

RUNNING HEAD: POPULARITY AND GENDER PROTOTYPICALITY

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POPULARITY AND GENDER PROTOTYPICALITY: AN EXPERIMENTAL
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POPULARITY AND GENDER PROTOTYPICALITY

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APPROACH

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Abstract

These studies investigate links between conformity to gender norms and adolescents' peer popularity. Previous research has established that popularity is associated with physical attractiveness in both boys and girls, as well as with gender-specific behaviors and activities (e.g., physical aggression and athletic involvement for boys, relational aggression and having stylish clothes for girls; (Vaillancourt & Hymel, 2005)) that often reflect gender-based expectations. However, research linking gender conformity with popularity is largely correlational in nature. Thus, the goal of the current studies was to examine the link between popularity and gender conformity experimentally. After being exposed to either a popularity priming condition or a neutral control, participants rated photographs (Study 1) and vignettes (Study 2) depicting gender-conforming and gender-nonconforming adolescents' appearance and behavior on a number of popularity-related characteristics. Results indicate that gender typicality in appearance, but not behavior, is associated with popularity. Gender typicality may be a key predictor of adolescent popularity, but only as it pertains to physical appearance.

Keywords: popularity; gender conformity; gender typicality;

Popularity and Gender Prototypicality: An Experimental Approach

For the first few decades of peer relations research, popularity was defined as being well-accepted by peers (e.g., Coie, Dodge, & Coppotelli, 1982). However, contemporary studies have shown that being popular does not always mean being well-liked (e.g., Parkhurst & Hopmeyer, 1998). Researchers are now distinguishing between adolescents who are well liked and those who have high levels of social power (Mayeux, Houser, & Dyches, 2011). Measured simply by asking adolescents to nominate peers who are “most popular,” popularity in modern peer relations research is characterized by social visibility, status, and influence power (Cillessen & Marks, 2011).

But why study popularity in adolescents? Popularity and belonging to one’s peer group are important to adolescents, with many youth endorsing it as an explicit social goal (Adler, Kless, Adler, 1992; Dawes and Xie, 2014; LaFontana & Cillessen, 2010). The relationships adolescents form with their peers are important for their emotional and social development (La Greca and Harrison, 2005). For example, Brown, Eicher, and Petrie (1986) found that adolescents claim that social support, friendship development, and social interactions are key components of peer belonging. Another reason popularity has been the focus of intense research interest over the past 15 years is in part because popularity has been found to correlate concurrently and longitudinally with health risk-taking and behavioral maladjustment. These risks include substance abuse, becoming a bully, physical and relational aggression, and precocious sexual activity (e.g., Cillessen, Mayeux, Ha, de Bruyn and LaFontana, 2014; Mayeux, Sandstrom & Cillessen, 2008).

While the prioritization of popularity peaks during the middle school years in general (LaFontana & Cillessen, 2010), there is variability in how strongly adolescents endorse

popularity as an explicit social goal. Some adolescents desire to be popular, while others do not (Dawes & Xie, 2014). Further, how strongly adolescents endorse popularity goals has important implications for their behavior. Research has shown that adolescents who want to be popular are more likely to act aggressively (Dawes & Xie, 2014) and those who are already popular show increases in aggression and bullying over time (Cillessen & Mayeux, 2004; deBruyn, Cillessen, & Wissink, 2010). Gender is a moderator in the different types of aggression displayed. Popular girls tend to be more relationally aggressive and popular boys tends to be more overtly aggressive (Cillessen & Mayeux, 2004). Thus, a major implication for prioritizing popularity is an increase in risky behaviors.

Despite the rich literature describing the correlates and outcomes associated with popularity, there are relatively few theories that address how popularity emerges. One theory by Cillessen describes four important conditions needed for popularity: social attention-holding power, agentic power, manipulation of peer group through prosocial or assertive behaviors, and psychobiological factors (Cillessen, 2011). Another, Hawley's Resource Control Theory, discusses how a popular adolescent controls social resources such as peer attention, network ties, and friendships by being both coercive and prosocial to his or her peers (Hawley, 2003). Moffitt explains the antisocial behaviors of adolescents through the lens of the "maturity gap," and argues that some adolescents garner social visibility and prestige because they engage in adult-like behaviors that draw attention and even admiration (Moffitt, 1993).

As described below, a large body of research has documented the correlates of popularity in adolescence. Furthermore, there are a number of developmental theories that can inform our understanding of how popularity emerges. However, one key component of popularity that has received little attention in the literature is gender. While researchers almost always include

gender as a moderator in their studies, for example investigating the correlates of popularity for both boys and girls, few studies include a discussion of gender as a driving force behind popularity and its development. In this thesis, I will present two studies that test the role of gender prototypicality, or having characteristics that are typical of one's gender, in peers' ratings of an individual's popularity. Are adolescents more likely to be popular when they are gender prototypical? This paper looks to answer this question.

Literature Review

Defining and Understanding Popularity

Cillessen and Marks define popularity as a “rank ordering of children or adolescents in their peer groups (classroom or grade) according to a criterion of hierarchy or status” (2011, pg. 25). Popularity refers to how visible one is to their peers and the social impact the adolescent has on the peer group. Popular adolescents are typically well-known to their peers, at least by reputation, and have a higher level of social influence on others compared to less-popular peers (e.g., Cohen & Prinstein, 2006). Thus, there is a high level of consensus among the peer group about who is popular and who is not (Cillessen & Marks, 2011).

The correlates of popularity for boys and girls shed light on potential links to gender prototypicality. Popular girls have some defining features that often signal their high status. For example, they are more likely to be physically attractive (e.g., Adler et al., 1992, Eder, 1985, Vaillancourt & Hymel, 2006). Usually associated with this physical attractiveness is having the financial means to afford stylish clothing and other material goods that are trendy and desired by peers (Adler et al., 1992). Popular girls also tend to be described as kind and cooperative (Jewell & Brown, 2014; Puckett, Aikins & Cillessen, 2008; Xie, Boucher, Hutchins & Cairns, 2006), sociable with their peers, and well- integrated into the peer group (Closson, 2009; LaFontana &

Cillessen, 2002). However, at the same time, popular girls are also described as using antisocial behaviors such as social exclusivity and relational aggression (Eder, 1985; Mayeux, Houser & Dyches, 2011). These relationally aggressive behaviors include gossip, social exclusion and spreading rumors (Mayeux et al., 2011). Finally, popular girls tend to participate in extracurricular activities such as cheerleading, which allows them to show off their feminine qualities (cute outfits, hair nicely done, and makeup) and provides them with a high level of visibility among their peers (Eder & Parker, 1987).

While popular girls and boys share some similar characteristics, such as social connectedness, it is important to point out the attributes specific to popular boys. First, popular boys are known for their physical dominance. This can come in different forms such as physical aggression (Adler et al., 1992, Cillessen & Rose, 2005), athletic ability (Eder & Parker, 1987) or just being seen as tough (Rodkin, Farmer, Pearl & Van Acker, 2000). Having strong athletic ability has been the most consistent correlate in the literature in relation to boy's popularity (e.g., Adler et al, 1992; Jewell & Brown, 2014; LaFontana & Cillessen, 2002). A similarity they share with girls is being physically attractive (Jewell & Brown, 2014; LaFontana & Cillessen, 2002; Vaillanacourt & Hymel, 2006). Finally, popular boys are known for being "cool." Jamison, Wilson, and Ryan (2015, p. 384) described coolness as "the embodiment of some combination of attributes that wins approval or earns the attention of others." Popular boys maintain this "coolness" when they can remain composed under pressure, such as while being disciplined by a teacher or parent (Adler et. al, 1992).

Popularity and the Adolescent Transition

Though status hierarchies of various types emerge earlier in development (such as the dominance hierarchies of preschool children; e.g., Charlesworth & LaFreniere, 1983), the

transition into early adolescence marks the point at which popularity as a form of social power becomes more salient, and concern for popularity becomes more pronounced (LaFontana & Cillessen, 2010; van den Berg, Burk & Cillessen, 2015). The adolescent transition is also the time when mixed-sex groups begin to socialize more frequently (i.e., school dances, mixed-sex birthday parties; Connolly, Craig, Goldberg, & Pepler, 2004). These social settings allow adolescents to gain experience interacting with opposite-sex peers and to test the waters of initial romantic interests. These activities are also contexts in which adolescents may begin to view their opposite sex peers as potential romantic interests and no longer just as friends (Simmons & Blyth, 1987). As these interactions become more frequent, so does the attention to social feedback from peers and the prioritization of being popular (LaFontana & Cillessen, 2010).

It is also at the transition to early adolescence that researchers start to see the emergence of behaviors that become associated with popularity over the long term. For example, some young adolescent girls begin to follow trends in dress and become more attentive to their appearance (Adler et al., 1992). Boys start to act more aggressively in mixed-sex settings, showing their dominance to impress female peers (Pellegrini & Long, 2003). One study found that girls were more attracted and attentive to boys that showed moderate levels aggression because the aggression showed high levels of social dominance status (Bukowski, Sippola & Newcomb, 2000; Pellegrini & Long, 2003). Having high social dominance in turn leads to high leadership among peers, which is seen as attractive and desirable to young females since it can lead to high social status (Pellegrini & Long, 2003). These behaviors fall in line with behaviors seen in popular adolescents, as well as behaviors that are in line with typical gender norms (Jewell and Brown, 2014). The emergence of popularity as an indicator of social power during a developmental period characterized by increased interactions with the opposite sex and emerging

romantic interests means that the characteristics that gain attention and power in the peer group may well be those attributes and behaviors that promote opposite-sex interest and attention. In other words, beginning in adolescence, the most gender-prototypical members of a peer group may be the most likely to gain prominence and social prestige—in part because they seem more mature and ready for romantic involvement, and in part because they receive more attention from the opposite sex.

Popularity and Gender Prototypicality

Popularity, then, may be enhanced when adolescents exhibit behaviors or characteristics that conform to gender roles and expectations. And indeed, the same attributes that are so often found to be correlated with popularity for girls (e.g., attractiveness, kindness, concern for their appearance) and boys (e.g., coolness, athletic ability, physical toughness) are also consistent with gender norms. There have been many studies that have shown a correlational relationship between popularity and gender prototypical characteristics (Adler et al., 1992; Jewell & Brown, 2014; LaFontana & Cillessen, 2002). Research has also shown that adolescents who do not have gender typical characteristics, such as girls who are more physically aggressive or less prosocial, and boys who are not tough (i.e. physically or emotionally tough; Adler et. al, 1992), are more likely to be victimized and rejected by peers (Jewell and Brown, 2014; Smith & Leaper, 2005; Lee & Troop-Gordon, 2010). Thus, gender prototypicality appears to be closely linked to popularity in adolescence. However, to date there is only correlational evidence in support of this idea. The current studies test the link between popularity and gender prototypicality through an experimental approach.

Study 1

Study 1 investigated the link between popularity and physical, observable gender prototypicality. If gender prototypicality is associated with popularity and social power, individuals who are more gender-prototypical in appearance should be rated as more popular than gender-nonconforming peers. However, simply asking participants to rate individuals of varying gender prototypicality on measures of popularity or power invokes the usual biases against gender-nonconforming people (e.g., Lee & Troop-Gordon, 2010). Thus, we developed an experiment in which participants were randomly assigned either to a condition in which they were primed to think about the popular crowd in their high school, or to a control condition. All participants then saw a series of photographs of gender-prototypical and gender non-conforming adolescent boys and girls in a within-subjects design. Participants were asked to rate the individuals in the photographs on a variety of attributes as described below.

Two specific hypotheses were tested.

Hypothesis 1A: When primed with popularity, participants will give gender-prototypical individuals higher ratings of power, popularity, leadership, and other attributes related to popularity, compared to participants in the control condition.

Hypothesis 1B: When primed with popularity, participants will rate gender-atypical individuals with lower ratings of power, popularity, leadership, and other attributes related to popularity compared to participants in the control condition.

Method

Participants. 328 undergraduate students (34% male, 66% female; $M_{age}= 19.3$, $SD=1.796$) were recruited from a large public university. Students were recruited through an

online database used in the psychology department to coordinate research participation. They were given class credit for participating in the study.

Procedure. Participants completed an online survey that required approximately 30 minutes to complete. Participants were randomly assigned either to the popularity prime condition or a control condition. Students in the priming condition were shown the following exercise: *Think back to when you were in high school. Your high school may have had a popular crowd, made up of the kids who were considered cool. In the space below, type three adjectives describing the popular kids in your grade.*

The other half of the participants were assigned to the control condition and completed the following exercise: *Take a minute to think about the professors you have had in college. In the space below, write 3 adjectives describing your favorite professor that you have had in college.*

After this exercise, participants were asked to complete a set of rating of adolescents in eight pictures. There were two pictures of each type of person, gender-typical boy and girl, and gender-atypical boy and girl (See Appendix A for pictures used). Using a Likert scale of 1 (*not at all like this person*) to 7 (*very much like this person*), participants were asked to rate the individuals in the eight pictures on the following attributes: *popular, powerful, has lots of friends, well-liked, attractive, deserving, kind, a good leader, smart, a bully, strong presence on social media (i.e, gets a lot of likes on posts)*. In order to analyze differences in participants' ratings of these attributes across the four types of targets, we averaged the ratings of each attribute for each pair of like targets (eg. gender prototypical boys, gender atypical girls, etc.) to create a mean rating. We did this for each attribute (eg., *popularity* ratings for gender-typical

boys, gender-atypical boys, gender-typical girls, and gender-atypical girls; *power* ratings for the same four groups, etc.).

Results and Discussion

Hypotheses were tested using eleven 2 (condition) X 2 (gender typicality) repeated measures ANOVAS with gender typicality as a within-subjects variable. The dependent variables were the mean ratings of popularity and popularity-related attributes. Of specific interest were main effects of typicality (all were significant except for *smart*) and interactions involving condition (four were significant). Follow up one-way ANOVAS were done to explore the interactions.

Main effects of gender typicality were significant for all popularity-related attributes: Popularity ($F(1, 327) = 1085.40$, Wilks $\Lambda = .232$, $p < .001$, $\eta^2 = .768$), power ($F(1, 327) = 351.53$, Wilks $\Lambda = .482$, $p < .001$, $\eta^2 = .518$), attractiveness ($F(1, 327) = 694.42$, Wilks $\Lambda = .320$, $p < .001$, $\eta^2 = .680$), social media presence ($F(1, 327) = 667.838$, Wilks $\Lambda = .329$, $p < .001$, $\eta^2 = .671$), bully ($F(1, 327) = 75.674$, Wilks $\Lambda = .812$, $p < .001$, $\eta^2 = .188$), has lots of friends ($F(1, 327) = 767.706$, Wilks $\Lambda = .299$, $p < .001$, $\eta^2 = .701$), deserving ($F(1, 327) = 32.173$, Wilks $\Lambda = .910$, $p < .001$, $\eta^2 = .090$), kind ($F(1, 327) = 20.212$, Wilks $\Lambda = .942$, $p < .001$, $\eta^2 = .058$), a good leader ($F(1, 327) = 122.467$, Wilks $\Lambda = .728$, $p < .001$, $\eta^2 = .272$), and well liked ($F(1, 327) = 492.559$, Wilks $\Lambda = .399$, $p < .001$, $\eta^2 = .601$). In all cases, gender-typical adolescents were rated more highly than gender-atypical adolescents. This was the case for both positively-valenced attributes (e.g., *popular*, *deserving*) and negatively-valenced ones (e.g., *a bully*). Importantly, these significant main effects demonstrate that the pictures included in the study effectively distinguished between gender-typical and atypical adolescents.

The interaction of Condition X Gender Typicality was significant for ratings of *popularity* ($F(1, 327) = 12.955$, Wilks $\Lambda = .962$, $p < .001$, $\eta^2 = .038$), *power* ($F(1, 327) = 10.380$, Wilks $\Lambda = .969$, $p < .001$, $\eta^2 = .031$), *attractiveness* ($F(1, 327) = 4.923$, Wilks $\Lambda = .985$, $p < .027$, $\eta^2 = .015$), and *social media presence* ($F(1, 327) = 4.998$, Wilks $\Lambda = .985$, $p < .026$, $\eta^2 = .015$). To explore the effects for these interactions, one-way ANOVAS tested the effect of Condition on ratings of gender-conforming and gender-nonconforming adolescents (see Figures 1 through 4). For *popularity*, the effect of Condition was significant for ratings of gender-nonconforming adolescents (popularity: $F(1,327) = 8.10$, $p < .005$). However, for *power*, *attractiveness* and *social media presence*, the effect of Condition was significant for ratings of gender-conforming adolescents (power: $F(1,327) = 5.70$, $p < .018$; attractiveness: $F(1,327) = 7.05$, $p < .01$; social media: $F(1,327) = 4.33$, $p < .038$). Participants primed with popularity rated gender-conforming adolescents as more powerful, attractive and as having a stronger presence on social media than control participants. In the case of popularity ratings, participants in the popularity prime condition rated gender-nonconforming adolescents as less popular than control participants did.

These results support the hypothesis that popularity and attributes associated with it (e.g., power, attractiveness) are ascribed more strongly to gender-prototypical adolescents compared to their less gender-conforming peers. When participants were assigned to the popularity priming condition, they were more likely to give higher ratings of popularity-related characteristics (powerful, attractive and social media presence) to gender conforming adolescents compared to participants who were assigned to the control condition. Participants also gave lower ratings of popularity-related characteristics (popular) to gender conforming adolescents compared to participants who were assigned to the control condition. These findings are consistent with the correlational work linking gendered appearance with popularity among peers. This study also

provides evidence that experimental studies are an important step in investigating the role of gender prototypicality in popularity. One limitation in this study was that it only looked at physical appearance. The next study addresses this limitation by investigating the link between gender prototypical behaviors and activities with peer popularity in an experimental design.

Study 2

Study 1 showed that priming older adolescents to think about popularity resulted in stronger ratings of popularity and power for gender-prototypical youth, compared to the ratings by participants in a control condition. However, one limitation of Study 1 was its sole focus on physical appearance. If gender prototypicality is indeed important for the development of popularity, it is likely that the effects extend to other aspects of gender conformity, specifically behavior or preferred activities. For example, as seen in the literature, popular girls tend to participate in extracurricular activities such as cheerleading that are high in social visibility and allow for them to show off their feminine attributes (Eder & Parker, 1987). Research has also shown that participating in sports is consistently correlated with boy's popularity (Adler et al., 1992; Jewell & Brown, 2014). This possibility was tested using an experiment similar to that in Study 1, but with two important differences. First, Study 2 used vignettes about fictional adolescents rather than photographs. Second, rather than focusing on physical appearance, the vignettes described hypothetical high school students in terms of their preferred extracurricular activities, some of which were consistent with gender norms (e.g., a boy who plays football) and some of which were not (e.g., a girl who plays rugby). Again, two hypotheses were tested.

Hypothesis 2A: When primed with popularity, participants will give gender-prototypical individuals higher ratings of power, popularity, leadership, and other attributes related to popularity, compared to participants in the control condition.

Hypothesis 2B: When primed with popularity, participants will rate gender-atypical individuals with lower ratings of power, popularity, leadership, and other attributes related to popularity compared to participants in the control condition.

Method

Participants. Participants were 249 undergraduates (16.4% males, 83.2% females, .4% other; $M_{age} = 18.71$, $SD = 2.312$) who completed an online survey for course credit as part of their Introductory Psychology course.

Procedure. Participants completed an online survey that took approximately 30 minutes. Participants were randomly assigned to either a popularity priming condition or a control condition, as described in Study 1. After completing the prime or control exercise, participants were asked to read eight vignettes describing hypothetical peers. These vignettes were developed based on a study by Horn (2007) that investigated adolescents' acceptance for gender conforming and nonconforming peers. Vignettes were brief, noting the hypothetical adolescent's gender and preferred extracurricular activity. Due to concerns that participant ratings might be influenced by their assumptions regarding the hypothetical peers' sexuality (i.e., that a gender-nonconforming peer might be gay or lesbian), the vignettes specifically noted that the peer had an opposite-sex partner in order to control for this possibility. For example: *Frank is a high school student who plays on the baseball team. He is a "B" student who likes to hang out with his girlfriend on the weekends.* Appendix B presents all eight vignettes.

Two vignettes were used for each combination of gender and gender typicality (e.g., two depicted gender-prototypical males, two depicted gender-atypical females, etc.). After reading each vignette, participants were asked to rate the individual on 14 characteristics on a 7-point Likert scale (1 = *not at all like this person* to 7 = *very much like this person*). Participants rated the

individuals described in the vignettes on the following attributes: *popular, powerful, has lots of friends, well liked, attractive, kind, a good leader, bullies others, strong presence on social media (i.e. gets a lot of likes on their posts), mean, disliked, cool, and influences others*. Participants also rated each individual on *masculinity* or *femininity*, depending on the gender of the target peer. In order to analyze the differences in participants' ratings of these attributes across the four targets, we followed the same data reduction procedure used in Study 1. We averaged the ratings of each attribute within each pair of like targets (e.g., popularity for gender- prototypical boys and girls, popularity for gender-atypical girls, etc.) to create a mean rating.

Results and Discussion

Like in Study 1, hypotheses were tested using thirteen 2 (condition) X 2 (gender typicality) repeated measured ANOVAS with gender typicality as a within-subject variable. The dependent variables were the mean ratings of popularity and popularity-related attributes. Preliminary analyses checked to ensure that the vignettes portrayed targets that differed in gender-typicality. Main effects of gender typicality were significant for *femininity* ($F(1, 250) = 468.689$, Wilks $\Lambda = .345$ $p < .001$, $\eta^2 = .655$) and *masculinity* ($F(1, 250) = 432.736$, Wilks $\Lambda = .362$ $p < .001$, $\eta^2 = .638$), with the vignettes for gender-nonconforming girls receiving lower ratings on femininity compared to those for gender-conforming girls, and those for gender-nonconforming boys receiving lower ratings on masculinity compared to those for gender-conforming boys. Thus, these significant findings indicate that our vignettes effectively distinguished between gender-conforming and nonconforming adolescents.

Main effects of gender typicality were significant (except for *a good leader* and *disliked*) for all popularity-related attributes: *Popularity* ($F(1, 250) = 488.306$, Wilks $\Lambda = .336$, $p < .001$ $\eta^2 = .664$), *power* ($F(1, 250) = 205.170$, Wilks $\Lambda = .546$ $p < .001$, $\eta^2 = .454$), *attractiveness* ($F(1,$

250) = 313.557, Wilks $\Lambda = .440$ $p < .001$, $\eta^2 = .560$), and *social media* ($F(1, 250) = 177.179$, Wilks $\Lambda = .582$ $p < .001$, $\eta^2 = .418$), *bully* ($F(1, 250) = 341.360$, Wilks $\Lambda = .420$ $p < .001$, $\eta^2 = .580$), *has lots of friends* ($F(1, 250) = 395.761$, Wilks $\Lambda = .383$ $p < .001$, $\eta^2 = .617$), *cool* ($F(1, 250) = 148.599$, Wilks $\Lambda = .624$ $p < .001$, $\eta^2 = .376$), *kind* ($F(1, 250) = 24.921$, Wilks $\Lambda = .908$ $p < .001$, $\eta^2 = .092$), *well-liked* ($F(1, 250) = 172.718$, Wilks $\Lambda = .588$ $p < .001$, $\eta^2 = .412$), *influences others* ($F(1, 250) = 104.145$, Wilks $\Lambda = .703$ $p < .001$, $\eta^2 = .297$), *mean* ($F(1, 250) = 272.626$, Wilks $\Lambda = .475$ $p < .001$, $\eta^2 = .525$). Gender-typical targets were rated more highly on *popularity*, *power*, *bully*, *cool*, *has lots of friends*, *social media*, *attractive*, *mean*, *liked*, and *influences others*. Gender-atypical targets were rated more highly only on *kind*.

There were no main effects of condition, and no interactions involving condition.

Thus, Study 2's hypotheses were not supported. Whether participants were primed with popularity or not did not have an effect on how participants rated the popularity-related attributes of gender-typical or gender-atypical targets. However, of note is that the only rating in the Typicality x Condition analysis that approached significance was attractiveness ($F(1, 250) = 2.343$, Wilks $\Lambda = .991$ $p < .127$, $\eta^2 = .009$). Participants primed with popularity rated gender-atypical adolescents as less attractive than they did gender prototypical adolescents, compared to the participants in the control condition ($F(1, 250) = 5.308$ $p < .022$). This is of interest because even though participants did not see any pictures with the vignettes, those primed with the popularity prime condition gave lower ratings to gender non-typical participants compared to those in the control, as seen when doing a one-way ANOVA. So even though the goal was to test how behaviors and interests played a role in participants' perceptions of peer status and status-related attributes, these null findings show that attractiveness and appearance may be the most important factor when determining who is most likely to be popular.

General Discussion

These experimental studies suggest that gender prototypicality in physical appearance, but not behaviors or interests, are closely tied to adolescents' perceptions of popularity. In Study 1, we predicted that when participants were primed with popularity, they would give higher ratings of popularity-related attributes to gender-typical adolescents compared to participants who were in a control condition. We also predicted that participants would give lower ratings of popularity-related attributes to gender-atypical adolescents compared to participants who were in the control condition. These hypotheses were supported with regard to ratings of power, popularity, attractiveness, and a strong presence on social media. Participants who were primed with popularity gave significantly higher ratings of power, attractiveness and social media presence to gender-typical adolescents compared to those who were in the control condition. Lower ratings of popularity were given to gender-atypical adolescents by participants in the popularity priming condition, compared to participants in the control condition. These findings suggest that gender-typical appearance is important in predicting which adolescents are more likely to be seen as popular and as having attributes associated with social power. If an adolescent has the physical appearance that is in line with gender typical norms, he or she is much more likely to be seen as popular compared to those who dress or groom differently from gender norms. This finding provides the first experimental evidence in support of previous correlational findings and suggests new directions for research on adolescent popularity.

Knowing that popularity may be more than appearance, Study 2 tested this gender prototypicality hypotheses with gender-typical and atypical behaviors and activities. Research has shown that popular adolescents tend to participate in gender-typical activities, such as football for boys and cheerleading for girls (Eder & Parker, 1987), and tend to have gender-

typical interests and personalities, such that boys are tough and girls are seen as prosocial and kind (Eder & Parker, 1987). Therefore, our aim was to replicate the findings from Study 1, but instead of pictures that focused on appearance, we used vignettes to describe behaviors of gender-typical and atypical adolescents. However, there were no significant findings in Study 2, suggesting that the gender-typicality of behaviors and interests are not closely tied to individuals' perceptions of their peers' popularity.

The findings from these two studies begs the question: Is appearance the most important factor in determining popularity in adolescence? Previous research has shown that popularity is correlated with gender-prototypical characteristics (Adler et al, 1992, Jewell and Brown, 2014, & LaFontana and Cillessen, 2002). Popular girls are seen as attractive and kind, and have a strong concern for their appearance, and popular boys are seen as cool and athletic and are physically tough. Many of the descriptors of popular youth in the literature relate to outward appearance for both girls and boys (e.g., attractiveness, wealth; Closson, 2009). Though some correlates of popularity refer to behaviors (e.g., playing sports) and personality features (e.g., being kind), these features may not be as powerful as an adolescent's appearance in contributing to the development of peer status. While attractiveness is likely not the only factor in predicting popularity, it may be the most important in helping to understand who is likely to be popular. Of note, while Study 2 did not provide evidence in support of the gender-prototypicality hypothesis, the only rating that was close to significant was attractiveness. While participants were only reading about the adolescents and had to assume their attractiveness, they assumed that gender nonconforming adolescents were less attractive than gender conforming adolescents. This fits in nicely with our current theory that gender-prototypicality in appearance is a critical factor in determining popularity in adolescence.

Another explanation for these results could be the changing nature of activities and behaviors that are popular for adolescents. Looking at the literatures on popularity and gender-typicality, it appears that the literature is lacking in current research on what activities are seen as gender typical for boys and girls. Today, more girls engage in sports (Jewell & Brown, 2014), so participating in sports other than cheerleading may still be considered cool, especially if it is a sport that provides a lot of visibility, which is important in achieving high social status (Cillessen and Rose, 2005). Boys, on the other, hand may participate in the school plays or be a member of the drama club, and that could still be considered consistent with being popular, especially if they have a lead role that again provides high visibility and is seen as prestigious (Cillessen and Rose, 2005; Chen and Tracy, 2014). While this may not seem gender-typical based on traditional gender norms, what is considered gender-typical and well-accepted by adolescents at this time may be changing. As the field continues to progress in studying adolescent relationships, activities and social dynamics, future research should look at what activities are considered typical by adolescents in order to help understand what factors predict an adolescent being popular.

An important part of a gender prototypicality theory of popularity is the development of gender prototypicality in adolescence in the first place, and how it relates to peer relations more broadly. As adolescents start to interact more with the opposite sex, there is an increase in motivation to please the opposite sex by adhering to gender norms (Eder, 1985). Boys who appear physically dominant and act tough are seen as more attractive to girls (Volk, Camilleri, Dane & Marini, 2012; Weisfeld and Woodward, 2004). For girls, it is important to be physically attractive and to look physically mature (Zimmer-Gembeck et al., 2004). Social power among peers may initially arise from being able to attract attention from the opposite sex, as receiving

approval and liking from the opposite sex is a developmentally salient goal with an element of competition to it. Young adolescents who are successful at this task are likely to be viewed in a particularly positive light, by both sexes, leading to the kind of attention and visibility that garners social power. A significant implication of this pattern is that gender prototypicality should be most closely associated with popularity at the transition to early adolescence. Thus, an important limitation of these studies is that they were conducted with college students, who are not in this key phase of adolescent transition. A crucial future direction for research is to test these associations with adolescents in middle school, when the patterns should theoretically be much stronger.

Another future direction for this area of research is to do a hybrid study that tests the relative contributions of physical appearance and behaviors to peers' perceptions of gender-typical and atypical adolescents. For example, pictures and vignettes could be used together to create targets with different combinations of typical and atypical attributes (e.g., gender-typical appearance and atypical activities). Such a design could help to bolster the current results that gender-prototypical appearance is the main factor predicting popularity. However, it could also be that certain behaviors and activities may outweigh the importance of appearance. It would be interesting to note if an adolescent needs to be truly all gender-typical in order to achieve high social status, or if just one aspect of gender typicality will help increase chances of high popularity.

Popularity has been studied for many years, and there is still much to learn. This study is unique to the field because it is the first experimental study linking popularity to physical appearance, and it is the first to show that gender-prototypical appearance is a stronger determinant of popularity than behaviors or interests. Knowing that appearance is highly

predictive of popularity in adolescence, developmental psychologists can conduct future studies that looks specifically at appearance in adolescence. Who is giving more attention to the appearance, opposite-sex or same-sex peers? How does that influence who has higher social power? This study contributes to theory-building regarding the emergence of popularity, as well. So far, few theories have been proposed to explain the development of social power in adolescence, and none consider the role of gender or gender conformity. The results reported here have important implications for our understanding of how gender conformity affects the kinds of peer perceptions that contribute to adolescents' social visibility, and thus their emerging popularity in the peer group.

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Figures – Study 1

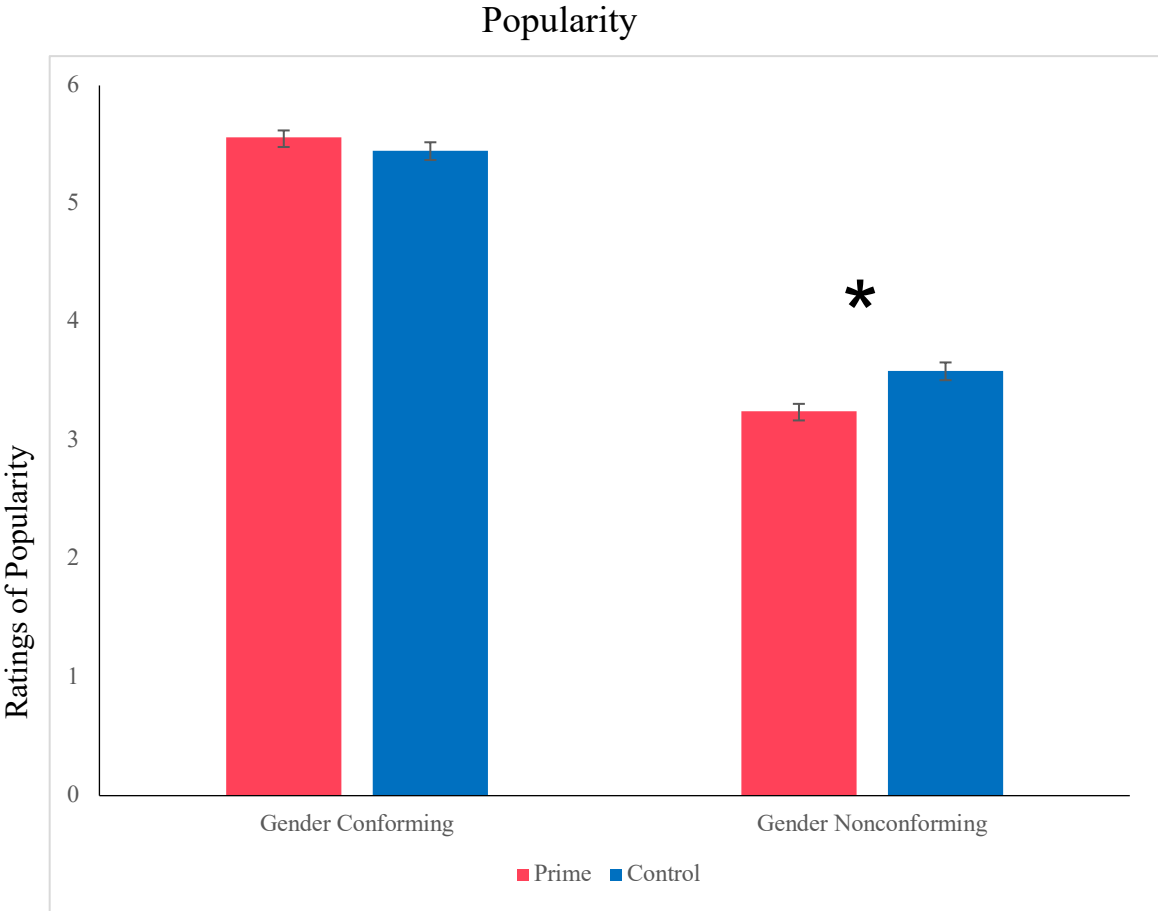


Figure 1. Lower ratings of popularity attributed to gender-nonconforming targets by participants in a popularity priming condition, compared to those in a control condition.

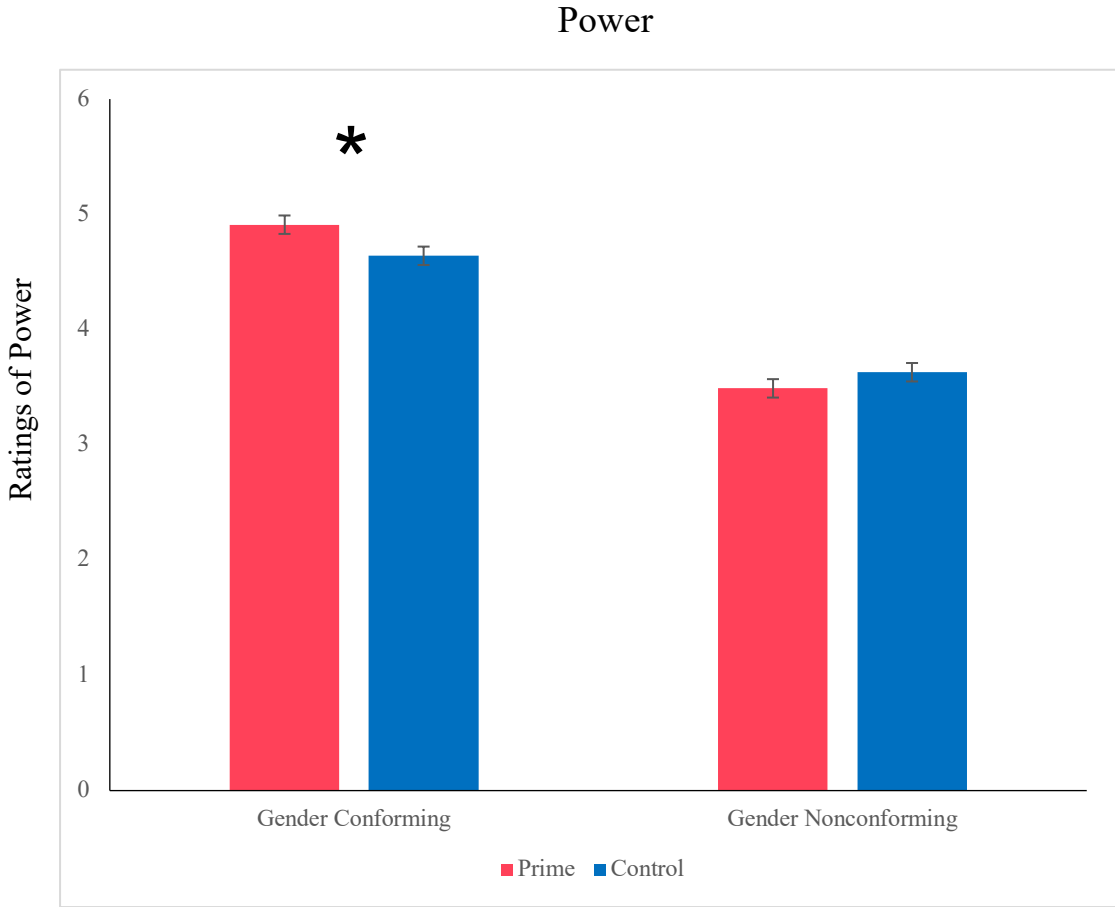


Figure 2. Higher ratings of power attributed to gender-conforming targets by participants in a popularity priming condition, compared to those in a control condition.

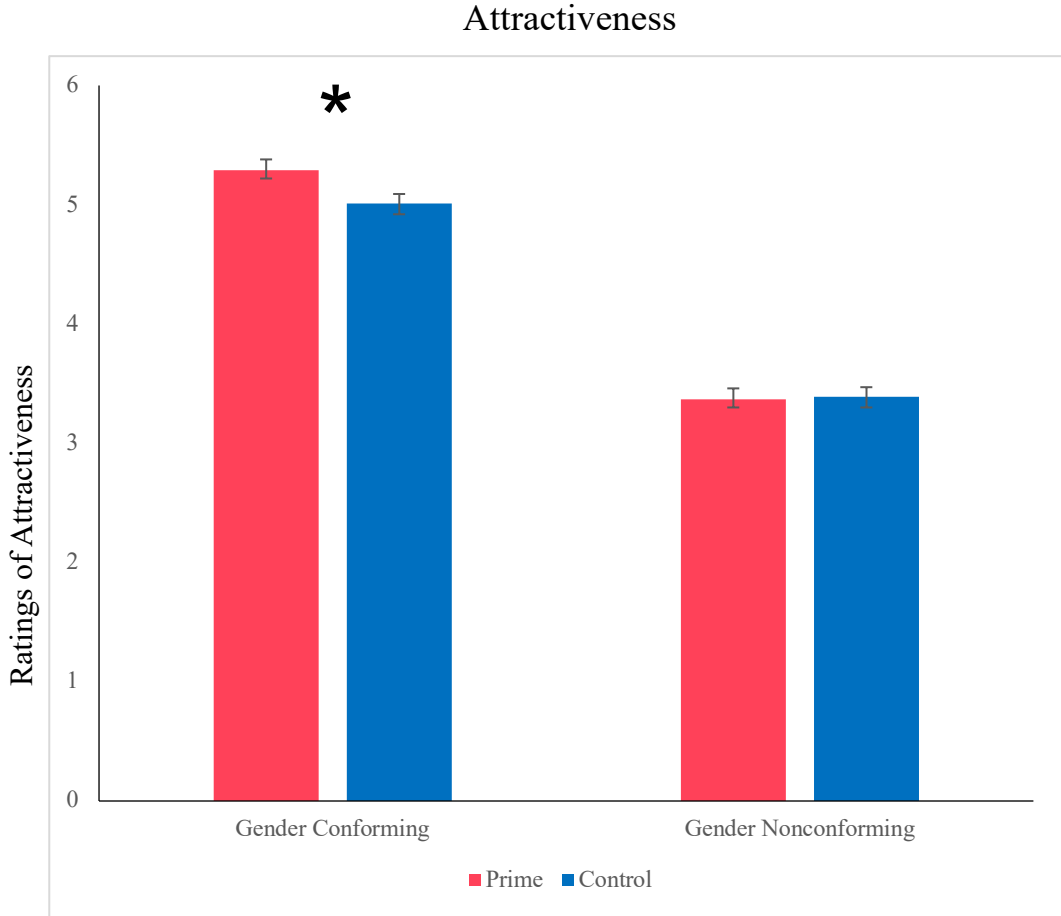


Figure 3. Higher ratings of attractiveness attributed to gender-conforming targets by participants in a popularity priming condition, compared to those in a control condition.

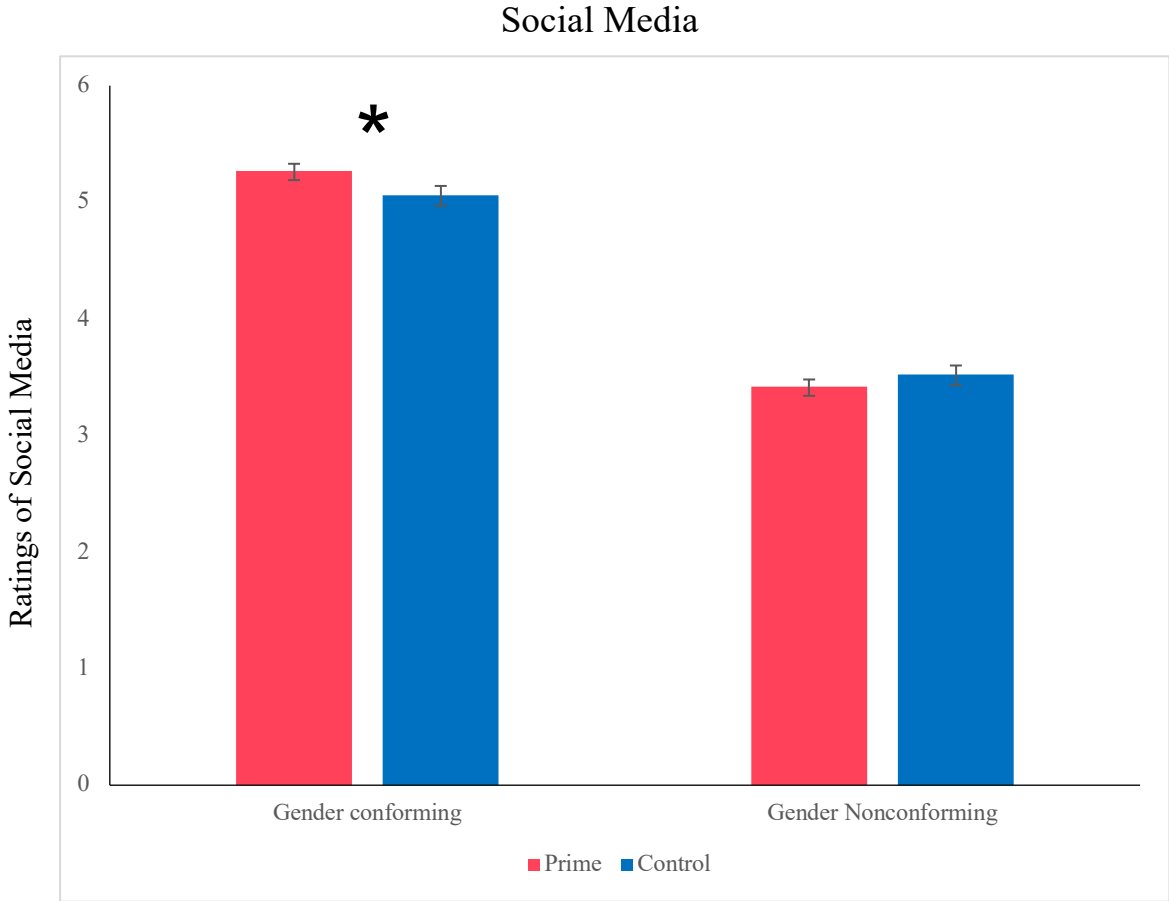


Figure 4. Higher ratings of social media presence attributed to gender-conforming targets by participants in a popularity priming condition, compared to those in a control condition.

Appendix A

Study 1 – Pictures



Atypical Boy

Typical Boy



Atypical Boy

Typical Boy



Atypical Girl



Atypical Girl



Typical Girl



Typical Girl



Appendix B

Vignettes – Study 2

Male, Gender-conforming

Frank is a high school student who plays on the baseball team. He is a “B” student who likes to hang out with his girlfriend on the weekends.

Mark is a high school student who plays on the football team. He is a “B” student who likes to hang out with his girlfriend on the weekends.

Male, non-conforming

Todd is a high school student who is a member of the local ballet company. He is a “B” student who likes to hang out with his girlfriend on the weekends.

Matt is a high school student who is a member of the school’s fashion merchandising club. He is a “B” student who likes to hang out with his girlfriend on the weekends.

Female, Gender-conforming

Emma is a high school student who plays on the school volleyball team. She is a “B” student who likes to hang out with her boyfriend on the weekends.

Lauren is a high school student who is on the school cheerleading team. She is a “B” student who likes to hang out with her boyfriend on the weekends.

Female, non-conforming

Olivia is a high school student who plays on the school football team. She is a “B” student who likes to hang out with her boyfriend on the weekends.

Emily is a high school student who plays on the school rugby team. She is a “B” student who likes to hang out with her boyfriend on the weekends.