Gender Difference in Prejudice Toward Redheads

by

L. James Climenhage

M.A. (Psychology), Simon Fraser University, 2009
B.A. (Hons), Simon Fraser University, 2006

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Approval

Name: L. James Climenhage
Degree: Doctor of Philosophy
Title of Thesis: Gender Difference in Prejudice Toward Redheads
Examinning Committee: Chair: John McDonald
Associate Professor

Michael T. Schmitt
Senior Supervisor
Associate Professor

Stephen C. Wright
Supervisor
Professor

Cathy McFarland
Supervisor
Professor Emerita

Özlem Sensoy
Internal Examiner
Associate Professor
Faculty of Education

Mindi Foster
External Examiner
Associate Professor
Faculty of Science
Wilfrid Laurier University

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Abstract

Many stereotypes about persons with red hair are both gender-specific and derogatory. These stereotypes often stand in stark contrast to gender-role stereotypes for men and for women. In three studies, the current research considered if prejudice directed at redheads is, in part, a result of bias against gender-atypical people. In Study 1, participants read about a bullying incident in which the victim was a boy or girl with red hair or another hair colour. Redheads, in general, were seen as less masculine than persons with other hair colours, while boys with red hair were seen as less well-liked than boys with other hair colours, particularly by men. This difference was not found for girls. In Study 2, participants viewed a male or female adult target person with red hair or another hair colour, and completed measures of gender stereotyping, liking, and sexual attraction. Male redheads were seen as less masculine, less gender prototypical, and less sexual than male non-redheads, by both men and women. However, only men liked male redheads less than males with other hair colours—no differences for any variables were found for judgments of female redheads and non-redheads. For male redheads, as expected, gender prototypicality was found to mediate the relationship between hair colour and liking, but only for men. As in Study 2, in the third study participants saw male redheads as less gender prototypical, and less sexual, than male non-redheads. However, red hair on men did not affect how much they were liked in Study 3. Overall, the results of the three studies illustrate that prejudice toward redheads is at least partly about gender atypicality, that this prejudice is mostly directed at boys and men, and that this prejudice is perpetuated by men more than by women.

Keywords: prejudice; stereotyping; hair colour; gingerism; gender differences
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Introduction

On November 20th, 2008, a grade ten boy in Calgary, Alberta, was repeatedly kicked and bruised by thirteen of his classmates in the locker room of his high school after gym class, and was taken to hospital for examination as a result. At a high school in Prince George, British Columbia, a student was kicked in the legs and subsequently sent home, while a student in Prince Rupert, BC, was kicked in the groin. This phenomenon was not limited to the West as schools all across Canada reported similar instances. The victims shared one thing in common—they all had red hair. These incidents were incited by a Facebook group entitled “National Kick-a-Ginger Day.” The group, consisting of 4700 members, encouraged people around the world to kick a red-haired person on that day. National Kick-a-Ginger Day was repeated on the same day the following year not only in Canada but also all across the United States, and has recently spread to parts of the UK (White, 2013).

As in the situation described above, prejudice and discrimination toward persons with red hair is not uncommon. The majority of work looking at prejudice against redheads—often termed gingerism or gingerphobia—primarily focuses on identifying the content of stereotypes about people with red hair (Clayson & Maughan, 1976; 1986; Feinman & Gill, 1978; Heckert & Best, 1997; Lawson, 1971; McNeely, Knox, & Zusman, 2005). Some stereotypes about redheads are common to both men and women, but the majority are both gender specific and gender atypical—in contrast with normative gender-role stereotypes. This is to say that stereotypical traits about red-haired men and women are often atypical of traditional male and female gender-role traits, respectively. This paper considers if the prejudice directed at redheads results, in part, from a bias against gender atypical people.
1.1. Prejudice Against Redheads

Prejudice toward redheads is not new. For instance, the use of the slang term *ginger* as applied to redheads goes back at least several centuries. According to Grose (1785) popular taunts of the day for redheads were *ginger pated* or *ginger hackled* (terms borrowed from cockfighting, as red roosters were termed gingers). One-hundred years later ginger was still a popular taunt (Dickens, 1889). Today, ginger or ‘ging-ah’ continues to be a common term used in both the United Kingdom and the United States to refer to persons with red hair, and often with derogatory connotations (e.g., Rohrer, 2007).

Bias against redheads appears to be particularly widespread in the UK as illustrated by various news articles. For example, an all red-haired family of six in England was reportedly forced to move from their neighbourhood as the children were continually bullied at school, and the parents taunted and harassed in the street culminating in their house being vandalized (Sims, 2007). Another article reported that a red-haired teen was driven to suicide because of the unrelenting teasing about his hair colour by his schoolmates (Lashley, 2009). In another, a man was repeatedly stabbed outside a pub because of an argument over his red locks (“Ginger Hair Sparks Stabbing,” 2003). Even Prince Harry of the UK has stated that he was bullied in school because of his red hair colour (Ward, 2007). Bias against redheads is not limited to the UK as gingerism is also found in other parts of the world. Remarkably, a study sampling 1742 persons from 20 countries found that 92% of men and 87% of women with red hair ($N = 1044$ redheads in the sample) reported being mocked or bullied because of their hair colour compared with only 11% of men and 6% of women without red hair (O’Regan, 2014). Similarly, 91% of 500 redheads surveyed in the United States reported being teased or harassed about their red hair colour ranging from “a little” to “a lot” (Douglas, 1996).

Systematic research also reveals a strong stigmatization of red hair in terms of romantic attraction. In a study by Feinman and Gill (1978), White American men and women were presented with a list of hair colours (i.e., black, blonde, brown, and red) and asked to indicate which hair colours they disliked, if any, on the other gender. Among both male and female participants, there was more dislike for red hair than for any of the
other colours (also see Synnott, 1987). Similar results were found by Swami and Barrett (2011) who asked male bar patrons their hair colour preference in a romantic partner. Of the 126 men surveyed 25% preferred brunettes, and 20% preferred blondes, while only 7% preferred redheads (48% had no preference).

Several field studies with men and women in France also illustrate this aversion to redheads. In a study by Guéguen (2012a), male confederates sporting one of four wig colours (black, blonde, brown, or red) asked women in a popular nightclub for a dance. Compared to blonde and brunette-haired men, confederates with red hair received the most rejections suggesting that women find men with red hair least appealing compared to men with other hair colours. The same can be said for women with red hair. In a study by Guéguen and Lamy (2013), requests to complete a short survey resulted in female red-haired surveyors being given the least amount of cooperation from men compared with blonde and brunette-haired surveyors (also see Guéguen, 2012a; Swami & Barrett, 2011; Synnott, 1987).

1.2. Red Hair Stereotypes

Taken as a whole the literature demonstrates that redheads are clearly stigmatized, yet it remains uncertain as to why. In the current study I suggest that prejudice against redheads may be linked with the perceived violation of gender-role stereotypes. Gender stereotypes are “shared expectations about appropriate conduct that apply to individuals solely on the basis of their socially identified sex” (Eagly & Wood, 1991, p. 309). In effect, men and women are expected to act in ways that are consistent with the norms of their respective gender groups (Deaux & Lewis, 1984; Eagly, 1987; Prentice & Carranza, 2002; Williams & Best, 1982). When persons are perceived to act in ways that are gender-role inconsistent (e.g., weakness in men), they are often met with negative attitudes (Prentice & Carranza, 2002). For example, a study by Kimmel and Mahler (2003) found that gender-role harassment was common in American high schools toward teen males who were seen as violating male gender-role norms.
Red hair is associated with a number of stereotypes of which the most common are hot-tempered, Irish, clown-like, wacky, strange and different (Heckert & Best, 1997). However, some stereotypes associated with red hair are specific for gender. For instance, male redheads are characteristically seen as unattractive (Clayson & Klassen, 1989; Clayson & Maughan, 1976; 1986; Heckert & Best, 1997), wimpy, desexualized (Heckert & Best, 1997), effeminate, shy, and weak (Clayson & Maughan, 1976; 1986). One woman interviewed by Heckert and Best (1997) described male redheads as “goobers, they are Richie Cunninghams…a good little boy, momma’s boys…wimp, boring, and dopey” (p. 375). These characterizations of men with red hair are consistent with popular media portrayals of male redheads (e.g., Danny Partridge—Partridge Family, Fregley—Diary of a Wimpy Kid, Ronald Weasley—Harry Potter series).

Male redheads may also be characterized as less influential than blonde or brunette men, and have been shown to be associated with working in lower ranking positions. For example, Clayson & Maughan (1976; 1986) conducted an experiment in which a confederate was introduced as either a Harvard professor or a janitor in one of two groups of students. Thirty minutes after the departure of the confederate, students in each group were asked to recall the man’s hair colour. Sixty-two percent of the professor group recalled the man as blonde, and 15% as a redhead. In the janitor condition 60% recalled the man as a redhead and only 10% as blonde. The confederate was actually a strawberry blonde with a flaming red moustache. By and large, the stereotypical traits associated with male redheads, such as effeminate and weak, are inconsistent with traditional gender-role stereotypes of men as agentic (e.g., strong and assertive).

Red-haired women, on the other hand, are typically characterized as strong-willed, temperamental, and aggressive (Lawson, 1971; Swami & Barrett, 2011; Weir & Fine-Davis, 1989), but also as wild and sexy (Cooper, 1971; Heckert & Best, 1997; McNeely et al., 2005) as reflected in television and movies (e.g., Ginger—Gilligan’s Island, Jessica Rabbit—Who Framed Roger Rabbit; Joan Holloway—Mad Men; also see Davis, 1990; Glascock, 2001). In a study by Heckert and Best (1997) red-haired women described the stereotype for female redheads as “spitfires…a little wild, self-assured, sexy;” “Fierce, fiery personality, like an untamed heroine in a romance novel;” “a mystique” (p. 374; also see Weitz, 2001). As a result of such stereotypes, female redheads are often thought to have more sex than women with other hair colours.
(Cooper, 1971; Dolliver, 1999; Heckert & Best, 1997). Although the stereotype of the red-haired “sexual siren” is a popular one it may be held more by men than by women as a study by McNeely et al. (2005) showed that significantly more men (23.7%; \(N = 326\)) agreed with the statement, “women with red hair are more fiery and saucy” compared with only 9.2% of women. Nevertheless, women with red hair are typically rated as more competent professional types such as doctor or professor, as well as more complex and more powerful (Clayson & Maughan, 1976; 1986; Heckert & Best, 1997; but c.f. Kyle & Mahler, 1996). These stereotypes about female redheads are atypical of traditional gender-role stereotypes. Although female redheads are clearly seen as feminine, they are also seen to possess more agentic or masculine characteristics (e.g., fiery and aggressive) than female non-redheads.

Indeed, a study by Lawson (1971) supports the assumption that redheads are seen as gender atypical, particularly in terms of masculinity. In their study, men and women rated perceptions of male and female target persons with different hair colours—blond, brunette, and red—on a number of bipolar adjective traits (e.g., strong-weak). Although the researchers did not interpret their findings in terms of gender atypicality, compared with blondes and brunettes, men with red hair were rated lowest on agentic or masculine traits (e.g., strong, unemotional, dependable) by both men and women. Although female redheads were seen as highly feminine, these same women were perceived as atypical of their gender on other traits (e.g., strong-willed, cold, dangerous, rugged, etc.; also see Beddow, Hymes, & McAuslan, 2011). In other words, female redheads were seen as more agentic—a traditionally masculine trait—than female non-redheads.

As stereotypes about redheads appear to contradict traditional gender-role stereotypes, it stands to reason that redheads would be shown prejudice compared to persons with other hair colours. As gender atypicality is often met with negative attitudes (e.g., Kimmel & Mahler, 2003), the teasing, and all out abuses in some cases aimed at persons with red hair may be explained as responses to perceived gender atypicality.
1.3. Differential Responses to Red Hair: Male vs Female Targets

For several reasons, I argue that a stronger bias will be shown against male redheads than against female redheads in relation to persons with other hair colours. First, gender is defined here as the differing roles, experiences, responsibilities, and limitations assigned to individuals based on their biological sex (Johnson & Repta, 2012). Building on biological sex, gender gives meaning to sex differences through the use of labels such as man-woman, male-female, and masculine-feminine, amongst others. It is recognized that these gender categories are socially constructed and that other gender categories and identities exist (Johnson & Repta, 2012).

Over the last half century gender roles have expanded more for women than for men. According to Eagly (1987), gender-role expectations emerged from women's traditional family role as nurturer, and extended to occupational roles typically held by women (e.g., teacher, nurse). However, since World War II, women's occupational roles have expanded to include traditionally male professions (Eagly & Sczesny, 2009). Consequently, women's contemporary gender-roles contain added agentic characteristics (Diekman & Goodfriend, 2006), which allows women to act in ways that are inconsistent with traditional female gender-roles but are still considered to be gender-normative (Fagot, 1977; Hemmer & Kleiber, 1981). This is not to say that women no longer are held accountable for gender-role violations. Rather, women are held to a different standard than were women at the turn of the twentieth century. As a result, female redheads, who are perceived to possess stronger agentic characteristics than women with other hair colours (e.g., Lawson, 1971), may not be seen as particularly atypical of their gender group. In contrast, since the beginning of the 20th Century, men's gender-role dimensions have remained stable (Diekman & Goodfriend, 2006). As a result, men are held to their traditional male gender-role expectations which are often reflected in their occupational choices (Eagly, 1987; Eagly & Wood, 1991).

Additionally, research shows that in many contexts, sanctions for gender atypicality are stronger for male violators. For instance, men who engage in traditional female gender-role behaviours are shown greater disapproval than women engaging in traditional male gender-role behaviours (Feinman, 1981; also see Fagot, 1977). There is
some evidence that male transgressions of gender roles may be seen as symptomatic of homosexuality (McCreary, 1994). Indeed, the homosexual label itself attributed to a person typically conjures up heterosexual traits normally associated with the other gender (Kite & Deaux, 1987). As a result, men show greater discomfort than women with engaging in other-gender behaviours for fear of appearing feminine (Rudman & Fairchild, 2004), and expect to be labelled as “pussies” (Berdahl, Magley, & Waldo, 1996), or homosexual, as a result (Bosson, Prewitt-Freilino, & Taylor, 2005; McCreary, 1994). As such, men often reject feminine traits in themselves (Glick et al. 2007) and other men, particularly when their own masculinity is under threat (Eisler & Skidmore, 1987; Schmitt & Branscombe, 2001).

1.4. Differential Responses to Red Hair: Male vs Female Observers

In addition to bias against redheads based on the gender of the target person, gender of the observer should affect bias against redheads. As gender roles tend to reinforce men’s higher status in society relative to women’s status (Schmitt, Branscombe, & Kappen, 2003; Schmitt & Wirth, 2009), men’s attitudes, relative to women’s, will reflect a greater desire to maintain gender roles and higher status for men. According to the social identity perspective (Tajfel & Turner, 1986; Turner et al., 1987), men’s positive self-concept is derived, in part, from membership in their gender group. One way to maintain this positive self-concept is to protect the legitimacy and stability of men’s higher status relative to women. Accordingly, it can be said that traditional male-role norms are important in maintaining men’s positive gender group identity. Women, on the other hand, have less to gain in terms of positive self-concept by helping to maintain existing gender-role norms and the subsequent status differences between men and women.

As such, men are more motivated to maintain male gender-role norms than women. Consequently, men would be expected to penalize atypical boys or men who are perceived to threaten the social standing of the ingroup, and to therefore show a stronger bias against male redheads. To be clear, although men and women stereotype male redheads as gender atypical (e.g., Heckert & Best, 1997), I expect that men will
respond to that atypicality more negatively than women because men are more motivated to maintain male gender-role norms.

1.4.1. Overview of Studies

Predictions were tested in three studies. In Study 1, men and women rated photos of White, elementary-age children with black, blonde, brown, or red hair colours on measures of gender stereotyping, liking and responses to bullying behaviour. In Study 2, White men and women rated White, college-age male and female targets with blonde, brunette, or red hair colours on measures of gender stereotyping, liking, and sexual attraction. The third study attempted to replicate the findings of Study 2. A measure of male-role endorsement was included to determine if endorsement of traditional gender-role norms moderated the relationship between target hair colour and target liking.
2. **Study 1**

2.1. **Overview**

In Study 1, participants first read a short vignette about a school bullying incident in which a boy or a girl (grade 2 or grade 7), with one of four hair colours (black, blonde, brown, or red), was swarmed by a group of same-gender kids and kicked in the legs. The outcome was the same in all conditions wherein the victim was taken to hospital for minor scrapes and bruises and the bullies sent home pending possible suspension. After reading the vignette, participants completed measures about the bullying incident and their attitudes toward bullying victims. Additionally, participants rated the target on gender stereotyping and target liking.

**Hypothesis 1: Gender Stereotyping**

Based on the assumption that stereotypes about redheads are inconsistent with traditional gender stereotypes, I predicted a two-way target gender and target hair colour interaction in which male redheads would be seen as less masculine than male non-redheads, and female redheads would be seen as more masculine than female non-redheads (Hypothesis 1a). I also predicted a two-way interaction in which male redheads would be seen as more feminine than male non-redheads. Significant differences in femininity were not expected between female redheads and non-redheads (Hypothesis 1b).

**Hypothesis 2: Attitudes Toward the Bullying Incident**

Based on the assumption that male redheads will be shown more prejudice than male non-redheads, particularly by men, I predicted a three-way interaction in which men would judge the bullying incident as less serious when involving male redheads than male non-redheads. Significant differences in the seriousness of the bullying incident were not expected between female redheads and non-redheads. For women,
differences were not expected between redheads and non-redheads regardless of target gender (Hypothesis 2a).

Further, I predicted a three-way interaction in which men would be less sympathetic toward male bullying victims with red hair than another hair colour. Significant differences in sympathy were not expected between female redheads and non-redheads. Women participants were not expected to express differential sympathy based on the victim’s hair colour regardless of the victim’s gender (Hypothesis 2b).

Finally, I predicted that men would more strongly endorse negative attitudes toward bullying victims after viewing male redheads than male non-redheads. Differences in attitudes toward the bullying victims were not expected between female redheads and non-redheads. No significant difference in women’s attitudes toward bullying victims was expected between redheads and non-redheads regardless of target gender (Hypothesis 2c).

Hypothesis 3: Target Liking

I predicted a three-way interaction in which men would judge male redheads as less well-liked by their peers than male non-redheads. Differences for liking were not expected between female redheads and non-redheads, or for women.

2.2. Method

2.2.1. Participants and Design

One-hundred and seventy-two (50 male, 122 female) students at Simon Fraser University participated in a school bullying study for partial course credit. Participant age ranged from 17 to 35 years ($M_{age} = 20.41$). As the study focused on prejudice against redheads, five participants with red hair were removed from the study leaving 167 participants (50 male, 117 female) with black (51%), brown (38%), and blonde hair colours (6%; not listed 5%). For 85% of participants, their current hair colour was also their natural hair colour. When asked, “If you were to consider changing your hair colour what colour would you choose?” the majority stated a preference for brown hair (52%), while the remaining participant choices were divided between black (20%), blonde (9%),
and red hair (8%; not listed 11%). The study consisted of East Asian (55%), White (25%), and South Asian (14%) participants (Other 13%), from primarily middle class (56%), and upper-middle class (29%) families, chiefly raised in large cities (65%).

The study was a 2 (participant gender: male or female) x 2 (target gender: male or female) x 4 (target hair colour: red, blonde, black, or brown) between-subjects design.

2.2.2. Procedure

A researcher emailed each participant a link to an online school bullying study. Participants gave informed consent and were randomly assigned to read a vignette in the form of a (bogus) news article in which each participant had an equal chance to read about a grade two or grade seven boy or girl victim of school bullying with one of four hair colours (black, blonde, brown, or red). Participants completed a number of measures and were fully debriefed.

Target Photos

Caucasian target photos were found online using Google image and a keyword search (e.g., tween + portrait + head and shoulders). Attempts were made to only include target persons with neutral or near-neutral expression. There were two target persons for each of the four hair colours, two age groups (grade 2 and grade 7), and two gender groups (female and male). Target age did not interact with target hair colour for any of the dependent measures and will therefore not be discussed further. Using photo manipulation software target hair colour was altered to include each of the four hair colour manipulations and each target person was affixed to a common background. In total, thirty-two target photos were included in Study 1.

Vignette

A relatively short vignette accompanied each target photo (see Appendix A). The text, in the guise of a genuine news article, reported on a bullying incident (at a fictional school) in which a group of same-gender students kicked another student. No actual persons were quoted in the article.
Measures

Participants completed the following measures in the order presented below.

**Sympathy toward the victim.** Using a Likert-type scale ranging from 1 (not very much) to 7 (very much), participants were asked to indicate the extent to which they felt sympathy toward the victim in the article, with higher scores indicating greater sympathy.

**Seriousness of the bulling incident.** The perceived seriousness of the bullying incident was assessed with a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) for the following statements: “This event should be taken very seriously;” “This situation was blown out of proportion(R);” “The mother quoted in this article is taking this way too seriously(R).” A composite measure ($\alpha = .69$) was created with higher scores indicating greater perceived seriousness of the bullying incident.

**Attitudes toward bullying victims.** Participants were asked to indicate their level of agreement or disagreement with 5-items from Rigby and Slee (1991; $\alpha = .87$) involving attitudes toward bullying victims as follows: “Kids who are weak are just asking for trouble;” “Kids should not complain about being bullied;” “It’s okay to call some kids nasty names;” “It is funny to see kids get upset when they are teased;” and “Kids who get picked on a lot usually deserve it.” Responses were rated on a 9-point Likert-type scale (1 - very strongly disagree to 9 - very strongly agree). Higher scores indicate greater agreement with negative attitudes toward bullying victims.

**Gender stereotyping.** A 15-item personality-trait scale adapted from Dion and Dion (1987) was employed to measure gender stereotyping. Participants were asked, “Based on the limited information you have been given, please make your best guess as to the following personality traits of the victim.” Items were rated on a 6-point Likert-type scale (1 - does not describe the person well to 6 - describes the person well).

A factor analysis using Varimax rotation identified two factors.\(^1\) The first 8-item factor (kind, polite, well-mannered, genuine, sincere, warm, desirable as a friend, and

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\(^1\) One item—‘interesting’—loaded equally well on both factors and was therefore removed from the analysis.
sensitive; $\alpha = .92$) can be described as consisting of feminine gender-role traits, whereas the second 6-item factor (strong, self-assertive, poised, sociable, independent, and exciting) reflect masculine gender-role traits ($\alpha = .83$; e.g., Abele & Wojciszke, 2007).

Liking by peers. The degree to which target persons were thought to be liked by their classmates was measured with a single item. Responses were rated on a 6-point Likert-type scale (1 - does not describe the person well to 6 - describes the person well), with higher scores representing greater perceived liking by classmates.

2.3. Results

As the main focus of the following studies is how people perceive and respond to redheads relative to non-redheads, all significant interactions, as well as main effects of hair colour, will be deconstructed contrasting red hair to all other hair colours.

2.3.1. Gender Stereotyping

To determine how gender stereotyping may vary by hair colour, I conducted a 2 (participant gender: male or female) x 2 (target gender: male or female) x 4 (target hair colour: black, blonde, brown, or red) analysis of variance (ANOVA).

For masculine traits, there was no significant main effect for target hair colour ($p = .637$). There were marginally significant main effects for participant gender ($p = .081$), and for target gender, ($p = .096$). There was no significant two-way interaction for participant gender and target gender ($p = .556$), and the participant gender and target hair colour interaction was only approaching significance, $F(3, 151) = 1.84$, $p = .143$. Finally, there was no significant three-way interaction, $p = .878$.

As gender stereotyping is a key component of the first study, orthogonal contrasts were carried out to decompose the participant gender and target hair colour interaction, even though that interaction was only approaching significance. As shown in Figure 2-1, men viewed redheads as less masculine than persons with other hair colours. For women, no significant difference for masculinity was found between redheads and non-redheads.
Figure 2-1. Means and Orthogonal Contrasts for Masculine Traits by Participant Gender and Target Hair Colour.

Note: Bonferroni correction was used to test each post hoc comparison at $\alpha = .05 \div 6 = .008$, for male participants: $a_b p = .083$; $a_c p = .032$; $a_d p = .268$; $b_c p = .584$; $b_d p = .597$; $c_d p = .301$, and for female participants: $a_b p = .525$; $a_c p = .302$; $a_d p = .431$; $b_c p = .685$; $b_d p = .868$; $c_d p = .816$.

For feminine traits, the main effect for participant gender was approaching significance, $p = .127$. Main effects for target gender and target hair colour were not significant, $p's > .483$. The interaction between participant gender and target gender was marginally significant ($p = .095$). All other interactions were non-significant, $p's > .378$.

It was hypothesized that male redheads would be seen as less masculine and more feminine than male non-redheads. Instead, redheads in general were rated as less masculine than non-redheads, but only by men. For women, masculinity and femininity did not differ between redheads and non-redheads.

2.3.2. **Attitudes Toward the Bullying Incident**

**Seriousness of the Bullying Incident**

For seriousness of the bullying incident there were no significant main effects, and the two-way interactions were not significant, $p's > .137$. However, a significant three-way participant gender, target gender, and target hair colour interaction was found, $F(3, 151) = 2.73$, $p = .046$. 
For men, orthogonal contrasts showed no significant differences between male redheads and non-redheads, or between female redheads and non-redheads, $t(22) = -1.05, p = .306$, $t(24) = 1.27, p = .215$, respectively. As shown in Table 2-1, differing trends were shown for red hair depending on target gender. Men judged the situation as less serious when involving male redheads than male non-redheads, whereas the situation was seen as more serious when it involved red-haired than non-red-haired girls.

### Table 2-1. Means and Standard Deviations for Seriousness of the Bullying Incident by Participant Gender, Target Gender and Target Hair Colour.

<table>
<thead>
<tr>
<th>Hair Colour</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male Participants</td>
<td>Female Participants</td>
</tr>
<tr>
<td>Reda</td>
<td>5.00 (1.41)</td>
<td>5.71 (1.09)</td>
</tr>
<tr>
<td>Blondeb</td>
<td>5.27 (0.72)</td>
<td>5.42 (1.08)</td>
</tr>
<tr>
<td>Blackc</td>
<td>5.58 (1.53)</td>
<td>6.00 (0.79)</td>
</tr>
<tr>
<td>Brownb</td>
<td>5.94 (0.65)</td>
<td>5.69 (1.14)</td>
</tr>
</tbody>
</table>

*Note. Standard deviations in parentheses. Bonferroni correction was used to test each post hoc comparison at $\alpha = .05/6 = .008$, for boys: men $a,b p = .717; a,c p = .506; a,d p = .175; b,c p = .626; b,d p = .135; c,d p = .600$; women $a,b p = .435; a,c p = .462; a,d p = .996; b,c p = .146; b,d p = .487; c,d p = .460$, and girls: men $a,b p = .119; a,c p = .499; a,d p = .069; b,c p = .911; b,d p = .250; c,d p = .297$; women $a,b p = .804; a,c p = .283; a,d p = .463; b,c p = .162; b,d p = .635; c,d p = .028$.*

For women, no significant differences were found between redheads and non-redheads regardless of target gender, $p$’s > .838.

### Sympathy Toward the Victim

For sympathy toward the victim, there were no significant main effects, $p$’s > .146. The participant gender and target hair colour interaction was marginally significant ($p = .086$), while none of the other two-way interactions were significant, $p$’s > .415. The marginal two-way interaction was qualified by a significant three-way participant gender, target gender, and target hair colour interaction, $F(3, 151) = 3.41, p = .019$.²

² Although several outliers were identified their removal failed to correct the skewed distribution. Levene's test indicated that the assumption of homogeneity of variance had been violated for the model, $F(15, 151) = 4.97, p < .001$. Although, correction with Log₁₀ transformation re-established the assumption of homogeneity, the outcome variables remained non-significant. Therefore, the non-transformed data, including outliers, are reported.
Table 2-2. Means and Standard Deviations for Sympathy Toward the Victim by Participant Gender, Target Gender and Target Hair Colour.

<table>
<thead>
<tr>
<th>Hair Colour</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male Participants</td>
<td>Female Participants</td>
</tr>
<tr>
<td>Reda</td>
<td>6.60 (.89)</td>
<td>6.47 (.64)</td>
</tr>
<tr>
<td>Blondeb</td>
<td>6.20 (.84)</td>
<td>6.42 (1.54)</td>
</tr>
<tr>
<td>Blackc</td>
<td>6.13 (.99)</td>
<td>6.50 (1.42)</td>
</tr>
<tr>
<td>Brownbd</td>
<td>6.17 (.41)</td>
<td>6.27 (.95)</td>
</tr>
</tbody>
</table>

Note. Standard deviations in parentheses. Bonferroni correction was used to test each post hoc comparison at $\alpha = .05 \div 6 = .008$, for boys: men $^{ab}p = .486;^{ac}p = .403;^{ad}p = .313;^{bc}p = .891;^{bd}p = .993;^{cd}p = .917$, women $^{ab}p = .857;^{ac}p = .929;^{ad}p = .564;^{bc}p = .789;^{bd}p = .633;^{cd}p = .560$, and girls: men $^{ab}p = .024;^{ac}p = .213;^{ad}p = .333;^{bc}p = .405;^{bd}p = .126;^{cd}p = .167$, women $^{ab}p = .486;^{ac}p = .093;^{ad}p = .456;^{bc}p = .700;^{bd}p = .512;^{cd}p = .229$.

Deconstructing the three-way interaction, men’s sympathy toward the victim did not significantly differ between redheads and non-redheads regardless of target gender, $p’s > .277$. In contrast to predictions, a trend was apparent in which men showed more sympathy toward male redheads than non-redheads (see Table 2-2). For women, none of the contrasts between redheads and non-redheads were significantly different, $p’s > .169$.

Attitudes Toward Bullying Victims

In contrast to the above measures which take a more direct approach to testing feelings toward bullying behaviour, attitudes toward bullying victims is a more indirect approach in that it asks generalized questions about the types of children who are stereotypically bullied. Participants completed this group of questions shortly after viewing the target person.

For attitudes toward bullying victims a main effect for participant gender was found, $p = .001$. There were no significant main effects for target gender, or for target hair colour, $p’s > .658$. There were no significant two-way interactions found for participant gender and target gender, or participant gender and target hair colour, $p’s > .650$. A marginally significant target gender and target hair colour interaction was found ($p = .056$), which was qualified by a significant three-way interaction, $F(3, 151) = 3.22, p = .024$. 
Deconstructing the three-way interaction, men showed marginally higher agreement with (negative) attitudes toward bullying victims after viewing male redheads than male non-redheads (see Figure 2-2). Interestingly, a trend was found in which men showed lower agreement with negative attitudes toward bullying victims after viewing female redheads than non-redheads. For women, attitudes toward bullying victims did not significantly vary as a function of target hair colour, $p's > .416$.

Overall, hypothesis 2 received some support. There was an interesting trend in which men rated the bullying incident as less serious when it involved male redheads than male non-redheads. Moreover, men showed more agreement with (negative) attitudes toward bullying victims after viewing male redheads than non-redheads. Significant differences were not found between female redheads and non-redheads. Although not significant, men did show more sympathy toward male redheads than male non-redheads in the bullying situation. Consistent with predictions these results suggest that prejudice against redheads may be held more by men than by women, and that prejudice against redheads may be aimed most squarely at male redheads than at female redheads.

**2.3.3. Liking by Peers**

One of the primary questions of interest in Study 1 was whether hair colour affects how much a person is liked. A significant main effect was found for target gender, $p = .025$. There were no significant main effects for participant gender, or for target hair colour, $p's > .293$. There were no significant two-way interactions, $p's > .309$. There was a marginal three-way participant gender, target gender, and target hair colour interaction effect, $F(3, 151) = 2.26, p = .083$.

As shown in Figure 2-3, men judged male redheads as less liked than male non-redheads. No significant differences in liking were found between female redheads and non-redheads. For women, no significant differences in liking were found between redheads and non-redheads regardless of target gender.
Figure 2-2. Means and Orthogonal Contrasts for Attitudes Toward Bullying Victims by Participant Gender, Target Gender and Target Hair Colour.

Note: Bonferroni correction was used to test each post hoc comparison at $\alpha = .05\div 6 = .008$, for boys: men $^{a,b} p = .130; ^{a,c} p = .382; ^{a,d} p = .128; ^{b,c} p = .565; ^{b,d} p = .297; ^{c,d} p = .800$; women $^{a,b} p = .448; ^{a,c} p = .234; ^{a,d} p = .207; ^{b,c} p = .457; ^{b,d} p = .339; ^{c,d} p = .905$, and girls: men $^{a,b} p = .130; ^{a,c} p = .382; ^{a,d} p = .128; ^{b,c} p = .565; ^{b,d} p = .297; ^{c,d} p = .800$; women $^{a,b} p = .448; ^{a,c} p = .234; ^{a,d} p = .207; ^{b,c} p = .457; ^{b,d} p = .339; ^{c,d} p = .905$. 

[Diagram showing means and orthogonal contrasts for attitudes towards bullying victims by participant and target gender, and target hair colour, with Bonferroni corrections for post hoc comparisons.]
Figure 2-3. Means and Orthogonal Contrasts for Liking by Peers by Participant Gender, Target Gender and Target Hair Colour.

As expected, men rated male redheads as less well-liked than male non-redheads, whereas the difference in liking between female redheads and non-redheads was non-significant. In comparison, women did not rate liking differentially by hair colour regardless of the gender of the target.
2.4. Discussion

Overall, the findings from Study 1 provide some initial evidence for the gender-role explanation as to why there is an aversion to redheads. It was anticipated that male redheads would be seen as less masculine and more feminine than male non-redheads, while female redheads would be seen as more masculine than female non-redheads. In partial support of this hypothesis, men viewed redheads in general—not just boys—as less masculine than non-redheads. No significant differences in femininity were found. Women made no significant distinctions between redheads and non-redheads, regardless of target gender. It should be noted that the small sample size for men in the first study may have affected the power to adequately detect significant effects.

Importantly, based on the overall pattern, this first study provides experimental evidence for prejudice against redheads. In keeping with expectations, there was a general trend in the data in which men judged the bullying incident to be less serious when it involved boys with red hair than boys without, and as more serious when it involved girls with red hair than non-red-haired girls. Additionally, men showed significantly higher endorsement of negative attitudes toward bullying victims when the situation involved red-haired boys than boys with another hair colour—no significant differences were found between girls regardless of hair colour, or by women. Significant differences for sympathy toward the victim were not found between redheads and non-redheads, regardless of participant gender or target gender. Indeed, the trend was in the opposite direction—men showed more sympathy for male redheads than non-redheads.

More importantly, as predicted, men perceived boys with red hair to be less liked by their peers than boys with other hair colours—this difference was not found for girls regardless of hair colour. Women, on the other hand, rated redheads and non-redheads similarly for liking. However, as target liking was framed as “liking by peers” it remains unclear if observers would themselves express less liking for redheads than non-redheads.
3. Study 2

3.1. Overview

In Study 1 it was illustrated that, in a bullying situation, men expressed less liking for boys with red hair than boys with other hair colours. Study 2 moves away from a bullying situation to a more neutral context. Additionally, the current study substitutes adult targets for child targets. As such, men are expected to show less liking toward male redheads than male non-redheads. This pattern is not expected for judgments of female redheads and non-redheads, or for female participants.

In the current study men and women viewed a male or female target person with one of three hair colours (blonde, brunette or red). Participants were asked to evaluate each target person in terms of gender stereotyping, liking, and sexual attraction. Participants then completed some basic demographic questions (e.g., age, gender) and were fully debriefed.

One of the limitations of Study 1 was that the participant sample was composed of a number of ethnicities. Yet, prejudice toward redheads appears to be found mainly in White populations. For instance, prejudice and discrimination directed at redheads seems particularly problematic in the United Kingdom (e.g., Rohrer, 2007) where the prevalence of red hair is high (12%; Hooton, 1940), and where the ethnic population is approximately 87% Caucasian (Office for National Statistics, 2012). Whites are not only assumed to be the most familiar with stereotypes about redheads, especially within a Western context, but there is also less chance of confounds due to cross-race effects. Therefore, it seems appropriate to test my hypotheses within a White sample. The following hypotheses were examined:
Hypothesis 1 – Gender Stereotyping and Gender Prototypicality

Similar to Study 1, I predicted a two-way target gender and target hair colour interaction in which male redheads would be seen as less masculine than male non-redheads, and female redheads would be seen as more masculine than female non-redheads (Hypothesis 1a). A two-way interaction was also predicted in which male redheads would be seen as more feminine than male non-redheads. Significant differences in femininity were not expected between female redheads and non-redheads (Hypothesis 1b).

For gender prototypicality, I predicted a two-way interaction in which male redheads would be seen as less gender prototypical than male non-redheads. No significant differences for gender prototypicality were expected between female redheads and non-redheads (Hypothesis 1c).

Hypothesis 2 – Target Liking

I predicted a three-way participant gender, target gender, and target hair colour interaction in which men would like male redheads less than male non-redheads. Significant differences for liking were not expected between female redheads and non-redheads. For women, significant differences for liking were not expected between redheads and non-redheads, regardless of target gender (Hypothesis 2a).

Further, based on the assumption that men relative to women are more motivated to maintain existing gender-role norms, the negative relationship between gender stereotyping and target liking was expected to be weaker for women. As such, a parallel multiple moderated-mediation model (see Figure 3-1) was tested with participant gender as a moderator of the indirect effect of target hair colour on liking through gender stereotyping (i.e., masculinity, femininity, gender prototypicality). Specifically, gender stereotyping was expected to mediate the indirect effect of hair colour on liking for men but not for women (Hypothesis 2b).
Figure 3-1. The Proposed Conceptual Model for Male Targets (Hypothesis 2b).

Hypothesis 3 – Target Sexual Attraction

Research has shown that persons who display atypical gender traits are more likely to be perceived as homosexual than similar persons without those atypical traits (Kite & Deaux, 1987; McCreary, 1994). As one of the stereotypes about male redheads is effeminacy (often associated with homosexuality), I predicted that *same-gender attraction* (i.e., men sexually attracted to men) would be higher for male redheads than male non-redheads (Hypothesis 3a). For men, as perceptions of same-gender attraction are believed to stem from perceptions of gender atypicality, I expected gender stereotyping (masculine traits, feminine traits, gender prototypicality) to mediate the effect of target hair colour on sexual attraction judgments (Hypothesis 3b).

Female redheads, on the other hand, were not expected to be seen as gender atypical. However, stereotypes about female redheads as “wild and sexy” (e.g., Heckert & Best, 1997) suggest that female redheads are seen as more sexual (i.e., “anything goes”) than female non-redheads. Therefore, I predicted that *same-gender attraction* (i.e., women sexually attracted to women) would be higher for female redheads than female non-redheads (Hypothesis 3a). To be clear, I predicted a main effect in which same-gender attraction would be higher for redheads than non-redheads, regardless of target gender or participant gender.
As the stereotypes about male redheads imply gender atypicality, I predicted a two-way interaction in which *other-gender attraction* (i.e., men sexually attracted to women and women sexually attracted to men) would be lower for male redheads than male non-redheads. As female redheads are stereotyped as more sexual than female non-redheads, I predicted that other-gender attraction would be higher for female redheads than female non-redheads (Hypothesis 3c).

3.2. Method

3.2.1. Participants

One-hundred and sixty one White male (*N* = 55) and female (*N* = 106) first and second year psychology students at Simon Fraser University participated in an online Person Perception study in exchange for course credit. As the study focused on prejudice against redheads, participants with red hair (*N* = 4) were removed from the study leaving 157 participants ranging in age from 17 to 51 years (*M*_{age} = 20.45). The majority of participants were natural-born Canadian citizens (76%), or had acquired citizenship (19%; *M* = 12.64 years in Canada). Most respondents grew up in large (45%) and smaller cities (40%), and came from middle class (53%), or upper-middle class (31%), backgrounds. Hair colour of respondents included brown (*N* = 84), blonde (*N* = 61), and black hair (*N* = 4; not listed: *N* = 8), in which 85% of participants stated this as their natural hair colour.

3.2.2. Procedure

Participants gave informed consent and were randomly assigned to view one of twelve Caucasian target persons in which each participant had an equal opportunity to view a college-age man or woman with one of three hair colours (blonde, brunette or red). Participants were given a brief description of the target person as follows:

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3 Non-white male and female respondents also participated in the study, but their data are not analyzed here.
“The (wo)man pictured below is 23 years old. (S)he grew up in central British Columbia but moved to Burnaby, BC, two years ago where (s)he currently lives and works. Please spend a few moments looking at this person as the following questions are based on your perceptions of her/him.”

**Target Pictures**

Each target person was shown in a forward-facing head and neck pose against a white background (see Appendix B). Target photos were acquired from a popular online face research website (www.faceresearch.org). The website offers the ability to average any number of faces from an existing face database to create a composite face. Research has shown that symmetry and beauty increase with the number of faces used to create a composite face (Langlois & Roggman, 1990). In order to control for facial attractiveness each target face used in the current study was a composite of four faces. Research by Langlois and Roggman (1990) has shown that four-face composites are perceived to be mid-range for level of attractiveness.

Using photo manipulation software, cross-hatching was used to render a painting effect for each target image. The advantage of using a painting effect over a realistic type image is that the former allows each target hair colour to be exaggerated for a strong hair colour manipulation. Similar methods have been used successfully in research looking at memory for faces (e.g., Rhodes & Tremewan, 1996). A small pilot study (N = 34) was conducted with the same population as Study 2 to ensure that the hair colour, age, and attractiveness level of each target person was perceived as expected.

**Measures**

The following measures were completed in the order presented below.

**Gender stereotyping.** To measure gender stereotyping, a 20-item scale was used based on the work of Prentice and Carranza (2002). The gender stereotyping measure consisted of masculine (α = .88) and feminine traits (α = .86). Each trait was accompanied by several synonyms to increase correct understanding. Each item was rated on a 7-point Likert-type scale (1 – describes the person well to 7 – does not describe the person well).
The **masculine traits** included business sense (business savvy; shrewd), athletic (fit, sporty), leadership ability (command; control), self-reliant (independent; self-sufficient), ambitious (determined; go-getting), high self-esteem (self-worth; self-respect), assertive (self-confident; forceful), decisive (resolute; determined), strong personality (character; charisma), and competitive (spirited; plays to win). The **feminine traits** included warm (affectionate; kind), sensitive (responsive; receptive), friendly (welcoming; gracious), clean (neat, tidy), attention to appearances (beautify; dress nicely), cheerful (happy; positive), cooperative (helpful; supportive), wholesome (virtuous, innocent), emotionally-expressive (open; communicative), and sympathetic (understanding; compassionate).

**Target liking.** To measure liking of target persons participants completed 8 items of the Reysen Likability Scale (Reysen, 2005; \( \alpha = .92 \)). Items were rated on a 7-point Likert-type scale (very strongly disagree to very strongly agree) with higher scores representing higher liking of target persons.

**Physical attractiveness.** Participants were asked to rate their agreement with the statement, “This person is physically attractive” (Reysen, 2005) on a 7-point Likert-type scale (very strongly disagree to very strongly agree) with higher scores indicating higher physical attractiveness of target persons.

**Gender prototypicality.** Gender prototypicality was measured with a single item: “How similar is this person to other (wo)men?” Participants responded on a 7-point Likert-type scale (1 – not very similar to 7 – very similar), with higher scores indicating higher gender prototypicality.

**Target sexual attraction.** Perceived sexual attraction was measured with two questions tapping same-gender attraction and other-gender attraction: “To what degree do you think this person is sexually attracted to (wo)men?” The other-gender attraction question was always asked first for both male and female targets. Items were measured on a 7-point Likert type scale (1 – not at all to 7 – very much).
3.3. Results

3.3.1. Manipulation Check

In Study 2, a hair colour manipulation check was included which asked, “What was the hair colour of the person you were asked to make judgements about?” As there was 97% agreement between manipulated and recalled target hair colours, hair colour was successfully manipulated. The results of the full sample are reported below.

3.3.2. Gender Stereotyping and Gender Prototypicality

Gender Stereotyping

To determine if hair colour affected perception of masculinity and femininity, I conducted a 2 (participant gender: male or female) x 2 (target gender: male or female) x 3 (target hair colour: red, blonde, brunette) analyses of variance (ANOVA). For masculine traits, there were significant main effects for participant gender ($p = .023$), and target gender ($p = .028$). The main effect for target gender was qualified by a significant two-way target gender and target hair colour interaction, $F(2, 145) = 5.55$, $p = .005$. Other main effects and interactions were not significant, $p’s > .391$.

As shown in Table 3-2, deconstructing the two-way interaction, male redheads were seen as less masculine than male non-redheads, while female redheads were seen as marginally more masculine than female non-redheads.

Contrary to expectations, male redheads were not seen to be more feminine than male non-redheads, $t(76) = -.98$, $p = .330$, and none of the post hoc comparisons were significant, $p’s > .280$. Anticipated, significant differences in femininity were not found between female redheads and non-redheads, $t(77) = .72$, $p = .474$. However, as shown in Table 3-1, post hoc comparisons revealed that blonde-haired female targets were seen as marginally less feminine than redheads, and significantly less feminine than brunettes.
Figure 3-2. Planned Comparisons for Masculine Traits by Target Gender and Target Hair Colour.

Note: Bonferroni correction was used to test each post hoc comparison at $\alpha = .05 \div 3 = .016$, for male targets: $a_b p = .004$; $a_c p = .037$; $b_c p = .236$, and female targets: $a_b p = .106$; $a_c p = .246$; $b_c p = .550$.

Table 3-1. Means and Standard Deviations for Feminine Traits by Target Gender and Target Hair Colour.

<table>
<thead>
<tr>
<th>Hair Colour</th>
<th>Target Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red$_a$</td>
<td></td>
<td>4.12 (1.42)</td>
<td>4.69 (0.96)</td>
</tr>
<tr>
<td>Blonde$_b$</td>
<td></td>
<td>4.47 (0.81)</td>
<td>4.20 (0.84)</td>
</tr>
<tr>
<td>Brunette$_c$</td>
<td></td>
<td>4.25 (0.69)</td>
<td>4.88 (0.90)</td>
</tr>
</tbody>
</table>

Note. Standard deviations in parentheses. Bonferroni correction was used to test each post hoc comparison at $\alpha = .05 \div 3 = .016$ for male targets: $a_b p = .280$; $a_c p = .655$; $b_c p = .296$, and female targets: $a_b p = .052$; $a_c p = .460$; $b_c p = .009$. 

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Gender Prototypicality

For gender prototypicality, there were no significant main effects for participant gender, or for target gender, \( p \)'s > .260. A main effect for target hair colour was found (\( p = .040 \)), which was qualified by a two-way target gender and target hair colour interaction, \( F(2, 145) = 10.78, p < .001 \). All other interaction effects were non-significant, \( p > .229 \).

Deconstructing the interaction, male redheads were seen as significantly less gender prototypical than male non-redheads (see Figure 3-3). Differences in gender prototypicality were not found between female redheads and non-redheads. However, after correcting for familywise error rate, post hoc comparisons revealed that female blondes were seen as significantly less gender prototypical than redheads, and brunettes, \( t(53) = 2.66, p = .010 \), \( t(47) = -2.86, p = .006 \), respectively.

It was hypothesized and found that male redheads were seen as less masculine and less gender prototypical than male non-redheads. In contrast to expectations, male
redheads were not seen to be more feminine than male non-redheads. As expected, female redheads were seen as (marginally) more masculine than female non-redheads—significant differences in femininity and gender prototypicality were not found between female redheads and non-redheads. However, post hoc comparisons did show that blondes were seen as less feminine and less gender prototypical than redheads and brunettes.

3.3.3. Target Sexual Attraction

For same-gender attraction, there were no significant main effects or interactions found, \(p’s > .246\). Indeed, as shown in Table 3-2, the trend is in the opposite direction to that hypothesized as men with red hair were rated lowest on same gender attraction than men with other hair colours.

Table 3-2. Means and Standard Deviations for Same-Gender Attraction by Target Gender and Target Hair Colour.

<table>
<thead>
<tr>
<th>Hair Colour</th>
<th>Target Gender</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>2.52 (1.16)</td>
<td>3.07 (1.68)</td>
<td></td>
</tr>
<tr>
<td>Blonde</td>
<td>3.19 (1.90)</td>
<td>3.32 (1.60)</td>
<td></td>
</tr>
<tr>
<td>Brunette</td>
<td>2.89 (1.47)</td>
<td>2.88 (1.23)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Standard deviations in parentheses.

For other-gender attraction there were no significant main effects for participant gender, or target gender. The main effect for target hair colour was approaching significance (\(p = .110\)). The target gender and target hair colour interaction effect was also approaching significance, \(F(2, 145) = 2.08, p = .128\), as was the three-way interaction, \(F(2, 145) = 2.24, p = .110\). All other interactions were non-significant, \(p’s > .546\).
Deconstructing the marginal three-way interaction, men rated male redheads lower on other-gender attraction than male non-redheads (see Figure 3-4). Significant differences in other-gender attraction were not found between female redheads and non-redheads. For women, there were no significant differences found between redheads and non-redheads regardless of target gender.
Figure 3-5. Planned Comparisons of Overall Sexuality by Target Gender and Target Hair Colour for Male Participants.

Note: Bonferroni correction was used to test each post hoc comparison at \( \alpha = \frac{.05}{3} = .016 \), for male targets: men \( a^b p = .027; a^c p = .009; b^c p = .680 \); women \( a^b p = .036; a^c p = .178; b^c p = .505 \), and female targets: men \( a^b p = .383; a^c p = .297; b^c p = .814 \); women \( a^b p = .384; a^c p = .066; b^c p = .532 \).

From these sexual attraction questions several composite measures were created. The first—relative heterosexuality—was created by subtracting same-gender attraction from other-gender attraction with higher scores indicating higher relative heterosexuality. The second composite measure was created by adding same-gender
attraction and other-gender attraction thus creating an overall sexuality rating of target persons.

In testing the two composite measures, there were no significant main effects or interactions for relative heterosexuality, \( p's > .448 \). For overall sexuality, there were no significant differences for participant gender or target gender, \( p's > .190 \). There was a significant difference found between target hair colours \( (p = .023) \), which was qualified by a two-way target gender and target hair colour interaction \( (p = .018) \), and further qualified by a significant three-way interaction, \( F(2, 145) = 3.65, p = .029 \). All other interaction effects were non-significant, \( p's > .902 \).

As shown in Figure 3-5, men judged male redheads as less sexual than male non-redheads. No difference in overall sexuality was found between female redheads and non-redheads. Women saw male redheads as marginally less sexual than males with other hair colours, while no significant difference in overall sexuality was found between female targets regardless of hair colour.

In sum, participants did not perceive redheads, compared to non-redheads, as more attracted to people of the same gender—if anything, the trend was in the opposite direction. However, male redheads were seen as less sexually attracted to other-gender persons than male non-redheads, specifically by men. This difference was not found between female redheads and non-redheads. In terms of the two composite measures, male redheads and male non-redheads did not significantly differ on relative heterosexuality, but significant differences were found for overall sexuality. Specifically, male redheads were seen as less sexual than male non-redheads by men, and marginally less sexual by women.

Therefore, in contrast to the hypothesis that male redheads would be seen as more sexually attracted to same-gender persons than male non-redheads, these results suggest, rather, that male redheads are seen as relatively asexual, especially by other men.
3.3.4. **Target Liking**

For liking, there were no significant main effects for target gender, or target hair colour, $p’s > .229$. There was a significant main effect found for participant gender, $p = .002$, a significant two-way target gender and target hair colour interaction, $F(2, 145) = 5.55$, $p = .005$, and a marginally significant interaction for participant gender and target hair colour, $F(2, 145) = 2.94$, $p = .056$. The three-way interaction was only approaching significance, $F(2, 145) = 1.93$, $p = .148$. All other interactions were non-significant, $p = .906$.

Although the three-way interaction was marginal, I examined the planned contrasts separately for male and female participants. For men, male redheads were liked less than male non-redheads. Significant differences in liking were not found between female redheads and non-redheads. For women, the difference between redheads and non-redheads was not significant, regardless of target gender. However, post hoc tests showed that blonde-haired female targets were liked significantly less than redheads, and less than brunettes, $t(33) = 2.58$, $p = .015$, $t(29) = -3.15$, $p = .004$, respectively.

These results support the premise that prejudice is directed more toward male redheads than female redheads, particularly by men.

3.3.5. **Moderated-Mediation**

Limiting the analysis to male target persons, a parallel multiple moderated-mediation model was proposed with participant gender moderating the indirect effect of target hair colour on target liking through gender stereotyping. This model allows each mediator (masculine traits, feminine traits, gender prototypicality) to be tested simultaneously while accounting for the shared association between them.
First, because Study 2 utilizes a 3-condition categorical independent variable (hair colour), contrast coding was used to compare red hair to blonde and brunette hair.
in which red hair colour was coded as 2 and blonde and brunette were both coded as -1. A non-parametric bootstrap approach was employed with the use of a macro expansion for SPSS (PROCESS; Hayes, 2013), which increases the power to detect mediated effects in small, non-normally distributed samples (Preacher & Hayes, 2004). The current dataset was randomly sampled with replacement 1000 times. When the 95% confidence interval does not include zero the null hypothesis is rejected.

As target hair colour did not predict femininity, femininity as a mediator was not tested. In hypothesis 2b, I predicted that the negative relationship between gender stereotyping and target liking would be weaker for female participants than for male participants. As shown in Table 3-3, results indicated that the interaction between masculinity and participant gender was not significant. As such, the mediation path was not moderated by participant gender. Excluding participant gender as a moderator, a test of the simple mediation model was not conducted as masculinity did not have a significant main effect on liking.

<table>
<thead>
<tr>
<th>Regression Paths</th>
<th>b</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Masculinity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mediation a path (THC on Masc)</td>
<td>-.265</td>
<td>-2.99</td>
<td>.004</td>
</tr>
<tr>
<td>Mediation b path (Masc on Liking)</td>
<td>.390</td>
<td>1.41</td>
<td>.163</td>
</tr>
<tr>
<td>Interaction' (Masc x PG)</td>
<td>-.028</td>
<td>-1.49</td>
<td>.882</td>
</tr>
<tr>
<td><strong>Gender Prototypicality</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mediation a path (THC on Prot)</td>
<td>-.485</td>
<td>-4.52</td>
<td>.000</td>
</tr>
<tr>
<td>Mediation b path (Prot on Liking)</td>
<td>-.346</td>
<td>-1.66</td>
<td>.102</td>
</tr>
<tr>
<td>Interaction' (Prot x PG)</td>
<td>.268</td>
<td>1.85</td>
<td>.068</td>
</tr>
</tbody>
</table>

Note. THC = target hair colour, Masc = masculinity, PG = participant gender, Prot = gender prototypicality.

In the second path of the moderated-mediation model, the interaction between prototypicality and participant gender was marginally significant. The indirect effect of target hair colour on liking through gender prototypicality was significant for male participants but not female participants, $b = -.092$ CI (-.245, -.006), $b = .038$ CI (-.026,
.161), respectively. These findings support the prediction that for men, target hair color predicted gender prototypicality ($b = -.485$, $t(76) = -.265$, $p < .001$), which, in turn, marginally predicted target liking ($b = .190$, $t(71) = 1.56$, $p = .122$). For women, target hair color predicted gender prototypicality ($b = -.485$, $t(76) = -4.52$, $p < .001$), while gender prototypicality did not predict liking, $b = -.078$, $t(71) = -.863$, $p = .391$.

Overall, these results suggest that men’s prejudice against male redheads is at least partly about gender stereotypes, and particularly about their implications for gender prototypicality. This is to say that participants judged male redheads as less gender prototypical. Less gender prototypicality, in turn, led to stronger bias toward male redheads—but only for male participants.

### 3.3.6. Additional Testing

Physical attractiveness has been shown to be positively associated with liking in that the more attractive a person is the more he or she is liked (e.g., Dion & Berscheid, 1972). Therefore, it is important to rule physical attractiveness out as an alternative explanation for the differences in liking between redheads and non-redheads.

#### Table 3-4. Means and Standard Deviations for Attractiveness by Target Gender and Target Hair Colour.

<table>
<thead>
<tr>
<th>Hair Colour</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reda</td>
<td>3.13 (1.25)</td>
<td>4.67 (1.52)</td>
</tr>
<tr>
<td>Blondeb</td>
<td>4.30 (0.99)</td>
<td>4.04 (1.62)</td>
</tr>
<tr>
<td>Brunettec</td>
<td>4.21 (1.07)</td>
<td>4.83 (0.92)</td>
</tr>
</tbody>
</table>

**Note.** Standard deviations in parentheses. Bonferroni correction was used to test each post hoc comparison at $\alpha = .05/3 = .016$, for male targets: $^{a,b}p = .001$; $^{a,c}p = .002$; $^{b,c}p = .041$.

First, testing for differences in physical attractiveness there were significant main effects for participant gender ($p = .043$), target gender ($p = .002$), and target hair colour ($p = .035$), the latter of which were qualified by a target gender and target hair colour interaction, $F(2, 145) = 5.31$, $p = .006$. All other interactions were not significant, $p$’s >
Deconstructing the interaction, male redheads were seen as less physically attractive than male non-redheads, \( t(76) = -4.14, p < .001 \). Significant differences in attractiveness were not found between female redheads and female non-redheads \( (p = .474) \).

In the current study men liked male redheads less than non-redheads. It could be argued that for male targets, attractiveness would mediate the relationship between target hair colour and target liking. It could also be the case that target liking would mediate the relationship between target hair colour and physical attractiveness. In the first instance, being seen as unattractive would reduce liking—an alternative explanation for my findings. In the second instance disliking someone would make them less attractive.

Table 3-5. Mediation by (a) Attractiveness of the effects of Target Hair Colour on Target Liking and (b) Mediation by Target Liking of the effects of Target Hair Colour on Attractiveness \( (N = 25) \)

<table>
<thead>
<tr>
<th>Regression Paths</th>
<th>B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediation a path (THC on Attract)</td>
<td>-.502</td>
<td>-2.581</td>
<td>.017</td>
</tr>
<tr>
<td>Mediation b path (Attract on Liking)</td>
<td>.357</td>
<td>3.284</td>
<td>.003</td>
</tr>
<tr>
<td>Total effect c path (THC on Liking)</td>
<td>-.357</td>
<td>-2.945</td>
<td>.007</td>
</tr>
<tr>
<td>Direct effect c’ (THC on Liking controlling for Attract)</td>
<td>-.178</td>
<td>-1.540</td>
<td>.138</td>
</tr>
<tr>
<td>Indirect effect (mediation)</td>
<td>-.180</td>
<td>[-.411, -.052]</td>
<td></td>
</tr>
</tbody>
</table>

| Mediation a path (THC on Liking)   | -.357 | -2.94 | .007 |
| Mediation b path (Liking on Attract) | .921  | 3.28  | .003 |
| Total effect c path (THC on Attract)       | -.502 | -2.58 | .017 |
| Direct effect c’ (THC on Attract controlling for Liking) | -.174 | -0.908 | .374 |
| Indirect effect (mediation)             | -.329 | [-.667, -.107] | |

Note. THC = target hair colour, Attract = attractiveness.

As shown in Table 3-5, there is some support for both models. In Model (a), mediation effects of attractiveness on the relationship between target hair colour and target liking, there was a significant indirect effect of target hair colour on liking through attractiveness. In Model (b), mediation effects of liking on the relationship between target hair colour and attractiveness, there was a significant indirect effect of target hair colour on attractiveness through target liking. As both models showed some support, there is
no strong evidence that liking effects can be accounted for by physical attractiveness. These results may suggest that attractiveness is simply another indicator of liking (Dion & Dion, 1987; Reysen, 2005).

It is worth emphasizing that the patterns of means differ for physical attractiveness and target liking. Both women and men saw male redheads as less attractive than male non-redheads. However, only men disliked male redheads. Although it is possible that men in the current study care more about physical attractiveness than women, it does not seem plausible as strong physical attractiveness bias is also found for women (Cross & Cross, 1971; Hadjistavropoulos & Genest, 1994; Sritharan, Heilpern, Wilbur, & Gawronski, 2010; Walster, Aronson, Abrahams, & Rothmen, 1966). As such, attractiveness cannot easily account for the liking findings.

3.4. Discussion

In partial support of the first hypothesis, male redheads were seen as less masculine than male non-redheads by both men and women, though not as more feminine. No significant difference in masculinity or femininity was found between female redheads and non-redheads. In terms of gender prototypicality, male redheads were seen as less gender prototypical than males with other hair colours regardless of participant gender—this difference was not found between female redheads and non-redheads. Taken together, these findings provide good evidence that male redheads are seen as less gender typical than male non-redheads.

It was anticipated and found that men liked male redheads less than male non-redheads, whereas no significant differences in liking were found between female redheads and non-redheads. Women did not express less liking for redheads than non-redheads regardless of target gender. Unexpectedly, women liked blonde-haired female targets less than brunettes and redheads. No other significant differences were found. Therefore, in keeping with the results of the first study, Study 2 provides further evidence that, although men and women stereotype redheads, male redheads are shown more prejudice, particularly by men.
To determine if gender stereotypes and gender prototypicality played a mediating role in the bias against male redheads, a parallel moderated mediation model was tested and found an indirect effect of target hair colour on liking through gender prototypicality, but only for men. Although both women and men saw male redheads as less prototypical, these prototypicality judgments influenced attitudes toward redheads for male participants only. For women, judgments of prototypicality were unrelated to how much they liked male targets. In short, men rated male redheads as less prototypical, which in turn undermined their liking for male redheads.

In terms of sexual attraction, it was predicted that same-gender attraction would be higher, and other-gender attraction would be lower for male redheads than non-redheads, while both sexual attraction measures would be higher for female redheads than non-redheads. There was some support for these hypotheses. First, no significant differences in same-gender attraction (or relative heterosexuality) were found between redheads and non-redheads. For men, other-gender attraction (and overall sexuality) was lower for male redheads than non-redheads. Women, on the other hand, rated redheads, in general, lower on overall sexuality than non-redheads. These results suggest that red hair on men is not seen as an indicator of homosexuality. Rather, it may be perceived as an indicator of asexuality—at least by other men.

Finally, in keeping with stereotype expectations, male redheads were seen as less physically attractive than males with other hair colours. No differences in physical attractiveness were found between female redheads and non-redheads. Physical attractiveness was tested as an alternative explanation for why male redheads are liked less than male non-redheads. Two mediation models were tested. In the first model the indirect effect of hair colour on liking through attractiveness was tested. In the second model target liking served as the mediator between target hair colour and attractiveness. Although both models showed some support there was no strong evidence that liking effects can be accounted for by physical attractiveness.
4. Study 3

4.1. Overview

In Study 2, it was found that male redheads were seen as less masculine, and less gender prototypical, than male non-redheads by both men and women. However, only men expressed less liking for male redheads than males with other hair colours. Significant differences were not found for female redheads and non-redheads. Additionally, it was found that gender prototypicality played a mediating role in the bias shown against male redheads, but only for men. These results are in keeping with the expectation that, although men and women both stereotype male redheads as gender atypical, in order to maintain existing gender-role norms men show more bias against male redheads than women do. In short, evidence suggests that men and women differentially use gender-role norms when making judgements of others.

To help explain why women and men respond differentially to persons with red hair, male role endorsement was anticipated to moderate responses to red hair. Male role endorsement is characterized as the degree to which people support men’s socially prescribed male gender roles (e.g., strong and assertive; Lantz & Schroeder, 1999). For persons who endorse male gender roles, deviation from these roles would be expected to result in a bias against the offender. As such, the purpose of the third study, beyond replicating the findings from Study 2, is to determine if the difference between women and men in male role endorsement helps to explain their differential ratings of male redheads, particularly for liking.

In Study 3, male and female participants were randomly assigned to view a male college-age target person and were asked to rate the target person on gender stereotypes, liking, and sexual attraction. However, unlike Study 2, participants viewed only male target persons with red, black, or brown hair colours.
Hypothesis 1 – Gender Stereotyping and Gender Prototypicality

Similar to Study 2, I predicted main effects in which male redheads would be seen as less masculine (Hypothesis 1a), more feminine (Hypothesis 1b), and less gender prototypical (Hypothesis 1c) than male non-redheads.

Hypothesis 2 – Sexual Attraction

I predicted main effects for sexual attraction in which same-gender attraction would be higher (Hypothesis 2a), and other-gender attraction would be lower (Hypothesis 2b) for male redheads than male non-redheads.

Hypothesis 3 – Target Liking

I predicted a two-way participant gender and target hair colour interaction in which men would like male redheads less than non-redheads. For women, differences in liking were not expected between redheads and non-redheads.

Hypothesis 4 – Moderation and Mediation

As endorsement of traditional male gender roles was theorized to be an underlying predictor of the bias against male redheads, I predicted male role endorsement to moderate the effect of target hair colour on target liking. For persons relatively high in male role endorsement, male redheads would be liked less than male non-redheads. For persons relatively low in male role endorsement, differences in liking were not expected between redheads and non-redheads (Hypothesis 4a).

As evaluations of male redheads were expected to result, in part, from male gender role endorsement, a moderated-mediation model (see Figure 4-1) was employed to test target hair colour as a moderator of the indirect effect of participant gender on target liking through male role endorsement. In effect, I predicted male role endorsement to mediate the relationship between participant gender and target liking, but only for male redheads (Hypothesis 4b).
4.2. Method

4.2.1. Participants and Design

The sample consisted of three-hundred and seventy one White male ($N = 99$) and female ($N = 272$) psychology students from various colleges and universities across Canada having an age range of 17 to 64 years ($M_{age} = 21.74$). Two-hundred and twenty-two students voluntarily participated in an online ‘Person Perception’ study and were then given the chance to enter their names into a lottery, while 149 students participated in exchange for course credit. Participants with red hair ($M = 28$) were removed from the study leaving 96 male and 247 female participants.

Eighty-two percent of respondents were natural-born Canadian citizens, or became citizens (13%). For this later group, the average number of years in Canada was 11.43. The majority of respondents were from middle class (43%) or upper-middle class (35%) backgrounds, and hailed from small (40%) or larger (36%) cities, while 25% were raised in a rural area. Sixty-five percent of respondents had brown hair, while 26% were blonde, and 4% had black hair (5% other)—these were the reported natural hair colours for 88% of the sample. The study was a 2 (participant gender: male or female) x 3 (target hair colour: black, brown, or red) between subjects design.
4.2.2. Procedure

Several methods of participant recruitment were employed in this study. In the first method, male and female psychology students were recruited to volunteer to take part in an online Person Perception study, through email, or in-class announcements, at participating Canadian Universities via their course instructors. Instructors in these classes had no way of knowing which students chose to participate and, therefore, participation had no effect on the students’ grades. Participants were invited to enter their email address for a chance to win one of two $100 prizes. The second method of recruitment consisted of introductory psychology students at Simon Fraser University who participated in an online study in exchange for course credit.

For all participants a brief study description and a link to the online study were provided. Participants gave informed consent and were randomly assigned to one of six (two of each hair colour) experimental conditions in which each participant had an equal chance to view a male college age target person with black, brown, or red hair. The same brief descriptor and target pictures of red-haired males used in Study 2 were used in the current study, with the addition of black-haired target persons. Participants completed a number of measures, some basic demographic questions, and were fully debriefed. No significant difference on any of the key variables was found for recruitment type and will therefore not be considered further.

Measures

In the current study, the same measures were used to test gender stereotyping, gender prototypicality, target liking, target sexual attraction, and attractiveness as in the previous study, with the addition of the following measure:

Male role endorsement. To measure endorsement with traditional male gender-role norms, I used the 26-item Male Role Norm Scale (MRNS; Thompson & Pleck, 1986; $\alpha = .90$). The MNRS is divided into three subscales that measure endorsement of male status (e.g., A man owes it to his family to work at the best-paying job he can get; $\alpha = .83$), toughness (e.g., When a man is feeling a little pain he should try not to let it show very much; $\alpha = .80$), and anti-femininity (e.g., It is a bit embarrassing for a man to have a job that is usually filled by a woman; $\alpha = .84$). Items were rated on a 7-point Likert type
scale from 1 – strongly disagree to 7 – strongly agree with higher scores indicating higher endorsement with male gender-role norms.

4.3. Results

4.3.1. Manipulation Check

Similar to Study 2, a manipulation check was included which asked participants to identify the hair colour of the person they were asked to make judgements about. Eighty-four percent of participants correctly identified the hair colour of the target person. Accuracy differed by hair colour condition in which the clear majority of errors occurred where black hair colour was misremembered as brown (13%). When analyses were retested with only these 84% of participants, the results did not differ from analyses with the full sample. Therefore, the results of the full sample are reported below.

4.3.2. Gender Stereotyping

For masculine traits, there were no significant main effects or interaction, \( p's > .241 \). For feminine traits, there were no significant main effects for participant gender or target hair colour, \( p's > .199 \). There was also no significant two-way interaction effect, \( p = .142 \). For gender prototypicality there were significant main effects for participant gender, \( F(1, 337) = 3.98, p = .047 \), and for target hair colour, \( F(2, 337) = 4.31, p = .014 \). The two-way interaction was not significant, \( p = .350 \). As shown in Figure 4-2, male redheads were seen as less gender prototypical than male non-redheads.

Contrary to expectations, male redheads were not seen as less masculine or more feminine than male non-redheads. However, male redheads were seen as less gender prototypical than males with other hair colours, replicating the findings of Study 2.
Figure 4-2. Planned Comparisons for Gender Prototypicality by Target Hair Colour.

Note. Bonferroni correction was used to test post hoc comparisons at $\alpha = .05 \div 3 = .016$: $^{a,b} p < .001; ^{a,c} p = .002; ^{b,c} p = .651$.

4.3.3. Sexual Attraction

For same-gender attraction, there were no significant main effects and the two-way interaction was not significant, $p's > .350$. For other-gender attraction, there was a significant main effect for participant gender, $p = .001$. There was no significant main effect for target hair colour, or for the participant gender and target hair colour interaction, $p's > .284$. For relative heterosexuality, there was a significant main effect found for participant gender, $F(1, 337) = 5.16, p = .024$. There was no significant main effect found for target hair colour, or a two-way interaction, $p's > .764$.

Finally, for overall sexuality, significant main effects were found for participant gender ($p = .022$), and for target hair colour, $F(2, 337) = 3.78, p = .024$. There was no significant two-way interaction effect, $p = .477$. As shown in Figure 4-3, male redheads were seen as less sexual than male non-redheads.
Overall, male redheads were not rated differentially on same-gender attraction, other-gender attraction, or relative heterosexuality than male non-redheads—however, male redheads were seen as less sexual than non-redheads. Like Study 2, these findings suggest that, rather than being seen as homosexual, male redheads were seen as asexual compared with non-redheads.

4.3.4. Target Liking and Physical Attractiveness

Target Liking

For target liking, there was a significant main effect found for participant gender, $p = .026$. There was no significant main effect found for target hair colour ($p = .689$). There was also no significant two-way participant gender and target hair colour interaction, $p = .234$. See Table 4-1 below for means and standard deviations.
Table 4-1. Means and Standard Deviations for Target Liking by Participant Gender and Target Hair Colour.

<table>
<thead>
<tr>
<th>Hair Colour</th>
<th>Male Participants</th>
<th>Female Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>4.14 (.86)</td>
<td>4.16 (1.01)</td>
</tr>
<tr>
<td>Black</td>
<td>4.11 (.96)</td>
<td>4.37 (1.05)</td>
</tr>
<tr>
<td>Brown</td>
<td>4.02 (.89)</td>
<td>4.52 (.91)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviations in parenthesis.

Additional Testing

As in Study 2, the indirect effect of target hair colour on target liking through physical attractiveness was intended to be tested as an alternative explanation for negative bias against men with red hair. As differences in target hair colour did not predict target liking, mediation testing was not conducted.

Still, there were significant main effects for attractiveness found for participant gender ($p = .050$), and for target hair colour ($p = .018$). These main effects were qualified by a significant two-way interaction effect, $F(2, 337) = 3.98$, $p = .020$. For men, none of the contrasts were significant, $p’s > .505$. For women, male redheads were seen as less physically attractive than male non-redheads, $t(245) = -.496$, $p < .001$.

4.3.5. *Moderation by Male Role Endorsement*

It was hypothesized that participants relatively high in male role endorsement would like male redheads less than male non-redheads, whereas participants relatively low in male role endorsement were expected to show little difference in liking between male redheads and non-redheads. This claim was tested by regressing target liking on target hair colour (contrast coding: red (2), black (-1), brown (-1)), male role endorsement, and the interaction between the two. Using the PROCESS plugin for SPSS (Hayes, 2013), male role endorsement and its subtypes were tested as potential moderators of the relationship between target hair colour and target liking. The target hair colour and male-role endorsement interaction was not significant, $b = -.015$, 95% CI [-.093, .063], $t = -.397$, $p = .704$, indicating that the relationship between liking and hair colour was not moderated by male role endorsement. Additionally, none of the subtypes
of male-role endorsement (i.e., male status, toughness, or anti-femininity) significantly interacted with target hair colour.

4.3.6. Moderated-Mediation

To determine if men and women differed in male-role endorsement an analysis of variance (ANOVA) was employed. As expected, men \( M = 3.91; \ SD = .90 \) were significantly higher on male-role endorsement than women \( M = 3.32; \ SD = .87 \), \( F(1, 341) = 31.81, p < .001 \).

It was hypothesized that target hair colour would moderate the indirect effect of participant gender on target liking through male role endorsement. In other words, male role endorsement would mediate the relationship between participant gender and liking, but only for male redheads. As there was no evidence of moderation by participant gender, and no evidence of moderation by male role endorsement, the moderated-mediation model was not conducted.

4.4. Discussion

In Study 3 it was hypothesized that male redheads would be seen as less masculine and more feminine than male non-redheads. Surprisingly, no significant differences in masculinity or femininity were found. However, as predicted, male redheads were seen as significantly less gender prototypical than male non-redheads, replicating the findings of the second study. It was hypothesized that same-gender attraction would be higher, and other-gender attraction lower, for male redheads than non-redheads. These predictions were not supported. However, similar to the second study, male redheads were seen as less sexual than male non-redheads.

I predicted that men would like male redheads less than male non-redheads, but women would not. Unlike Study 2, this hypothesis was not supported. It is unclear why replication of the results from Study 2 was unsuccessful.

As men, relative to women, are expected to show a stronger bias against male redheads than non-redheads, it was assumed that male role endorsement would
mediate the relationship between participant gender and liking of male redheads. As there was no evidence of moderation by participant gender or by male role endorsement, mediation was not tested.

Overall, the results of Study 3 support the premise that male redheads are seen as less gender typical than men with other hair colours, though the hypothesis that men like male redheads less than non-redheads was not replicated. These findings suggest that although male redheads are seen as less gender typical, as was shown across three studies, prejudice toward male redheads may be more variable.
5. General Discussion

5.1. Key Findings

Considering the studies as a whole, results provide initial evidence that prejudice directed at redheads results, in part, from a bias against gender atypical people. Although men and women view male redheads as more gender atypical than male non-redheads, men show more prejudice toward male redheads. Compared with persons with other hair colours, male redheads were seen as less masculine, especially by men, though this difference was not found in the third study. Similarly, male redheads were seen as less gender prototypical than male non-redheads, by both men and women. As expected, male redheads were shown more prejudice than male non-redheads, particularly by men, though this result was not replicated in study three. In keeping with theoretical expectations, gender prototypicality was shown to mediate the relationship between target hair colour and target liking, for men only. Overall, male redheads were seen as less gender typical than male non-redheads, and this perception, in part, led men to show more prejudice toward male redheads than non-redheads. These results are an important addition to the literature on prejudice, and help to highlight an understudied area of prejudice research.

5.1.1. Perceptions of Redheads as Gender Atypical

Gender stereotyping. According to research, men and women are expected to act in ways that are consistent with the norms of their respective gender groups (Eagly, 1987). Over the last century women’s gender-roles have expanded to include some agentic characteristics, while over this same time period, men’s gender-roles have remained relatively stable (Eagly & Wood, 1991). Although results differed across the first two studies, what remained consistent was that male redheads were seen as less masculine than male non-redheads, particularly by men. In keeping with expectations, in Study 2 female redheads were seen as marginally more masculine than female non-
redheads—though, the inverse was found in Study 1. As stereotypes about male redheads contain some stereotypical feminine characteristics (effeminacy, shyness; e.g., Heckert & Best, 1997), it was expected that male redheads would be seen as more feminine than male non-redheads. However, this difference was not found. In Study 3, no significant differences for masculinity or femininity were found between redheads and non-redheads. In effect, where these differences for male redheads and non-redheads were found, male redheads were seen as less agentic or masculine than non-redheads, rather than possessing more female gender-role traits.

**Gender prototypicality.** Stronger evidence that male redheads are seen as gender atypical was found when participants were asked to judge how prototypical the target person was of his or her gender. Although gender prototypicality was not tested in the first study, in subsequent studies male redheads were seen as less gender prototypical than male non-redheads, by both men and women. In contrast, participants did not see female redheads as less prototypical than female non-redheads.

Although masculine and feminine are aspects of gender prototypicality, the difference in effect between these two measures may be related to how these questions were framed—personality traits versus similarity to same-gender persons. Using personality traits as a proxy for masculine and feminine gender-role norms has its limitations as there are no fixed set of characteristics that make up these categories. Therefore, other combinations of traits may lead to different results. Additionally, gender prototypicality consists of other aspects of gender (e.g., physical attractiveness, occupational choice) that help define gender prototypicality. This is to say that gender prototypicality is a broader measure than gender stereotyping.

**Sexual attraction.** Perceived gender atypicality was expected to extend to other judgements of male redheads, including sexual attraction. In effect, male redheads were expected to be more sexually attracted to men and less sexually attracted to women than male non-redheads. Conversely, although female redheads were assumed to be seen as gender typical, some stereotypes about female redheads frame them as highly sexual (e.g., Heckert & Best, 1997). As a result, female redheads were expected to be more sexually attracted to both genders than female non-redheads. Contrary to expectations redheads were not seen to be higher on same-gender attraction (or relative
sexuality) than non-redheads. But, male redheads were seen to be lower on other-gender attraction (and overall sexuality), than male non-redheads, but only by men.

Overall, the results lend some support to the premise that male redheads are seen as gender atypical compared with male non-redheads. In particular, only male redheads were consistently rated as gender atypical—as less masculine, less gender prototypical, and lower in sexual attraction—than other males. This is to say that, in terms of gender, stereotypes about male redheads appear to be about what they lack—that is, agency. In terms of sexual attraction, for male redheads gender atypicality is more about the perception of their lacking sexual attraction than having higher same-gender attraction. In short, male redheads are seen as gender atypical for not having prototypical male gender-role characteristics rather than having non-prototypical other-gender characteristics.

5.1.2. Prejudice Toward Male Redheads by Men

Compared with women, men were expected to show a stronger bias against male redheads. These differences in prejudice toward male redheads were theorized to stem, in part, from men’s motivation to maintain existing gender-role norms by sanctioning perceived gender-role violations.

In the first study prejudice was examined with a number of variables which looked at attitudes toward the bullying incident. As expected, men showed (marginally) higher agreement with negative attitudes about bullying victims after viewing male redheads than male non-redheads. Similarly, a trend was found in which, for men, the bullying situation was seen as less serious when it involved male redheads than males with another hair colour.

Although sympathy for victims was high regardless of target hair colour, participant gender, or target gender, a trend was found, contrary to expectations, in which men were more sympathetic toward male redheads than male non-redheads. Given the pattern of effect on the other variables related to the bullying incident the elevated sympathy men felt toward male redheads might reflect pity, which can be
construed as a form of paternalistic prejudice, such as is often expressed toward people with disabilities (Fiske, Cuddy, Glick, & Xu, 2002).

A more direct measure of prejudice—liking—was included in all three studies. In the first study, participants were asked to judge how much the target person was liked by his or her peers. Male redheads were seen as less well-liked by their peers than male non-redheads. Conversely, a trend was found in which female redheads were seen as liked more by their peers than female non-redheads, but only by men. In the studies that followed, participants were asked the degree to which he or she personally liked the target person. In Study 2, men liked male redheads less than males with other hair colours. Participant gender was expected to moderate the indirect effect of target hair colour on liking through gender stereotyping (masculinity, femininity, and prototypicality). In the model, only gender prototypicality mediated the relationship between hair colour and liking, but only for men. This is an important result because it shows that gender prototypicality can negatively influence perceptions of male redheads, particularly for men. In contrast, women showed no significant difference in liking between redheads and non-redheads, regardless of target gender.

Contrary to predictions, there were no significant differences for liking found in Study 3. Although unexpected, this failure to replicate has some positive connotations. Essentially, although perceptions of gender atypicality can sometimes manifest themselves as prejudice toward male redheads, as was shown in the first two studies, the results of the third study suggest that prejudice toward redheads is not an inevitable outcome.

Finally, Study 3 tested if the (assumed) difference between women and men in terms of male gender-role endorsement helped to explain their differing prejudice toward male redheads. Male-role endorsement was expected to moderate the relationship between hair colour and liking wherein persons high in male role endorsement would like male redheads less than male non-redheads, compared with persons low on male role endorsement. Although men did endorse gender roles more than women, role endorsement did not moderate the relationship between hair colour and liking.
Overall, these results support the premise that prejudice is directed more at male redheads than male non-redheads, and that prejudice toward male redheads is shown more strongly by men than by women. However, these results also suggest that prejudice toward redheads is more contingent than stereotyping and gender prototypicality.

5.2. Where Do Stereotypes About Red Hair Come From?

There is an important question that cannot be addressed with the current data—why are the stereotypes about redheads what they are? Why do red hair stereotypes differ by gender, and why are they gender atypical for men? A number of researchers (e.g., Clayson & Maughan, 1986; Feinman & Gill, 1978; Guéguen, 2012; Heckert & Best, 1997) have speculated that the stereotypes aimed at persons with red hair may be due to the rarity or low frequency of red hair colour in the human population. In their view, the rarity of red hair leads people to have an aversive reaction to redheads. Although it is not specified, this aversion could be the result of dislike of difference (Byrne, Clore, & Smeaton, 1986; Byrne, Griffitt, & Stephaniak, 1967), or a lack of familiarity (Zajonc, 1968).

Red hair is relatively rare in the human population. Depending on geography, estimates of the frequency of red hair range upward of 12% (Snee, 1974), but are much lower in most places (Beddow et al., 2011; Clayson & Maughan, 1986; Cooper, 1971; Douglas, 1996; Hooton, 1940; Lawson, 1971; Meyerowitz, 1991; Rich & Cash, 1993; Swami & Barrett, 2011). It is safe to say that redheads are clearly in the minority when it comes to hair colour groups. However, it cannot be the case that the infrequency of red hair in and of itself contributes to this negative bias. If this were the case we would expect bias against both men and women with red hair. However, the results of the current study do not support this premise. Rather, they illustrate that female redheads are not seen much differently than women with other hair colours.

However, it could be the case that the rarity of red hair is associated with why redheads are stereotyped as gender atypical. As red hair is not prototypical within the human population, people may infer that redheads are atypical in other ways, such as in
terms of their gender. This process might be especially likely for judgments of male redheads, as men's gender-role norms are more rigid and narrow than female gender-role norms. Therefore, any indication of atypicality, such as red hair, might be more likely to influence perceptions of the gender prototypicality of boys and men than of girls and women.

Another explanation as to the origins of negative stereotypes about redheads may lie, in part, in something other than rarity. Although the clear majority of Irish men and women are non-redheads (approx. 95%; Hooton, 1940), “Irish” is a common stereotype associated with persons with red hair (Heckert & Best, 1997). A watershed moment in the creation of negative stereotypes about the Irish can be linked with the Great Famine that occurred in nineteenth century Ireland. According to Smart (2010), the famine allowed the English the opportunity to rewrite the racial and cultural differences of these two groups. During this time period, the Irish were seen as inferior by the English, and were often represented as childlike, simian, bad tempered and untrustworthy; “ultimately…incapable of providing for themselves or their families” (p. 59). Many of these characteristics are considered atypical of gender role norms, especially for men. Although negative stereotypes about the Irish might help to explain some of the origins of prejudice and negative stereotypes about redheads, it is not altogether clear how these same stereotypes came to be differentiated into separate stereotypes for male and female redheads.

Overall, while these explanations offer some insight into why stereotypes about redheads are what they are, they do not go very far in explaining the gendered difference between male and female redheads found in the current study. It is not obvious what the process was in which these stereotypes about redheads became gendered. Further investigation is needed to determine the historical underpinnings of stereotypes about redheads and under what conditions these gendered differences may have taken place.
5.3. Implications

The current research illustrates that prejudice toward redheads is not simply about the hair colour of a person, but rather is intimately tied to gender. These results are in concert with recent approaches to research and social policy which have begun to move towards a more intersectional or contextual approach to discrimination by focusing on the interconnections between, and the inseparability of, different systems of privilege, inequality, and prejudice (Shields, 2008). In effect, what an intersectionality perspective suggests is that prejudice cannot be looked at in isolation, but rather, other intersections must be considered. The data from the current study are consistent with this perspective. In order to understand or ameliorate “gingerism,” we must also attend to sexism and gender relations. Research on intersectionality suggests that efforts to reduce hair colour discrimination might focus energy not just on reducing stereotypes of redheads, but also on expanding gender roles, especially for boys and men.

Similar to intersectionality is a growing body of literature on appearance bias or lookism—the social or cultural bias that rewards persons and social groups that embody positively held social and cultural appearance norms (Freedman, 2002). Social groups that are perceived to have fallen short of the normative standard—obese, short, disabled, or unattractive—often find themselves the victims of prejudice and discrimination. For example, compared with attractive persons, physically unattractive individuals are perceived to be lower in social and intellectual competence (e.g., Feingold, 1992). Across the three studies male redheads were seen as less attractive than male non-redheads. As such, the unattractive stereotype about male redheads may, in part, help to explain the increased prejudice toward this group. However, when tested, attractiveness was found to mediate the relationship between hair colour and liking, and liking was found to mediate the relationship between hair colour and attractiveness. As support was found for both models it may be the case that attractiveness can be construed as another form of liking (e.g., Dion and Dion, 1987; Reysen, 2005).
5.4. Limitations and Future Directions

The question can be raised such as why male-role endorsement had no significant effect on prejudice toward male redheads. One reason may be that the Male Role Norm Scale (Thompson & Pleck, 1986), which was used to test male-role endorsement, is an old-fashioned measure and may not be appropriate for contemporary samples. Additionally, in the current study the Male Role Norm Scale was used with a mixed gender sample but the questions appear specifically designed for men. As such, future research could explore better, more contemporary, measures of male-role endorsement and other gender-relevant constructs which also consider women’s perspectives on male-role norms (e.g., Male Role Norms Inventory–Short Form; Levant, Hall, & Rankin, 2013).

In studies two and three gender prototypicality was found to be theoretically and empirically more important as a measure of gender atypicality than was masculinity. Still, gender prototypicality was a single item measure that only took into account overall similarity with ingroup members. Prototypicality can be defined as a representative exemplar of a group or category. According to self-categorization theory (see meta-contrast ratio; Turner et al., 1987), prototypicality results from perceptions of similarity to the ingroup and difference from relevant outgroups. From this perspective, the use of a multi-item measure would result in better construct validity. For example, a multi-item measure of gender prototypicality for men should include measures of both perceived similarity to the gender ingroup and difference from the gender outgroup across different dimensions (e.g., personality traits, occupation, interests and hobbies).

Across the three studies gender was analyzed as a binary variable (i.e., men—women⁴). Although gender has been characterized as opposing and disconnected categories (Johnson & Rapta, 2012; Lorber, 1993) in countless psychological studies (Alsop, Fitzsimmons, Lennon, & Minsky, 2002; West & Zimmerman, 1977), and by a number of theoretical models (e.g., Social Role Theory; Eagly, 1987), gender is a much

⁴ Although across all three studies participants could also choose “other” when asked to state their gender, very few chose this option. Therefore, only data from participants who chose male or female were analyzed.
more complex issue than can truly be captured in a gender binary. Moreover, conceptualizing gender in this way has important implications for psychological research as the use of categorical labels such as male-female, and masculine-feminine homogenizes participants and research results, and masks the variability within and across these groups (Johnson & Rapta, 2012). As such, it is recognized that the results of the current research are somewhat limited in scope, and may not adequately capture gender difference as it applies to prejudice toward redheads.

A methodological limitation, particularly in the first two studies, was low sample size, especially for White male participants. A low sample size reduces the chance of detecting a significant effect (i.e., Type II error), but can also increase the chance of detecting a statistically significant effect that is not really there (i.e., Type 1 error; Button et al., 2013). Though unsuccessful, in the second study a considerable effort was made to increase the power to detect significant effects. Although these limitations were overcome in the third study, a number of key variables did not replicate. As these key variables were only found to be statistically significant in the first two studies we must be cautious in not overstating the reliability of these findings. As such, future research must be conducted with an adequate number of participants—in particular, White males. In addition, the failure to replicate differences in liking between male redheads and non-redheads in the third study suggests that the effects of red hair on prejudice were more variable than the effects on gender prototypicality. As such, future research might examine factors that bring out more (or less) prejudice in men (and women) toward male redheads.

It should be recognized that some of the findings of these studies might result from the minimal context provided to participants. Specifically, all three studies were designed around pictures of target persons shown in a forward-facing head and neck pose, with neutral expression against a nondescript background, and with relatively little information given in the last two studies. Although manipulating hair colour in this way helps to control potentially confounding variables, it is not how we actually make judgements about others in the real world. This is to say that our perceptions of others are also based on location, situation, body size, clothing style, and in the presence or absence of others, to name a few. This lack of contextual variability may have played a role in the differences found for gender stereotyping, especially for female targets. For
example, although no significant difference in prejudice toward female redheads was found across the three studies, prejudice toward female redheads may be found under conditions where there are differences in normative gender expectations. For example, it may be the case that in situations with low agency expectations for women, such as when persons subscribe to more traditional gender roles for women (e.g., motherhood), bias against female redheads may be higher than in situations where agency is not seen as counter-stereotypical for women. It could also be the case that red hair colour may exacerbate bias against female redheads in combination with another stigma. For instance, a study by Clayson and Klasson (1989) gave participants résumés of women who had different hair colours and were described as either obese or as having a normal body weight. They found that when job candidates were described as having an average weight, female redheads were considered more attractive than female non-redheads. In contrast, when female job candidates were described as obese, female redheads were seen as less attractive than females with other hair colours. This difference in perceptions of attractiveness between overweight female redheads and thin female redheads may be due to conflicting stereotypes about female redheads (e.g., highly sexual) and anti-fat bias. Similarly, we might expect female redheads to be seen as less liked than female non-redheads in combination with other stigmas (e.g., physical disability, low socioeconomic status).

As well, prejudice toward male redheads would be expected to increase where motivation to protect ingroup identity is high. For example, if the theoretical underpinnings of the current research are correct that prejudice toward male redheads is a result of men’s motivation to maintain their gendered status, threats to one’s gender group, or threats to one’s ingroup position, might increase men’s prejudice toward redheads as both factors have been shown to increase enforcement of ingroup norms (e.g., Castano et al., 2002; Schmitt & Branscombe, 2001). For example, in a situation where men’s masculinity is either threatened (e.g., through bogus feedback; Schmitt & Branscombe, 2001) or not threatened, men who experience gender threat would be expected to be more vigilant in deriding those men perceived to be gender atypical, such as male redheads, than men who did not experience gender threat. In terms of group status, a threat of women’s gendered status surpassing men’s status at some future point in time would be expected have a similar effect as threat to one’s position in the
ingroup—that is, men threatened with lower group status would be more likely to show a negative bias toward male redheads than men not threatened with lower group status.

Lastly, although the current research provides some evidence that stereotypes about male redheads paint them as gender atypical, it is unclear if groups outside of a Western context come to learn these same stereotypes about redheads. It is assumed that prejudice against redheads is not universal, but rather, is a culturally-based and socially-learned phenomenon. For example, historically Italy and Greece have held more positive attitudes towards redheads than other European countries (Cooper, 1971). If correct, higher levels of prejudice toward redheads would be expected to be found in different cultural contexts, particularly where anti-Irish bias is high.

5.5. Conclusion

Across three studies this paper considered if the prejudice directed at redheads results, in part, from a bias against gender atypical people. A number of findings across studies provide initial support for this claim. Both men and women saw male redheads as gender atypical. However, only men showed prejudice toward redheads—and toward male redheads in particular. Indeed, for men, there was some evidence that gender prototypicality mediated the relationship between hair colour and liking, though this result was only found in one study. Overall, the results of the current studies suggest that male redheads are seen as more gender atypical than persons with other hair colours, that the majority of the prejudice against redheads appears to be aimed at males with red hair, and that most of the prejudice against male redheads is shown by men.
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Appendices
Appendix A. Study 1 Vignette.

B.C. students sent home for kicking classmate

A Grade 7 boy at Francis Baker Middle school in Vancouver was kicked in the legs by a group of boys and was sent to hospital as a result, said a spokeswoman for the Vancouver school board.

"It's absolutely ridiculous and disgusting that something like this would happen," she said.

The victim was taken to hospital for examination, and sustained "some minor bruising" to his legs and upper body.

A spokesperson for the Vancouver School District said the school principal sent the boys home that carried out the attack and is considering suspending them.

"The fact of the matter is from a policing perspective, it is a crime" said Const. Lionel Bennett.

Bennett, who runs anti-bullying workshops, said police will not hesitate to investigate schoolyard incidents if they suspect a crime has been committed.

He said no student should accept behaviour that could hurt him or her.

"First of all, you do have the right to be there without fear of being the victim of youth violence," Bennett said.

Parent Laurie Phillips said her twelve-year-old son is afraid. She said the incident shows that anti-bullying messages aren't getting through to some kids.

"My son's in Grade 7," said Phillips. "And he's worried about being hurt at school." "I think the school needs to do more to protect kids," she said.

Mariene Hale, a teacher at Francis Baker Middle School, is urging teachers around the province to talk with students about the effects of bullying. "When you constantly reinforce the anti-bullying message through positive means, then it goes a long way towards preventing that type of behaviour from occurring," she said.
Appendix B. Target Person Examples (Studies 2 and 3)

Note. Face composites created at faceresearch.org and transformed with photo-manipulation software. All photos used by permission.