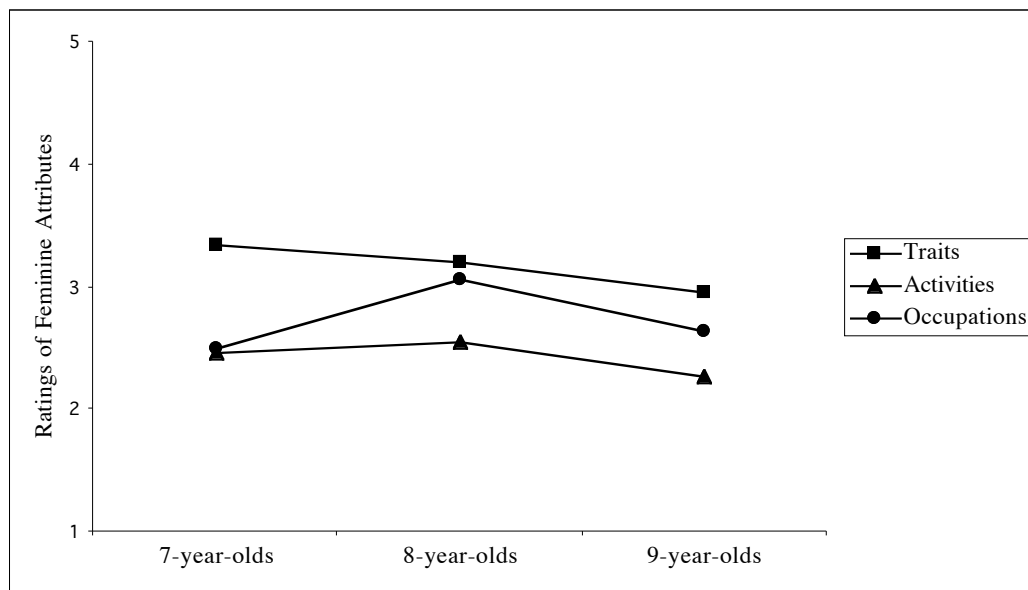


Figure 9: Children’s Mean Ratings of Feminine Traits, Activities, and Occupations as a Function of Participant Age

Analyses of responses to the masculine attributes showed that stereotype domain interacted with target gender in ratings by both adults,  $F(2, 70) = 9.23, p < .001, \eta^2 = .21$ , and children,  $F(2, 224) = 11.46, p < .001, \eta^2 = .09$ . Adults rated male targets significantly higher on the likelihood of having a masculine trait ( $M = 3.46, SD = .71$ ) and engaging in a masculine activity ( $M = 3.41, SD = .70$ ) than doing a masculine occupation ( $M = 2.79, SD = .79$ ),  $ps < .01$ ; ratings for male targets on masculine traits and activities did not differ from one another. Adults rated female targets significantly higher on the likelihood of having a masculine trait ( $M = 2.93, SD = .82$ ) than on the likelihood of either engaging in a masculine

activity ( $M = 1.92, SD = .82$ ) or occupation ( $M = 2.15, SD = .80$ ),  $ps < .01$ ; ratings for females on masculine activities and occupations did not differ from one another (see Figure 10). Like adults, children rated the male targets as more likely to have a masculine trait ( $M = 3.34, SD = 1.05$ ) or to do a masculine activity ( $M = 3.27, SD = .95$ ) than to do a masculine occupation ( $M = 2.97, SD = 1.16$ ),  $ps < .05$ ; ratings for male targets on masculine traits and activities did not differ from one another. Also similar to adults, they rated the female targets as more likely to have a masculine trait ( $M = 2.87, SD = .87$ ) than to do either a masculine activity ( $M = 2.12, SD = .91$ ) or occupation ( $M = 2.24, SD = .96$ ),  $ps < .001$ ; ratings for females on masculine activities and occupations did not differ from one another (see Figure 11).

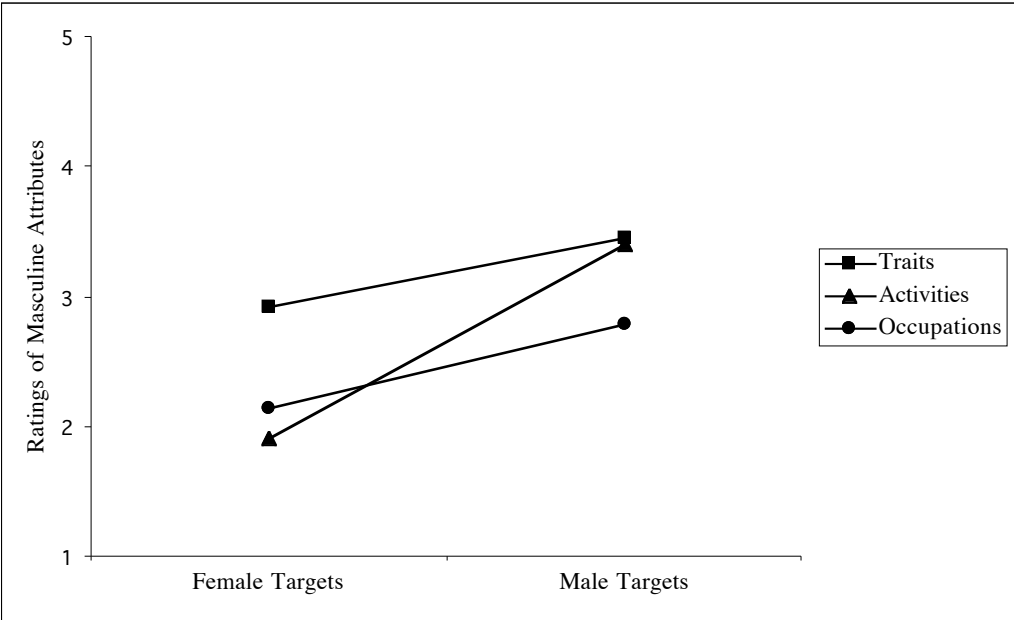


Figure 10: Adults' Mean Ratings of Masculine Traits, Activities, and Occupations to Female and Male Targets

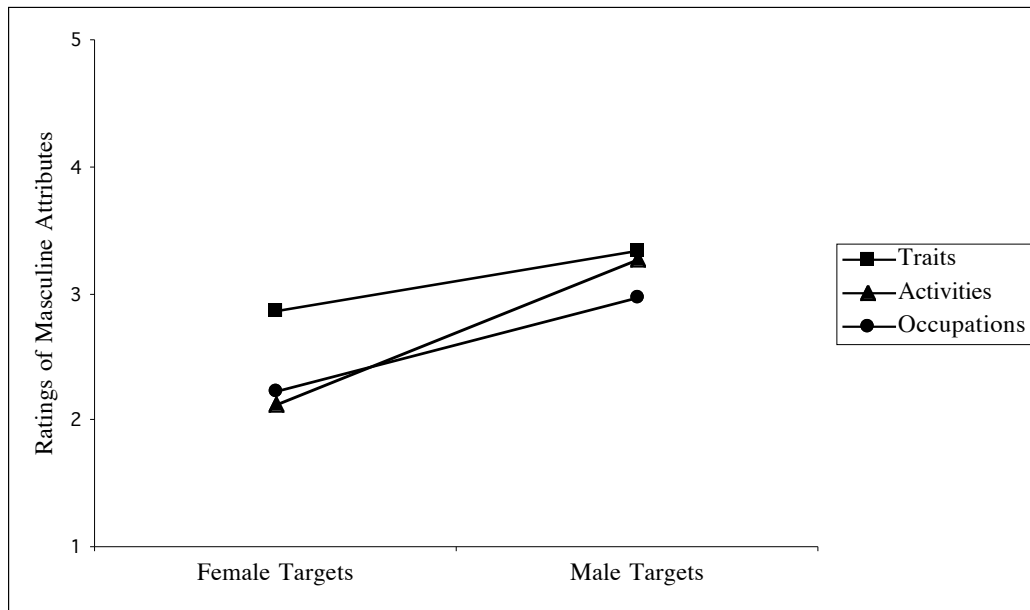


Figure 11: Children’s Mean Ratings of Masculine Traits, Activities, and Occupations to Female and Male Targets

Taken together, these results provide further support that both children and adults are more likely to show greater flexibility in cross-sex-typed attributions of traits than in cross-sex-typed attributions of activities or occupations. These findings are interesting because they show that not all gender stereotype domains are perceived as equally appropriate for the opposite sex, even by children as young as 7-9-years-old. Such results are in accord with Liben and Bigler (2002) who found that people are more likely to endorse sex-typed traits as appropriate for both sexes than they are to endorse sex-typed activities or occupations as appropriate for both sexes. Liben and Bigler’s explanation for greater acceptance of cross-sex-typed traits versus cross-sex-typed activities or occupations is either that the trait items used in their scale are not as gender-typed as the activity or

occupation items used or that gender stereotypes of traits have weakened over the years due to increasing demands for both instrumental and expressive traits in both males and females. Unfortunately, the results of both Experiments 1 and 2 are insufficient to tease apart which of these explanations is more likely because the measure used consisted entirely of items previously used by Liben and Bigler.

#### **ADDITIONAL RESULTS FOR PARTICIPANT GENDER**

Analyses of ratings of masculine attributes resulted in a significant two-way interaction involving participant gender and target gender for both adults,  $F(1, 35) = 5.20, p < .05, \eta^2 = .13$ , and children,  $F(1, 112) = 5.19, p < .05, \eta^2 = .04$ . Neither interaction could be interpreted further, however, because none of the comparisons to investigate these interactions were significant. An additional two-way interaction between participant age and participant gender in children's responses to the masculine attributes,  $F(2, 112) = 4.08, p < .05, \eta^2 = .07$ , also could not be interpreted further because none of the contrasts to interpret this interaction were significant once corrected for multiple comparisons.

Children's responses to the gender-neutral attributes showed a main effect for participant age,  $F(2, 112) = 4.24, p < .05, \eta^2 = .07$ , qualified by a two-way interaction between participant age and participant gender,  $F(2, 112) = 13.12, p < .001, \eta^2 = .19$  (see Figure 12). Contrast analyses between 7-, 8-, and 9-year-olds within each gender group showed that, within girls, 8-year-olds' ratings ( $M = 3.51, SD = 1.22$ ) were higher than 7-year-olds' ( $M = 2.63, SD = 1.64$ ),  $p < .001$ , but not higher than 9-year-olds' (7- and 9-year-olds' ratings did not differ from one another). Within boys, 7-year-olds' ratings ( $M = 3.48, SD = 1.12$ ) were higher

than 9-year-olds' ( $M = 2.95$ ,  $SD = 1.27$ ),  $p < .01$ , but not higher than 8-year-olds' (8- and 9-year-olds' ratings did not differ from one another). The importance of these results involving age and gender is likely minimal given that they neither depended on target characteristics nor demonstrated consistent or linear changes in stereotyped attributions.

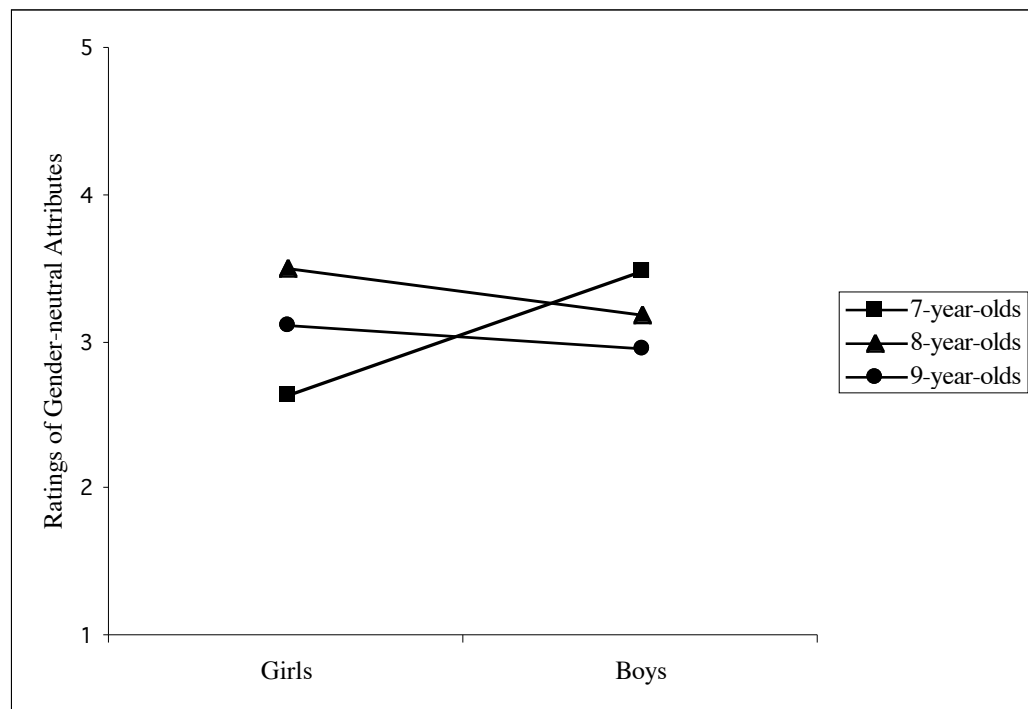


Figure 12: Children's Mean Ratings of Gender-neutral Attributes to Targets as a Function of Participant Gender and Age



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## **Vita**

Rebecca Anne Hoss was born on April 6, 1975 in Bismarck, North Dakota and is the daughter of William and Patricia Hoss. She attended Millard North High School and Creighton University in Omaha, Nebraska. At Creighton, she received a B.A. in psychology where she graduated summa cum laude with honors in spring 1997. She began graduate work under the supervision of Judith H. Langlois, Ph.D. at The University of Texas at Austin in the fall of 1997 and received an M.A. in psychology in the spring of 2000. She is co-author of an article entitled "Origins of a stereotype: Categorization of attractive and unattractive faces by young infants," in press in *Developmental Science* and also co-author of a chapter "Infants prefer attractive faces," in press for *Nova*. She was an instructor for Introduction to Child Development in spring 2001 at UT and will be an assistant professor of developmental psychology and human services at College of Saint Mary in Omaha, Nebraska beginning fall, 2003.

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