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The eroticization of lesbianism by heterosexual men

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THE EROTICIZATION OF LESBIANISM BY HETEROSEXUAL MEN

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A Thesis
Presented to
The Faculty of
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Abstract

The stereotyping of lesbians includes both a traditional masculine, "butch" lesbian and a feminine, sexualized lesbian. The perception of lesbianism as erotic extends throughout mainstream society, with images of lesbianism targeted to heterosexual men in advertising, film, and pornography. If men do not perceive lesbians as either inherently bisexual or hypersexual, why are lesbians eroticized by heterosexual men? Here, subliminal priming with homosexual or heterosexual male or females primes was designed to elicit chronically accessible eroticization of lesbianism. Findings revealed that, contrary to expectations, priming with heterosexual-female prime sets did not increase reported erotic value of lesbianism relative to other prime sets; however, homosexual-male priming did increase reported erotic value of lesbianism.

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The Eroticization of Lesbianism by Heterosexual Men

Why are lesbian women eroticized by heterosexual men? The prevalence of this eroticization is demonstrated by the proliferation of lesbian content in erotic material aimed at straight men (Palys, 1986), as well as in mainstream media. From Katy Perry's hit single "I Kissed a Girl" to the infamous kiss between Madonna and Britney Spears at an awards show, to the high degree of publicity given to the affair between bisexual reality star Tila Tequila and heiress Casey Johnson, as well as Lindsay Lohan and Samantha Ronson, a highly eroticized vision of lesbianism has been presented, often devoid of the political context of lesbianism developed in second-wave feminism. Eroticization centers on sexual activity. What is there, in the context of an erotic situation in which there is apparently no role for a heterosexual man to play, that captures the male imagination?

Several hypotheses have been suggested. Perhaps two women in a sexual context are simply twice as sexy as one woman in a sexual context. Perhaps the women involved are seen as inherently bisexual or hypersexual (Whitley, Wiederman, & Wryobeck, 1999). The characteristics of the women in question may be relevant—feminine women engaging in acts of lesbian eroticism may be more acceptable to the heterosexual male consumer than masculine women engaging in those same acts. Additionally, the element of homosexuality itself may add something, whether a broken taboo, anxiety, or simply an increased dose of sexualization.

Lesbian imagery, in popular culture, often employs stereotypes. These stereotypes may be subjectively either positive or negative, and are often concerned with lesbians' conformity with gender roles and their attitudes toward heterosexual men (Herek, 2002a;

Whitley, 2001). The stereotype of the hostile, masculine lesbian probably contributes to the continuing stigma of lesbianism. As familiar as that stereotype has become, a contradictory stereotype exists beside it in cultural consciousness. The sexualized, feminine lesbian, long a staple in erotic material, has become a mainstream phenomenon. In what fashion are these stereotypes relevant to the eroticization of lesbianism? What factors contribute, consciously or unconsciously, to the eroticization of lesbianism?

There is evidence of gender differences in general attitudes toward lesbians. Although women in general have tended to report less explicit anti-gay bias than men, heterosexual women report less comfort with lesbians than with gay men, while heterosexual men report less comfort with gay men than with lesbians (Herek, 2002a). The major gender differences in reported anti-gay bias have generally come from heterosexual male participants' reactions to items concerning gay men; heterosexual male participants have tended to rate homosexuals of both genders in more extreme ways than heterosexual female participants, with more positive ratings of lesbians and much more negative ratings of gay men (Herek, 2002a; Oakenfull & Greenlee, 2004).

The differences in male attitudes toward homosexuals of either gender extend beyond traditional social desirability. Louderback and Whitley (1997) found that men reported placing much higher erotic value ratings on female same-sex sexual behavior than on male same-sex sexual behavior, while there was no corresponding pattern with women, who reported that both lesbian and gay male sexual activity were equally--and not very--arousing. This erotic value has also been observed in the marketplace. Palys (1986) observed that around 10% of pornography marketed to heterosexual men

consisted of lesbian scenes. The male consumers targeted by marketers presumably purchase the material because they find lesbianism appealing. Louderback and Whitley (1997) found that men who tended to place high erotic value on lesbianism also tended to be men who placed little emphasis on traditional gender roles and were more open to and desirous of sexual activity. Consonantly, Herek (2002a) found that male participants with higher degrees of sexual prejudice had longer response latencies on an implicit association test for lesbian items than for gay male items. Herek argued that this difference in response latency suggested that stereotypical thoughts about gay men were more accessible than stereotypical thoughts about lesbians.

Louderback and Whitley (1997) suggested that the increased consumption of lesbian pornographic content might have influenced their participants' perceptions of lesbianism as erotic. However, causality cannot be inferred from their data, and it seems likely that men who had a pre-existing liking for lesbian pornographic content would tend to seek out such content to a greater degree than men who did not have that liking. The market forces behind the production of pornography encourage its producers to cater to customer demand, rather than imposing new standards of what is erotic. For instance, producers of pornography have not moved to market gay male pornographic material to heterosexual male or female customers.

In a follow-up study designed to examine what features were correlated with liking of lesbian pornographic content, Whitley et al. (1999) found that men who placed a high erotic value on lesbianism did not tend to perceive lesbians as either inherently bisexual or as hypersexual. This raises the question of why men would derive erotic

pleasure from situations in which men are conspicuously absent and, apparently, not likely to be welcome. Although pornographic content is always to some extent fantastical, it is generally assumed that consumers project themselves into the content, as evidenced by the use of camera angles that avoid showing male actors' faces in heterosexual pornography. The distinction between "real" lesbians and women engaging in lesbian sexual behavior in the context of pornography may be such that men who would not expect a lesbian of their acquaintance to sleep with them might still expect or fantasize that the women engaging in lesbian sexual behavior in pornography would be interested in sexual activity with men.

Herek (2002b) found that, while female participants reported disapproving of all bisexual targets more than either heterosexual or homosexual targets, male participants reported disapproving of non-heterosexual male targets more than lesbian, bisexual, or heterosexual female targets. This is intriguing, because it suggests that sexual orientation is more important to men for the purposes of evaluating other men than for evaluating women. Similarly, in Puhl and Lemm (2009), male participants did not report finding an attractive female photographic target differently attractive when told that she was either gay or straight, but did report finding an attractive male photographic target more attractive when he was presented as gay than when he was presented as straight.

Some clarification may emerge from Diamond's (2008) findings, which suggest that a self-identified lesbian is highly likely to engage in heterosexual intercourse at some point in her life. It may be that the men surveyed by Whitley et al. (1999) were unconsciously aware of this possibility. On an evolutionary level, a man who pursues sex

with women regardless of their sexual orientation might improve his chances of reproductive success; any time he has sex with a reproductively viable woman, there is an increased chance that his genes will make it into the next generation. If a woman who typically prefers to have sex with women only has sex with women over the course of her lifetime, and not once has sex with a man, she will not have children. A woman need only engage in heterosexual intercourse a handful of times to drastically increase her chances of having children and seeing copies of her own genes make it into the next generation. Although it is unclear at this time whether there is a genetic basis for sexual orientation in women, if there is, women who at some point in their lives have sex with men might be more reproductively successful than women who do not, and may thus pass along the genetic basis for predominantly non-heterosexual behavior.

If women who self-identify as lesbians are still likely to have heterosexual sex during their lives, then it is reasonable for men to experience sexual arousal at the sight of women in a sexual context, regardless of the gender of the partner. At the very least, knowledge of a woman's self-identified sexual orientation, and even some knowledge of her history of sexual behavior, is insufficient to unambiguously determine whether she will engage in sexual intercourse with a man (Diamond, 2008). When information about self-identified sexual orientation is unavailable, the gender of a person's current partner may be used in its place, as in depictions of women engaging in sexual activity with other women. This ambiguity may give men reason to judge women without regard to their self-identified, or apparent, sexual orientation.

However, it is also possible that, for heterosexual men, the appeal of lesbianism comes solely from the presence of multiple women. In the film *Kissing Jessica Stein,* when two heterosexual men are asked what they find appealing about lesbians, they respond by saying, "It's two women together," and, "It's double-sexy." Some heterosexual men do place an erotic value on lesbian behavior (Louderback & Whitley, 1997; Whitley et al., 1999); is the "double-sexy" hypothesis supportable? Furthermore, various men may find lesbian imagery sexually appealing for a variety of reasons; some reasons may be related to qualities inherent in the stimulus, while others may be related to the personality traits of the viewer.

Characteristics of Stimuli

There is limited evidence on whether the attractiveness of lesbian sexual activity can be explained by the attractiveness of two women. Oakenfull and Greenlee (2004) examined gender differences in responses to advertisements. The advertisements presented to participants contained either two male or two female models, with homoerotic imagery that was either overt or covert. In overt imagery, the models were engaged in obvious homoerotic activity; in covert imagery, the models, although in an eroticized context, were not engaged in obvious homoerotic activity. While both male and female participants preferred covert gay male imagery to overt gay male imagery, male--but not female--participants preferred overt lesbian imagery to covert lesbian imagery.

This suggests that male preference for overt, and by definition sexualized, lesbian imagery is part of a positive affective reaction, which is supported by the findings of

Herek (2002a) with respect to gender differences in affective responses toward gay men and lesbians. It is not simply the presence of two women that generates these positive attitudes; the sexualization of the women is an intrinsically rewarding component.

It is unclear from these results whether the sexualization can be dissociated from the lesbian behaviors of the two women. Is a scene with two heterosexually behaving but also overtly sexualized women as arousing as a scene with two homosexually behaving women? Furthermore, does the attractiveness of the women in question matter? To the best of my knowledge, there has not been a study examining the effects of pre-rated attractiveness on the degree of liking men express for overt or covert lesbian imagery.

This creates potential difficulties in generalizing the results from Oakenfull and Greenlee (2004) to a broader context. Although Oakenfull and Greenlee did not describe the attractiveness of their targets, female targets seen in advertising tend to be very attractive, and this may be sufficient to overrule other factors, such as prejudiced attitudes relating to lesbianism. In an unpublished study, Puhl and Lemm (2009) examined the effects of pre-rated physical attractiveness and presented sexual orientation on the social desirability and perceived physical attractiveness of male or female targets. We found that what mattered in judgments of male targets appeared to differ from what mattered in judgments of female targets.

Puhl and Lemm (2009) presented photographic targets that were either more attractive or less attractive with scenarios that described the targets as either gay or straight. For male targets, the difference in ratings of social desirability and physical attractiveness between the more and the less attractive conditions was greater when the

male targets were presented as homosexual than when they were presented as heterosexual; more attractive male targets who were presented as homosexual seemed to enjoy a social reward, perhaps for conforming to stereotyped expectations, as in Lehavot and Lambert (2007). However, for female targets in the same presentation paradigm, the only significant effects were main effects of pre-rated physical attractiveness on both physical attractiveness and social desirability, such that more attractive female targets were rated as both more physically attractive and more socially desirable than less attractive female targets by both male and female participants. It would appear that presented sexual orientation for women plays much less of a role in assessments of attractiveness than it does for men, perhaps because of an unconscious awareness on the part of the participants of the less deterministic nature of female sexual orientation (Diamond, 2008).

There is also a context-dependent effect on the reported attitudes of men toward lesbians. Herek (2002a) asked men two sequential blocks of questions, one pertaining to their attitudes toward gay men and the other to lesbians. The order of the blocks affected participants' answers. Participants who answered questions about gay men first reported generally negative attitudes toward gay men and similarly negative attitudes toward lesbians. However, participants who answered questions about lesbians first reported more positive attitudes toward lesbians than did participants who had answered questions about gay men first, and some of that positivity appeared to carry over into their responses to questions about gay men. Herek suggested that the mechanism for this carryover was an affective response--specifically, that male participants who had

answered questions about gay men first had a negative affective reaction that persisted into the second block of questions.

Louderback and Whitley (1997) suggested that their findings of the eroticization of lesbianism reflected a dissociation in attitudes toward lesbians. Their erotic value scale, referencing "a woman making love to another woman," might not have activated homophobic response tendencies because their participants envisioned the women in question as sexualized and attractive, much as in Oakenfull and Greenlee (2004). In this case, it is not lesbianism as homosexuality that is eroticized, but rather, lesbianism as sexual interaction between two feminine, gender-conforming women. The components of lesbianism—femaleness and homosexuality—do not contribute equally to eroticization. Femaleness is associated with eroticization, while homosexuality is not.

Characteristics of the Viewer

Above and beyond the characteristics of the stimuli, the attitudes that are activated by socially charged stimuli will differ according to the unique characteristics of the viewer. Glick and Fiske's (1997) theory of ambivalent sexism states that there are two components of sexism, one of which is subjectively positive, called benevolent sexism. This type of sexism reflects the idea that women are, or should be, an ideal, nurturing species, distinct from men. For instance, the statement "Women, as compared to men, tend to have a superior moral sensibility" comes from the benevolent sexism subscale of Glick and Fiske's (1997) ambivalent sexism scale. Although benevolent sexism purports to be positive, it still contributes to a stereotype of femininity, with a concept of acceptable female behavior. The other component, called hostile sexism, is both

subjectively and objectively negative. An example of hostile sexism would be a statement such as "Once a woman gets a man to commit to her, she usually tries to put him on a tight leash," also from Glick and Fiske (1997). This statement stereotypes women in a globally negative way.

The concept of benevolent sexism suggests a mechanism by which men's attitudes toward lesbians might be more positive than their attitudes toward gay men. The assumptions of benevolent sexism predicate that women require men and that it is the responsibility of men to protect women, at least as long as women adhere to gender roles (Rudman & Glick, 2001). Sakalli (2002) found that, although benevolent sexism and hostile sexism were both correlated with homophobia, hostile sexism was a significantly better predictor than benevolent sexism and that benevolent sexism did not explain significantly more variance in homophobia once hostile sexism was controlled for.

The attitudes that men with typical or high levels of benevolent sexism but low hostile sexism report toward women as a whole should be subjectively positive (Rudman & Glick, 2001). However, for men with high hostile sexism, regardless of their level of benevolent sexism, references to female homosexuality should elicit negative responses. Eliciting negative responses to female homosexuality as a whole might also result in reduced perception of erotic value for lesbianism. Benevolent sexism, on the other hand, may be largely unrelated to eroticization, in that it is applicable only in situations where women behave in a gender-conforming, and therefore heterosexual, way.

Subliminal Priming

The eroticization of lesbianism by heterosexual men can be studied in multiple ways. Self-report has been the method of choice, used by Louderback and Whitley (1997) and by Whitley et al. (1999). Although self-report is useful, there are arguments for using subliminal priming to test the factors that influence the accessibility of eroticization, as well. While heterosexual men seem to be aware of the erotic value that they place on lesbianism, there is no single consensus as to why this erotic value exists, and what might activate it.

Subliminal priming has been shown to be effective across a variety of topics and stimulus types (Brown, Croizet, Bohner, Fournet, & Payne, 2003; Kiefer & Sanchez, 2007; Ric, 2004). The use of subliminal priming typically takes one of two forms: either a prime is presented, immediately followed by a target, and then the participant must make a judgment, or a series of primes are presented, followed by testing on the subject of interest. The first form is generally used to examine momentary differences in timing, with a focus on assessing individual differences in implicit attitude, while the second is more often used to examine the group level effects of subliminal priming on reported beliefs or attitudes (Glaser & Banaji, 1999; Irmen, 2006).

The second form is appropriate for examining the factors that impact the accessibility of erotic value judgments. When participants are intensively primed with the construct of interest, differences between groups can be interpreted as evidence that the different constructs resulted in different erotic value judgments. A related example of this comes from the work of Irmen (2006), who used primes related to the stereotyping of

career women in a parafoveal presentation paradigm to prime participants with concepts related to either career women or women in general.

Why subliminal and not supraliminal priming? Typically, researchers using subliminal priming expect to see assimilation effects, whereby the primed material is subconsciously incorporated into decision-making following the exposure; however, contrast effects are also possible, wherein participants either become aware of and react against the priming, or unconsciously react against the priming. Contrast effects are more likely with supraliminal than subliminal priming, making it more difficult to assess the constructs in question (Bornstein, 1990).

Supraliminal and subliminal priming have been shown to elicit different reactions across a variety of stimuli (Balconi, 2006; Kamio, Wolf, & Fein, 2006; Kouider, Dehaene, Jobert, & Bihan, 2007; Williams et al., 2006). Of particular interest is the suggestion that emotionally valenced stimuli are processed at a very early—subliminal—point during stimulus processing (Balconi, 2006; Williams et al., 2006). Both gender and sexual orientation are potentially highly emotionally valenced, by sexism and homophobia, respectively.

Furthermore, there is evidence that participants responding to questions about sexual orientation display a high degree of reactivity. For example, Puhl and Lemm (2009) found that participants who read a scenario involving a homosexual target reported lower levels of anti-gay prejudice than participants who read a scenario involving a heterosexual target. It is unlikely that reading a scenario altered participants' deeply-held beliefs, and much more likely that participants who understood that the study

was largely about homosexuality altered their responding. Although references to femininity are common and could be included in a conscious prime, such as a word scramble, references to homosexuality are rarer and are likely to draw attention. Supraliminal priming may be likely to generate contrast effects, while subliminal priming is more likely to generate assimilation effects that more closely resemble the beliefs and attitudes of interest.

The present study, consisting of both male and female participants, was conducted to assess the potential priming targets; prime sets were chosen based on the effectiveness of the primes in eliciting associations with homosexuality. The subliminal primes consisted of words and pictures that referred to targets who were either male or female and either heterosexual or homosexual. Measures of attitudes toward lesbians, erotic value of lesbianism, and ambivalent sexism followed the presentation of the primes. During the priming experiment, participants were exclusively male. There was no reason to expect differences in heterosexual female participants' reactions to various types of lesbians, particularly with respect to erotic value (Herek, 2002a; Louderback & Whitley, 1997).

I hypothesized, first, that men who saw heterosexual-female primes would report placing a higher erotic value on lesbianism than men who saw homosexual-female or homosexual-male primes. This may appear counter-intuitive, but the erotic value of lesbianism may be dependent on the association of lesbianism with women and femininity, rather than on the association of lesbianism with homosexuality. Heterosexual male attitudes toward homosexuality, which is itself a form of gender non-conformity,

have tended to be negative (Herek, 2002a). In contrast, heterosexual male attitudes toward women who behave in gender-conforming ways have tended to be at least subjectively positive (Glick & Fiske, 1997). Therefore, while exposure to a visibly homosexual woman might not be associated with erotic value, but rather, with the subjectively negative concept of homosexuality and stereotypes of unattractiveness (Dew, 1985; Dunkle & Francis, 1990; Dunkle & Francis, 1996), exposure to a visibly non-homosexual woman would be subjectively positive to heterosexual male participants and associated with femininity, leading to an increase in the reported erotic value of lesbianism.

With a heterosexual-female prime set, participants would be primed with the stereotype of a feminine and sexualized woman, which would be associated with increased erotic value of lesbianism, since feminine, sexualized women are considered more attractive than masculine women across a variety of contexts (Gottschall, 2008). The homosexual-male and homosexual-female prime sets would both be associated with the subjectively negative and non-arousing concept of homosexuality, which would result in a decrease in reported erotic value of lesbianism. Men who saw heterosexual-male primes were predicted to report placing an intermediate erotic value on lesbianism, as neither stereotypical femininity nor stereotypical homosexuality was primed.

Second, although anti-lesbian bias is likely to be so strongly entrenched that it is resistant to modification by subtle priming, to the extent that it might vary, I predicted that men who saw heterosexual-female primes would report less anti-lesbian prejudice than men who saw homosexual-female or homosexual-male primes. Men who saw

heterosexual-male primes were predicted to report intermediate anti-lesbian prejudice. Anti-gay bias toward lesbians, as measured by the Attitudes Toward Lesbians scale (Herek, 1988), was expected to be linked to ambivalent sexism; hostile sexism has been linked to homophobia, while benevolent sexism is not a useful predictor of homophobic attitudes in the context of hostile sexism. Hostile sexism, but not benevolent sexism, would be activated by the presentation of homosexual primes.

Third, and finally, I predicted that men with low hostile sexism would place higher erotic value on lesbianism than men with high hostile sexism, especially after seeing heterosexual-female primes as opposed to homosexual-female and homosexual-male primes. Men who view lesbianism as morally wrong may be more likely to perceive lesbianism as an inferior and incomplete form of sexuality. Priming homosexuality would lead to a more affectively negative response for men who perceive homosexuality as morally wrong or unnatural.

Stimulus Development

Participants

Participants were recruited through posts on the social networking website Facebook, through a "shared" announcement,[1] or through the introductory Psychology participant pool. Participants recruited by both methods were informed that the survey was about rating characteristics of photographs and words and would contain questions of a sexual nature. Of the 271 people who began the survey, 197 (72.7%) completed it. Nine participants gave consent but answered none of the questions, and were dropped from

[1] "Sharing" refers to a process by which Facebook users can post whole announcements or single links, typically visible to a wide network of users; because of varying levels of privacy protection it is difficult to assess, once the announcement has been shared initially, who has reposted it.

further analyses, for a total of 262 participants. Participants suggested in comments that the survey felt very long, which probably contributed to the drop-out rate. Data from participants who did not complete the survey were included, as long as those participants had answered at least some questions.

The surveys were conducted through the website Survey Monkey, an Internet-based survey tool. Participants consisted of 262 people, 57.3% male, 40.1% female, and 2.7% identifying as neither male nor female; a majority of participants identified as White or Caucasian (86.3%), with 2.3% identifying as Black or African-American, 11.1% identifying as neither Caucasian nor African-American, and 0.4% preferring not to answer. Participants had a mean age of 24.79 years (SD = 7.31).

Most participants self-reported being primarily or exclusively heterosexual; on a scale of 1 (exclusively homosexual) to 9 (exclusively heterosexual), 65.3% reported a sexual orientation of 8 or 9, and the mean score was 7.55 (SD = 2.00). The high proportion of non-heterosexual respondents (much higher than the typical estimate of 5-10%) is likely due to the combination of Internet-based recruiting and the nature of the survey, which deals with sexual orientation; individuals with a vested interest in sexual orientation research are often more likely to participate in that research.

Materials

Materials included potential prime photographs, potential prime words, and questions related to eroticization. Because the goal of this study was to activate chronically accessible stereotypes, pejorative slang terms were included in the potential prime words. Although an attempt was made to use pejorative slang for both the

homosexual and the heterosexual primes, slang for heterosexual men and women tends to be less emotionally charged and is therefore likely to be less negative than slang for homosexual men and women ("bitch" vs. "faggot," for example). For a list of the potential primes tested, see Appendix A.

Potential pictorial cues were acquired from social networking sites, Rate-My.Org and HotorNot.Com, and represented heterosexual-appearing women, homosexual-appearing women, heterosexual-appearing men, or homosexual-appearing men. No pictures included nudity; at most, some female photographic targets showed minimal cleavage and some male photographic targets (both heterosexual and homosexual) were shirtless.

Procedure

To assess viability of various stimulus items, participants were asked to rate words and pictures. Participants rated on a scale of 1 (not at all) to 9 (very) how negative they found each potential prime, how positive, how associated with homosexuality, and how associated with gender non-conformity.

Participants also completed two items related to the eroticization of lesbianism taken from the Louderback and Whitley (1997) erotic value scale: "I find the idea of two women making love erotic" and "I find the idea of two women making love repulsive." Response options consisted of a 9-point Likert-type scale, ranging from 1, "strongly disagree," to 9, "strongly agree."

Basic demographic information (gender, age, race, and ethnicity) was collected. Due to a relatively low prevalence of any single racial or ethnic group other than

White/Caucasian, racial data was analyzed by White/Caucasian or non-White/non-Caucasian status.

Due to the length of the survey, it was administered with some questions in common to all (demographic information, two questions regarding the erotic value of lesbianism, and the phrases associated with lesbianism with varying degrees of reference to feminization), but most questions divided between separate surveys. Most of the potential primes were divided into four blocks. Each block consisted of a roughly equal number of primes in each of the categories (two to three each of male/female, heterosexual/homosexual). Each participant saw and rated two blocks; block order was counterbalanced.

Results

Erotic value. Data from all male and female participants were used in assessing erotic value of lesbianism. Analyses were conducted using a 2 x 2 ANOVA. When participants were asked how erotic they found the idea of two women making love, there was a main effect of gender, F (1, 246) = 3.97, MSE = 4.80, p = .047, such that female participants found lesbianism less erotic (M = 5.24, SD = 2.74) than did male participants (M = 6.33, SD = 2.29). There was also a main effect of participant sexual orientation, F (1, 246) = 9.35, MSE = 4.80, p = .002, such that heterosexual participants found lesbianism less erotic (M = 5.68, SD = 2.60) than did non-heterosexual participants (M = 6.27, SD = 2.37).

These main effects were qualified by an interaction of participant gender and participant sexual orientation on reported erotic value of lesbianism, F (1, 246) = 62.79,

MSE = 4.80, $p < .000001$, such that non-heterosexual women (*M* = 6.98, *SD* = 1.85) and heterosexual men (*M* = 6.65, *SD* = 2.06) reported placing high erotic value on lesbianism. Analysis of simple effects revealed that non-heterosexual women and heterosexual men did not report placing significantly different erotic value on lesbianism, F (1, 246) = 0.78, *MSE* = 4.80, $p = .38$. This finding was consistent with expectations and confirmed the existence of high erotic value of lesbianism in heterosexual male participants. Non-heterosexual men reported placing relatively low erotic value on lesbianism (*M* = 5.16, *SD* = 2.69), while simple effects revealed that heterosexual women reported placing even less erotic value on lesbianism (*M* = 3.60, *SD* = 2.43) than did non-heterosexual men, F (1, 246) = 10.04, *MSE* = 4.80, $p = .002$, perhaps due to the fact that the non-heterosexual male participants included bisexual as well as homosexual participants.

Selection of primes. Only data from heterosexual male participants were used for these analyses, as the eroticization of lesbianism by heterosexual men was the research focus. To analyze the ratings of the various primes, initially, median ratings of the four qualities (positivity, negativity, association with homosexuality, and gender nonconformity) were examined. Analysis of the individual items was conducted such that a group of reasonably comparable items was chosen for each of the four prime categories, with seven words and five pictures for each. The major selection criterion for individual primes was the perceived association of homosexuality with the prime. Many primes were clearly not associated with homosexuality (having a mean close to and median of 1 on the 1, not at all, to 9, very, scale). Some primes were ambiguous, with means and

medians close to the heterosexual group, including the word “fairy” with a median of 2 and “sissy” with a median of 3.

Text primes that had received high ratings of apparent homosexuality, with medians at or above 6, were included in the priming phrase of the experiment. For picture primes, the distinctions were less clear, with very few pictures receiving mean or median homosexuality ratings above 3 or 4; this may reflect unwillingness on the part of participants to specify that a particular person is homosexual. The modal response for every one of the picture primes was 1, the lowest possible association with homosexuality. This resulted in skewed distributions, so to account for that, medians were considered more indicative than means. There are multiple potential reasons for this reluctance to describe picture primes as homosexual—pictures contain a great deal of information, but may be inherently more ambiguous than words; additionally, that identification could be construed as an insult. Therefore, picture primes with medians at or above 2 were considered homosexual for the purposes of this study.

The distribution of ratings for each prime was then considered, and primes with ambiguous distributions (i.e., bimodal) were eliminated. From the remaining items, groups were constructed for each of the four prime categories containing those most comparable in ratings of positivity and negativity. Text primes chosen can be found in Appendix A, in bold; picture primes chosen can be found in Appendix B. For median ratings on positivity, negativity, association with homosexuality, and gender-nonconformity of items used as primes in the second study, see Table 1. For means and standard deviations, see Table 2.

Analysis of groups. Potential primes were also rated on additional dimensions beyond association with homosexuality, although these ratings were not used for the initial inclusion criteria. Because primes were selected for the main experiment strictly on the basis of rated association with homosexuality, there were some differences between groups of primes on other evaluative dimensions. Analysis of the item groups chosen was conducted by collapsing ratings of each group's items within individual participants. Since no single participant saw all the items in any given category, but all participants saw some items from each category, means were calculated for the groups based on the items each participant did see. For means and standard deviations, see Table 3. Within-subjects ANOVAs were conducted for each of the dependent variables.

Homosexual items were more likely to be associated with homosexuality than items intended to be perceived as heterosexual, F (1, 107) = 853.85, MSE = 1.81, $p <$ .001, partial η^2 = .89. There was a main effect of prime gender on association with homosexuality such that female items were more likely to be associated with homosexuality than male items, F (1, 107) = 6.85, MSE = 0.92, p = .01, partial η^2 = .06. These main effects were qualified by an interaction, F (1, 107) = 29.72, MSE = 0.96, $p <$ .001, partial η^2 = .22. Simple effects analysis revealed that heterosexual-male primes were rated as more associated with homosexuality than heterosexual-female primes, F (1, 107) = 8.70, MSE = 0.92, p = .004, although this must be considered in light of the very low variability among heterosexual items, most of which were rated as completely heterosexual. Additionally, homosexual-female primes were rated as more associated

with homosexuality than homosexual-male primes, F (1, 107) = 24.15, MSE = 0.92, p < .0001.

The pattern for gender non-conformity was similar. Homosexual items were more likely to be associated with gender non-conformity than were heterosexual items, F (1, 106) = 111.53, MSE = 4.04, p < .001, partial η^2 = .513. There was a main effect of prime gender on association with homosexuality, F (1, 106) = 10.37, MSE = 0.77, p = .002, partial η^2 = .09. These main effects were qualified by an interaction, F (1, 106) = 9.90, MSE = 0.72, p = .002, partial η^2 = .09. Simple effects analyses revealed that heterosexual-male and heterosexual-female primes were not rated differently on gender non-conformity, F (1, 106) = 0.0027, MSE = 4.04, p = .96. However, homosexual-female items were rated as marginally more gender non-conforming than homosexual-male items, F (1, 106) = 3.73, MSE = 4.04, p = .056.

Homosexual items were rated more negatively than heterosexual items, F (1, 107) = 58.20, MSE = 2.21, p < .001, partial η^2 = .35. Female items were rated more negatively than male items, F (1, 107) = 4.75, MSE = 1.58, p = .032, partial η^2 = .04. Additionally, there was a significant interaction between item gender and item sexual orientation, F (1, 107) = 87.46, MSE = 1.03, p < .001, partial η^2 = .45. An analysis of simple effects revealed that the difference in negativity between the heterosexual and homosexual conditions was significant for male items, F (1, 107) = 98.22, MSE = 2.21, p < .0001, but not for female items, F (1, 107) = 0.77, MSE = 2.21, p = .78.

Homosexual items were rated less positively than heterosexual items, F (1, 107) = 56.19, MSE = 1.84, p < .001, partial η^2 = .34. Female and male items were not rated

significantly differently, F (1, 107) = 1.51, MSE = 0.99, p = .22, partial η^2 = .01. However, there was a significant interaction between item gender and item sexual orientation, F (1, 107) = 43.09, MSE = 0.72, p < .001, partial η^2 = .29. An analysis of simple effects revealed that the difference in positivity between the heterosexual and homosexual conditions was significant for male items, F (1, 107) = 67.18, MSE = 1.84, p < .0001, as well as for female items, F (1, 107) = 5.78, MSE = 1.84, p = .018. Additionally, the difference in positivity between the male and the female items was significant in the homosexual condition, F (1, 107) = 124.11, MSE = 0.99, p < .0001, as well as in the heterosexual condition, F (1, 107) = 23.13, MSE = 0.99, p < .0001.

Priming Eroticization

Method

Participants. The participants were 95 male students, drawn from the introductory Psychology participant pool at Western Washington University, with a mean age of 19.59 years (SD = 2.41). Participants reported predominantly heterosexual sexual orientation (M = 8.27, SD = 1.58). Due to the nature of the study, only data from participants reporting a sexual orientation of 8 or 9 were used, which appears to form a natural grouping based on the large difference in number of participants reporting a sexual orientation of 9 (67.4%) or 8 (16.8%) versus 7 (5.3%) and lower (10.5%). See Figure 1 for a depiction of the J-curve associated with self-reported sexual orientation in this sample. The relatively large percentage of participants reporting non-heterosexuality may be due in part to the nature of the study, as non-heterosexual people may be more likely to participate in studies with sexually sensitive questions. Ethical constraints required that

participants be notified that the survey would contain sexual questions before signing up to participate. No participant chose to leave the study after it began, although one participant did refrain from answering any questions except for demographics, and this participant was dropped from subsequent analyses.

Most participants reported self-identifying as Caucasian or White (78.8%), with 16.2% reporting self-identifying as non-White and 5% not responding. Race did not appear to play a significant role in any of the further analyses, and was dropped in further analyses; additionally, as there were no non-White participants in the homosexual-female prime condition, interpretation would be problematic. Participants received a half-hour of participation credit to fulfill class requirements in exchange for their participation and were treated as prescribed by the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 1992).

Materials and Procedure

Primes used in this study consisted of words relating to either homosexual or heterosexual men or women, or of pictures of men or women who appeared either clearly homosexual or clearly heterosexual. These primes were developed in the pilot study described above. The computers used all had screen refresh rates of 60 Hz, which means that a single frame remained on the screen for 16.7 milliseconds.

The priming stimuli developed as described above were displayed according to a paradigm used by both Ric (2004) and Irmen (2006). Participants were told that they would be engaging in a directional decision task before filling out surveys. The directional decision task consisted of focusing on a red fixation cross at the center of the

screen while stimuli were flashed to either the left or the right of the cross (evenly spaced between the center of the screen and the edge of the screen to prevent foveal, conscious exposure). Participants were instructed to press one of two keys to indicate whether the stimulus had appeared on the left or the right side of the screen. The directional decision task served the dual purpose of directing participant attention to the primes without informing participants that they would be subliminally primed.

Participants were exposed to two experimental blocks. In the first, in which word primes were used, a red fixation cross was constantly displayed; a forward mask was presented for 50 ms, the prime was then displayed for 50 ms, followed by a backward mask for 50 ms. Text masks consisted of random letter strings, while picture masks consisted of scrambled and pixilated version of pictures from all categories. (A common response among participants who claimed to see pictures was, "A big picture made up out of a lot of little pictures.") Participants were given 10 "practice" trials, during which they were presented with the actual primes, and then 90 "experimental" trials, during which they were presented with the same primes. After the practice trials, participants saw a screen in which they were given feedback containing only the percent correct of the directional decisions they had made and their personal average response time. After the trials with word primes, participants engaged in a similar block of trials (10 "practice," 90 "experimental") with picture primes; picture primes remained on the screen for a shorter duration, with a forward mask of 50 ms, prime exposure of 16.7 ms, and backward mask of 50 ms, because pictorial primes are often easier to consciously see than word primes (Balconi, 2006; Irmen, 2006; Kamio, Wolf, & Fein, 2006; Kouider, Dehaene, Jobert, &

Bihan, 2007; Ric, 2004; Williams et al., 2006). For each trial, one of the primes from the given category (which was either a word or picture depending on the block) was selected at random, but such that each prime would be shown an equal number of times, so that each of the 7 words was shown 14 or 15 times and each of the 5 pictures was shown 20 times.

There is evidence that participants can consciously see at least pictorial information presented for as little as 50 ms (Rule & Ambady, 2008). Typical durations for subliminal prime presentation tend to be less than 40 ms (Kiefer & Sanchez, 2007; Lowery, Eisenberger, Hardin, & Sinclair, 2007; Schubert & Hafner, 2003; Ric, 2004; Mussweiler, Ruter, & Epstude, 2004). This is particularly interesting in light of neural imaging data, which researchers suggest indicate that the process by which participants become consciously aware can be divided into stages, with 30 ms being a key point in the proposed timeline between unconscious and conscious awareness (Lamme, 2006). Studies using presentation durations from 18 ms to 35 ms have demonstrated significant results without participants becoming consciously aware of the priming stimuli (Kiefer & Sanchez, 2007; Lowery et al., 2007; Schubert & Hafner, 2003).

Following the prime presentation blocks, participants responded to three questionnaires, presented in fixed order. The scale used to measure erotic value was developed by Louderback and Whitley (1997). Their scale initially contained eight items, four referring to lesbians and four referring to gay men. For the purposes of this study, only the items referring to lesbians were considered relevant, particularly in light of the consistent findings from previous studies and during the pilot study for this experiment

that neither heterosexual male nor female participants reported finding gay men erotic (Louderback & Whitley, 1997). The items included "I find the idea of a woman making love to another woman erotic," "I find the idea of a woman making love to another woman repulsive," and "I think that I would be sexually aroused by watching two women make love." Additionally, there was a fourth item, "I have viewed pornographic materials involving lesbian acts."

Responses for the first three items were given on a 9-point Likert-type scale, ranging from "strongly disagree" to "strongly agree," and the last item also had a 9-point Likert-type response option, which instead ranged from "never" to "frequently." Although the scale was designed for use with all four items, the second item, concerning repulsiveness, was not well-correlated with the other items, and the reliability of the scale (.64) was improved when the repulsion item was removed. For those reasons, the repulsion item was not used in further analyses. The reliability of the scale with the remaining three items was .69, considerably lower than in Louderback and Whitley (1997), at .88, and Whitley et al. (1999), at .93, although still higher than for the same questions applied to gay men rather than lesbians, .65, in Louderback and Whitley (1997).

Herek (1988) developed the Attitudes Toward Lesbians (ATL) scale, a subscale within the Attitudes Toward Lesbians and Gay Men scale, with a Cronbach's alpha for the ATL component in the current sample of .81. The questionnaire has 10 items, with responses marked on a 9-point Likert-type scale, from "strongly disagree" to "strongly agree." For example, some items included are "Lesbians just can't fit into our society"

and “Female homosexuality is an inferior form of sexuality.” (For all items, see Appendix C.)

The scale used for measuring ambivalent sexism was the Ambivalent Sexism Inventory (ASI), developed by Glick and Fiske (1997). The scale is comprised of 22 statements about relationships, with a 6-point Likert-type response ranging from “disagree strongly” to “agree strongly.” The scale includes two subscales, one to measure benevolent expressions of sexism and one to measure hostile expressions of sexism. Items include (hostile) “Most women interpret innocent remarks or acts as being sexist” and (benevolent) “Most women fail to fully appreciate all that men do for them.” (For all items, see Appendix D.) The reliability in the current sample of the benevolent sexism subscale was .65, considerably lower than in similar samples in previous research (Glick & Fiske, 1997). Item analysis was conducted, but no single item contributed disproportionately to the poor reliability. The reliability of the hostile sexism subscale was .82.

After completing the ASI, participants were asked demographic questions, including their age, their ethnicity (with free response), and their sexual orientation on a scale of 1 to 9, with 1 being exclusively homosexual and 9 being exclusively heterosexual.

Finally, participants were asked a series of funneled questions (with free response) about their awareness of the priming stimuli. They were first asked whether they had seen stimuli flashing on the screen; they were then asked whether they had seen words; then they were asked whether they had been able to read the words, and if so,

what those words had been. Participants were then asked whether they had seen pictures flashing on the screen; they were then asked whether they knew the content of the pictures and, if so, to describe it; they were then asked to guess what the content of the pictures had been. Lastly, participants were shown four pictures, one drawn at random from each category of pictorial primes, and asked to guess which one they had seen. As described above, each of the pictures in the category was shown repeatedly, so that each participant had seen one picture (the one drawn from their category) 20 times.

Results

Analyses were restricted to participants who reported a sexual orientation of 8 or 9 on a 1 to 9-point scale, with 1 being exclusively homosexual and 9 being exclusively heterosexual.

Awareness of Primes. Of the entire dataset, 22.1% of participants chose the correct picture prime, which is close to the expected chance level of 25%. Participants also were not more likely than chance to choose either correct gender or correct sexual orientation.

It was unclear whether participants who reported conscious awareness of the primes and correctly chose the photographic prime they had seen would be affected at a subliminal level or at a supraliminal level. Depending on whether the participants were aware of the primes, either assimilation or contrast effects would be expected (Bornstein, 1990), and participants displaying contrast effects would be unlikely to contribute meaningfully to the research question at hand. However, it is not universally standard practice to exclude aware participants (Irmen, 2006; Kiefer & Sanchez, 2007; Lowery et

al., 2007; Schubert & Hafner, 2003). Due to this uncertainty, analyses were conducted both with and without data from participants who reported awareness and chose correctly ("aware" participants). Analyses reported in text were conducted with the restricted dataset, with only unaware participants; where differences between the pattern of results for the restricted and the unrestricted dataset existed, the unrestricted results are reported in footnote form. Of participants considered aware, three were in the heterosexual-female prime condition, three were in the homosexual-female condition, and one was in the homosexual-male condition.

Erotic Value of Lesbianism. Analyses were conducted using 2 x 2 ANOVAs; race and age were not included, as there was no evidence of age- or race-related effects. Prime gender did not have a significant main effect on ratings of erotic value of lesbianism, F $(1, 66) = 0.76$, $MSE = 1.98$, $p = .39$, partial $\eta^2 = .01$. Prime sexual orientation did have a significant main effect on ratings of erotic value of lesbianism, F $(1, 66) = 4.81$, $MSE = 1.98$, $p = .032$, partial $\eta^2 = .07$. Participants who saw primes related to homosexuality reported placing higher erotic value on lesbianism than participants who saw primes not related to homosexuality (see Table 4 for all means and standard deviations). However, this main effect was an artifact of a significant interaction.

There was a significant interaction between prime gender and prime sexual orientation on erotic value, F (1, 66) = 7.60, $MSE = 1.98$, $p = .008$, partial $\eta^2 = .10$. An analysis of simple effects indicated that participants who saw homosexual-male primes reported placing more erotic value on lesbianism than participants who saw heterosexual-male primes, F (1, 66) = 12.65, $MSE = 1.98$, $p = .001$, while participants who saw

homosexual-female primes did not report placing more erotic value on lesbianism than participants who saw heterosexual-female primes, F (1, 66) = 0.154, MSE = 1.98, p = .70. See Figure 2. The interaction was not consistent with the initial hypotheses; participants seeing heterosexual-female primes were expected to report the most erotic value.

Additional analysis of simple effects indicated that participants who saw heterosexual-male primes reported placing less erotic value on lesbianism than participants who saw either heterosexual-female or homosexual-female primes, F (1, 66) = 7.64, MSE = 1.98, p = .007. However, participants who saw homosexual-male primes did not report placing different erotic value on lesbianism than participants who saw either heterosexual-female or homosexual-female primes, F (1, 66) = 1.70, MSE = 1.98, p = .020.

Attitudes Toward Lesbians. Prime gender did not have an effect on reported attitudes toward lesbians (as measured by the ATL scale), F (1, 68) = .220, MSE = 1.39, p = .64, partial η^2 = .003. Prime sexual orientation also did not have an effect on reported attitudes toward lesbians, F (1, 68) = .14, MSE = 1.39, p = .71, partial η^2 = .002. There was no interaction, F (1, 68) = .001, MSE = 1.39, p = .97, partial $\eta^2 < .001$. These results were not consistent with the hypothesis that participants seeing homosexual prime sets would report less positive attitudes toward lesbians than participants seeing heterosexual-female prime sets.

Hostile Sexism. Prime gender did not have an effect on reported hostile sexism, F (1, 68) = 1.60, MSE = 0.70, p = .21, partial η^2 = .02. Prime sexual orientation also did not have an effect on reported hostile sexism, F (1, 68) = 0.10, MSE = 0.70, p = .76, partial η^2

= .001. There was no interaction, F (1, 68) = 1.28, MSE = 0.70, p = .26, partial η^2 = .02. This was consistent with expectations, as prime characteristics were not expected to have an effect on hostile sexism.

Benevolent Sexism. Prime gender did not have an effect on reported benevolent sexism, F (1, 68) = 0.42, MSE = 0.43, p = .52, partial η^2 = .006. Prime sexual orientation also did not have an effect on reported benevolent sexism, F (1, 68) = 0.52, MSE = 0.43, p = .48, partial η^2 = .007. However, there was a marginally significant interaction, F (1, 68) = 2.93, MSE = 0.43, p = .09, such that participants who saw feminine targets (either heterosexual-female or homosexual-male) reported more benevolent sexism than participants who saw masculine targets (either homosexual-female or heterosexual-male).[2] This is consistent with the activation of benevolent sexism by femininity, but was not hypothesized.

Correlations. Correlations were examined among erotic value scores, ATL scores, and scores for the benevolent sexism and hostile sexism subscales of the ASI. ATL scores were positively correlated with the benevolent sexism (r = .32, p < .01) and the hostile sexism (r = .26, p < .05) subscales of the ASI, such that participants who reported more negative attitudes toward lesbians also reported more sexist attitudes toward women. Erotic value was positively correlated with the hostile sexism (but not benevolent sexism) subscale of the ASI (r = .28, p < .05), such that participants who reported more hostile sexist attitudes toward women also reported placing more erotic

[2] Although the interaction between prime gender and prime sexual orientation on benevolent sexism did not reach significance in the restricted dataset, in the unrestricted dataset, the interaction was significant, F (1, 75) = 5.39, MSE = 0.47, p = .023, partial η^2 = .067. The pattern of results was the same, suggesting that the non-significance in the restricted dataset was likely a function of lack of power. However, these results must be interpreted in light of the poor reliability of the benevolent sexism subscale in this sample.

value on lesbianism. Benevolent sexism and hostile sexism were positively correlated ($r = .35$, $p < .01$) such that participants who reported more benevolent sexism also reported more hostile sexism.

Correlations were also examined among the items on the erotic value scale; the items correlated positively and significantly with each other, with correlations ranging from .34 to .55. The removed item from the erotic value scale, on repulsion, was not correlated with two of the three other items. However, it was correlated positively with ATL ($r = .42$, $p < .01$), such that participants who reported greater repulsion toward lesbians also reported more disapproval of lesbianism.

Discussion

Heterosexual men place erotic value on lesbianism. In fact, in this study, heterosexual men not only reported placing erotic value on lesbianism, they placed as much erotic value on lesbianism as lesbians did. Why? While there are multiple possible explanations, I focused on the presence within the lesbian identity of two components, femininity and homosexuality. These two components were hypothesized to activate either a feminine, subjectively positive, or a homosexual, subjectively negative, stereotype on the part of the participant. These different stereotypes would lead to different reported erotic value of lesbianism, with participants viewing heterosexual-female primes reporting more eroticization of lesbianism than participants viewing homosexual and/or male primes. However, the findings did not support that hypothesis.

Instead, the presentation of subliminal primes relating to male heterosexuality was associated with a decrease in reported erotic value of lesbianism. This is interesting in

light of the prediction that heterosexual-male primes would function essentially as controls. If priming with maleness is sufficient to decrease erotic value of lesbianism, then the findings with homosexual-males primes are particularly strange. The presentation of subliminal primes relating to male homosexuality was associated with reported erotic value of lesbianism equivalent to that in groups where participants were shown heterosexual or homosexual female primes. This is puzzling in several ways, and may reflect a statistical fluke; replication is needed before this can be regarded as in any way conclusive. Heterosexual male participants have consistently, and understandably, reported placing little to no erotic value on male homosexuality (Louderback & Whitley, 1997). If the "double-sexy" hypothesis is correct, there should be nothing for a heterosexual male observer to be aroused by in a gay male sexual interaction—not only is there no surfeit of women, there is a marked deficit.

Given that information, what about a set of subliminal primes related to male homosexuality might cause heterosexual men to report placing erotic value on lesbianism? Although it is possible that some uncontrolled characteristic of the set affected erotic value ratings, the ratings of positivity, negativity, homosexuality, and gender non-conformity of the prime sets all tell a very similar story: heterosexual primes are viewed more positively than homosexual primes, and the homosexual female primes in this case were seen as particularly homosexual and particularly gender-nonconforming relative to the homosexual male primes. One homosexual-male picture prime was included on the basis of a high median homosexuality rating in the whole sample; however, when only ratings from heterosexual male participants were considered, the

picture prime's median association with homosexuality rating was low. The mean score for this prime was still relatively high, but this prime would likely not have been included had the initial analysis been carried out with only the straight male participants. The differences in ratings between homosexual-male and homosexual-female primes may be due in part to presence of this anomalous picture prime, but if the homosexual male primes were causing some kind of positive affective reaction, that reaction would likely have been visible in the ratings of positivity.

Given that participants' pornography-viewing habits were not measured prior to the priming process, it is possible that the participants who saw the homosexual-male prime set were disproportionately likely to be viewers of lesbian pornography. The possibility that random assignment failed in this instance cannot be ruled out. The homosexual-male prime set may have also triggered anxiety or disgust in the participants; without a measure of anxiety, this is difficult to assess. However, if any negative affective reaction was involved, it may have stimulated general physical arousal, which might have been misattributed to sexual causes (Dutton & Aron, 1974).

The effects of priming may also have been influenced by the nature of the primes and their potentially highly emotional valence. Evidence of this has been found with respect to relatively extreme primes as opposed to moderate primes in supraliminal work (Glaser & Banaji, 1999). It may be the case that homosexuality is such a highly valenced topic that references to it act as an extreme prime, driving contrast effects.

It is also possible that the inherent sexualization of sexual orientation played a role. Heterosexuality, being, in essence, the default, may not be perceived in a sexual

light; however, homosexuality is typically perceived as very much a sexual phenomenon. In discussions of sexual orientation in the media, surprisingly graphic references to sexual acts are not uncommon, some even unrelated to homosexuality *per se* but simply referencing deviance (Stein, 2010).

Additionally, gay men are more often sexualized than lesbians. Depictions of promiscuous gay men have been popular for decades (as in *Cruising,* which starred Al Pacino). Lesbians, on the other hand, are often presented as lacking sexual agency, and the myth of "lesbian bed death," which refers to the decline in frequency of sexual relations over the course of time in a lesbian relationship, has no comparable counterpart in discussions of gay male relationships (van Rosmalen-Nooijens, Vergeer, & Lagro-Janssen, 2008). This concept of lesbian bed death may reflect societal unwillingness to allow women sexual agency in the absence of a male figure.

Most of the findings in this study are in line with previous findings. For instance, ATL scores likely reflect a set of deeply-held beliefs, which would be expected to be resistant to modification from a subtle prime, and ATL scores in this case did not differ among groups after priming. The correlation of hostile sexism with erotic value, although not expected, is in line with Whitley et al.'s (1999) hypotheses related to the processes of objectification; objectification may be more likely when pre-existing negative attitudes toward the target allow dehumanization.

The correlation between repulsion toward lesbianism and negative attitudes toward lesbians is also to be expected. Interestingly, Louderback and Whitley (1997) found that erotic value mediated attitudes toward lesbianism for heterosexual male

participants such that, when erotic value was controlled for, the participants reported similarly negative attitudes toward male and female homosexuality. This may suggest that the erotic value scale used as a mediator may be better split into erotic value *per se* and repulsion, which may not reflect eroticization.

The finding that reported benevolent sexism was marginally higher when participants saw homosexual-male or heterosexual-female prime sets may also suggest that perceived femininity of the target group is enough to activate benevolent sexist attitudes. That finding is particularly interesting in light of the low reliability of the benevolent sexism scale in this sample, which limits the likelihood of meaningful correlations. It is peculiar that the benevolent sexism scale, which has shown relatively high reliability in other studies, had such low reliability in this study; however, it may be that the sample characteristics of this study, in which participants had to be notified beforehand that questions of a sexual nature would be asked, led to the difference. Although this is purely speculative, individuals who agree to participate in a sexual study may be less likely to harbor the beliefs associated with benevolent sexism.

The expectation that priming heterosexual male participants with heterosexual-female primes would lead to an increased report of erotic value of lesbianism was based on the knowledge that gender presentation and perceived homosexuality are intimately linked (Kite & Deaux, 1987); that gender conformity and perceived attractiveness are linked (Puhl & Lemm, 2009); and that perceived attractiveness might lead to eroticization, whereas perceived unattractiveness would not. In other words, being primed to think of lesbians in the context of attractive, gender-conforming women would

lead to eroticization, while being primed to think of lesbians in the context of homosexuality and gender non-conformity would not. These findings are not consistent with that structure, which may reflect any of a number of possibilities.

Perhaps the key difference between eroticized and non-eroticized lesbians is not their perceived sexual orientation, but their attractiveness. This is supported by Puhl and Lemm (2009), where male participants' judgments of women as socially desirable and attractive depended only upon pre-rated attractiveness and were not affected by presented sexual orientation. Researchers examining this in the future would benefit from examining whether attractiveness of targets affects eroticization in the context of lesbianism directly, as well as whether the "double-sexy" hypothesis can be empirically supported. Among free responses in the first portion of the study, where the existence of the eroticization of lesbianism was assessed, participants were asked what characteristics they found erotic about lesbians and why they found lesbianism erotic. Heterosexual male particiapnts often responded that they found attractive women together erotic, but not unattractive women, and that lesbianism was erotic precisely because of the presence of two women. This explanation appears to be at least a popular lay theory of the eroticization of lesbianism, and bears testing.

Additional studies using the presence of homosexual-male primes to predict an increased eroticization of lesbianism relative to other primes and heterosexual-male primes to predict a decreased eroticization of lesbianism are necessary if any claims of a consistent effect are to be made. Controls relating to anxiety and disgust would also be necessary, as would an examination of the usefulness and specificity of text and picture

primes, which were not dissociated in the current study. Although the findings in this study did not support the initial hypotheses, they do constitute a potentially interesting avenue for future research. Whatever the reason for the eroticization of lesbianism by heterosexual men, male participants self-reported placing erotic value on lesbianism; target attractiveness, participant attitudes toward lesbians, and the continuing feedback of mass media may all contribute to this apparently illogical eroticization.

References

American Psychological Assocation (1992). Ethical principles of psychologists and code of conduct. *American Psychologist, 47,* 1597-1611.

Balconi, M. (2006). Exploring consciousness in emotional face decoding: An event-related potential analysis. *Genetic, Social, and General Psychology Monographs,132,* 129-150.

Bornstein, R. F. (1990). Critical importance of stimulus unawareness for the production of subliminal psychodynamic activation effects: A meta-analytic review. *Journal of Clinical Psychology, 46,* 201-210.

Brown, R., Croizet, J. C., Bohner, G., Fournet, M., & Payne, A. (2003). Automatic category activation and social behaviour: The moderating role of prejudiced beliefs. *Social Cognition, 21,* 167-193.

Dew, M. A. (1985). The effect of attitudes on inferences of homosexuality and perceived physical attractiveness in women. *Sex Roles, 12,* 143-155.

Diamond, L. M. (2008). Female bisexuality from adolescence to adulthood: Results from a 10-year longitudinal study. *Developmental Psychology, 44,* 5-14.

Dunkle, J. H., & Francis, P. L. (1990). The role of facial masculinity/femininity in the attribution of homosexuality. *Sex Roles, 23,* 157-167.

Dunkle, J. H., & Francis, P. L. (1996). "Physical attractiveness stereotype" and the attribution of homosexuality revisited. *Journal of Homosexuality, 30*(3), 13-29.

Dutton, D. G., & Aron, A. P. (1974). Some evidence for heightened sexual attraction under conditions of high anxiety. *Journal of Personality and Social Psychology,*

30, 510-517.

Glaser, J., & Banaji, M. R. (1999). When fair is foul and foul is fair: Reverse priming in automatic evaluation. *Journal of Personality and Social Psychology, 77,* 669-687.

Glick, P., & Fiske, S. T. (1997). Hostile and benevolent sexism: Measuring ambivalent sexist attitudes toward women. *Psychology of Women Quarterly, 21,* 119-135.

Gottschall, J. (2008). The "beauty myth" is no myth: Emphasis on male-female attractiveness in world folktales. *Human Nature, 19,* 174-188.

Herek, G. M. (1988). Heterosexuals' attitudes toward lesbians and gay men: Correlates and gender differences. *Journal of Sex Research, 25,* 451-477.

Herek, G. M. (2002a). Gender gaps in public opinion about lesbians and gay men. *Public Opinion Quarterly, 66,* 40-66.

Herek, G. M. (2002b). Heterosexuals' attitudes toward bisexual men and women in the United States. *Journal of Sex Research, 39,* 264-274.

Irmen, L. (2006). Automatic activation and use of gender subgroups. *Sex Roles, 55,* 435-444.

Kamio, Y., Wolf, J., & Fein, D. (2006). Automatic processing of emotional faces in high-functioning pervasive developmental disorders: An affective priming study. *Journal of Autism and Developmental Disorders, 36,* 155-167.

Kiefer, A. K., & Sanchez, D. T. (2007). Men's sex-dominance inhibition: Do men automatically refrain from sexually dominant behavior? *Personality and Social Psychology Bulletin, 33,* 1617-1631.

Kite, M. E., & Deaux, K. (1987). Gender belief systems: Homosexuality and the implicit

inversion theory. *Psychology of Women Quarterly, 11,* 83-96.

Kouider, S., Dehaene, S., Jobert, A., & Bihan, D. L. (2007). Cerebral bases of subliminal and supraliminal priming during reading. *Cerebral Cortex, 17,* 2019-2029.

Lamme, V. A. F. (2007). Towards a true neural stance on consciousness. *Trends in Cognitive Sciences, 10,* 494-510.

Lehavot, K. & Lambert, A. J. (2007). Toward a greater understanding of antigay prejudice: On the role of sexual orientation and gender role violation. *Basic and Applied Social Psychology, 29,* 279-292.

Louderback, L. A., & Whitley, B. E., Jr. (1997). Perceived erotic value of homosexuality and sex-role attitudes as mediators of sex differences in heterosexual college students' attitudes toward lesbians and gay men. *Journal of Sex Research, 34,* 175-182.

Lowery, B. S., Eisenberger, N. I., Hardin, C. D., & Sinclair, S. (2007). Long-term effects of subliminal priming on academic performance. *Basic and Applied Social Psychology, 29,* 151-157.

Mussweiler, T., Ruter, K., & Epstude, K. (2004). The man who wasn't there: Subliminal social comparison standards influence self-evaluation. *Journal of Experimental Social Psychology, 40,* 689-696.

Oakenfull, G., & Greenlee, T. (2004). The three rules of crossing over from gay media to mainstream media advertising: Lesbians, lesbians, lesbians. *Journal of Business Research, 57,* 1276-1285.

Palys, T. S. (1986). Testing the common wisdom: The social content of video

pornography. *Canadian Psychology, 27,* 22-35.

Puhl, K. M., & Lemm, K. M. (2009). [The effects of presented sexual orientation and pre-rated physical attractiveness on ratings of social desirability and physical attractiveness.] Unpublished raw data.

Ric, F. (2004). Effects of the activation of affective information on stereotyping: When sadness increases stereotype use. *Personality and Social Psychology Bulletin,30,* 1310-1321.

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues, 57,* 743-762.

Rule, N. O., & Ambady, N. (2008). Brief exposures: Male homosexuality is accurately perceived at 50 ms. *Journal of Experimental Social Psychology, 44,* 1100-1105.

Sakalli, N. (2002). The relationship between sexism and attitudes toward homosexuality in a sample of Turkish college students. *Journal of Homosexuality, 42*(3), 53-64.

Schubert, T. W., & Hafner, M. (2003). Contrast from social stereotypes in automatic behavior. *Journal of Experimental Social Psychology, 39,* 577-584.

Stein, S. (2010, March 13). J.D. Hayworth: Gay marriage law could produce man-horse nuptials. *The Huffington Post.* Retrieved May 2, 2010 from http://www.huffingtonpost.com/

van Rosmalen-Nooijens, K. A., Vergeer, C. M., & Lagro-Janssen, A. L. (2008). Bed death and other lesbian sexual problems unraveled: A qualitative study of the sexual health of lesbian women involved in a relationship. *Women & Health, 48,* 339-362.

Whitley, B. E., Jr. (2001). Gender-role variables and attitudes toward homosexuality. *Sex Roles, 45,* 691-721.

Whitley, B. E., Jr., Wiederman, M. W., & Wryobeck, J. M. (1999). Correlates of heterosexual men's eroticization of lesbianism. *Journal of Psychology & Human Sexuality, 11,* 25-41.

Williams, L. M., Liddell, B. J., Kemp, A. H., Bryant, R. A., Meares, R. A., Peduto, A. S., et al. (2006). Amygdala-prefrontal dissociation of subliminal and supraliminal fear. *Human Brain Mapping, 27,* 652-661.

Appendix A

Potential word prime stimuli, by category of target. Stimuli chosen as primes in **bold**.

Heterosexual-female: **girl**, **woman**, **lady**, feminine, **chick**, **bimbo**, **skank**, **ho**

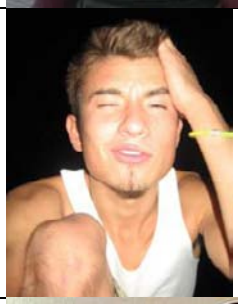
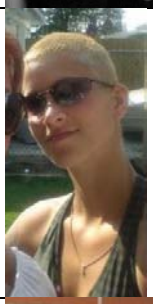
Homosexual-female: **butch**, **dyke**, **bulldyke**, bulldagger, tomboy, **lesbo, lesbian, lesbianism, tomboy**

Homosexual-male: **gay**, swish, fop, nancy, sissy, **faggot**, **queer**, fairy, bent, catamite, **queen**, **pansy**, **sodomite**, **flamer**

Heterosexual-male: **dude**, **bro**, **stud**, jock, **man**, **hunk**, **virile, guy**

Appendix B.

Picture primes used in the priming study, with two-letter identifiers.

Gay Male	Gay Female	Straight Male	Straight Female
 AA	 AE	 CA	 BH
 BC	 DA	 BG	 BA
 CC	 AH	 AC	 AI
 CD	 DH	 BJ	 AF
 AJ	 BD	 CF	 CJ

Appendix C

All items from the Attitudes Toward Lesbians (ATL) scale. Reverse-coded items are indicated with an *.

1. Lesbians just can't fit into our society.

2. A woman's homosexuality should *not* be a cause for job discrimination in any situation.*

3. Female homosexuality is detrimental to society because it breaks down the natural divisions between the sexes.

4. State laws regulating private, consenting lesbian behavior should be loosened.*

5. Female homosexuality is a sin.

6. The growing number of lesbians indicates a decline in American morals.

7. Female homosexuality in itself is no problem, but what society makes of it can be a problem.*

8. Female homosexuality is a threat to many of our basic social institutions.

9. Female homosexuality is an inferior form of sexuality.

10. Lesbians are sick.

Appendix D

All items from the Ambivalent Sexism Inventory. Reverse-coded items are indicated with an *.

1. No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman.

2. Many women are actually seeking special favors, such as hiring policies that favor them over men, under the guise of asking for "equality."

3. In a disaster, women ought not necessarily to be rescued before men.*

4. Most women interpret innocent remarks or acts as being sexist.

5. Women are too easily offended.

6. People are often truly happy in life without being romantically involved with a member of the other sex.*

7. Feminists are not seeking for women to have more power than men.*

8. Many women have a quality of purity that few men possess.

9. Women should be cherished and protected by men.

10. Most women fail to appreciate fully all that men do for them.

11. Women seek to gain power by getting control over men.

12. Every man ought to have a woman whom he adores.

13. Men are complete without women.*

14. Women exaggerate problems they have at work.

15. Once a woman gets a man to commit to her, she usually tries to put him on a tight leash.

16. When women lose to men in a fair competition, they typically complain about being discriminated against.

17. A good woman should be set on a pedestal by her man.

18. There are actually very few women who get a kick out of teasing men by seeming sexually available and then refusing male advances.*

19. Woman, compared to men, tend to have a superior moral sensibility.

20. Men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives.

21. Feminists are making entirely reasonable demands of men.*

22. Women, as compared to men, tend to have a more refined sense of culture and good taste.

Table 1

Median Ratings of Primes

Stimulus Item	Homosexuality	Negativity	Positivity	Gender Non-Conformity
Homosexual-Male				
Gay	7	5	2	3.5
Queer	6	3	4	4
Pansy	7	8	1	6
Faggot	8	7	1	5
Flamer	8	7	1	5
Queen	7	6.5	2	5
Sodomite	7	5	2.5	5
Homosexual-Female				
Butch	6	5	3	5
Dyke	7	6.5	2	4
Lesbo	7.5	5	2	5
Bulldyke	8	8	1	6
Lesbians	9	2	5	5
Lesbianism	9	2	5	5
Tomboy	6	6	2	6
Heterosexual-Male				
Dude	1	1	5	1
Hunk	1	2	6	1
Bro	1	6	1.5	1
Stud	1	1	7	1
Man	2	1	2	1
Virile	1	1	5	1
Guy	1	1	6	1
Heterosexual-Female				
Girl	1	1	5	1
Woman	1.5	4.5	2	2.5
Lady	1	3	2	1
Bimbo	1	1	4	1
Ho	1	3	3	1
Skank	1	6	2	1
Chick	1	5	1	1
Homosexual-Male				
Picture AA	2.5	1	4.5	1
Picture AJ	2	1	4	1
Picture BC	1	1	5	1

Picture CC	3	1	5	3
Picture CD	4	1	5	3
Homosexual-Female				
Picture AE	2	1	3	2
Picture AH	2	1	5	1
Picture BD	2.5	1	4	1
Picture DA	4	2	4	3
Picture DH	3	1	4	3
Heterosexual-Male				
Picture AC	1	1	4	1
Picture BG	1	1	3	1
Picture BJ	1	1	5	1
Picture CA	1	1	5	1
Picture CF	1	1	4	1
Heterosexual-Female				
Picture AF	1	1	5.5	1
Picture AI	1	1	3	1
Picture BA	1	1	4.5	1
Picture BH	1	1	5	1
Picture CJ	1	1	5	1

Table 2

Means and Standard Deviations of Primes

Stimulus Item	Homosexuality	Negativity	Positivity	Gender Non-Conformity
Homosexual-Male				
Gay	7.09 (1.67)	4.44 (3.19)	2.75 (2.21)	3.56 (2.68)
Queer	5.15 (2.85)	3.67 (2.55)	3.89 (2.15)	4.33 (3.04)
Pansy	6.04 (2.75)	7.53 (1.63)	1.47 (0.90)	5.63 (2.73)
Faggot	7.21 (2.15)	6.96 (1.90)	2.27 (1.66)	4.36 (3.15)
Flamer	6.81 (2.83)	6.42 (2.32)	2.00 (1.48)	4.74 (3.11)
Queen	6.37 (2.76)	5.54 (2.88)	2.90 (2.20)	4.81 (2.67)
Sodomite	6.37 (2.44)	5.00 (2.89)	3.00 (2.08)	5.00 (2.68)
Homosexual-Female				
Butch	4.97 (2.95)	4.34 (2.63)	3.19 (1.84)	4.09 (2.54)
Dyke	6.09 (3.00)	2.28 (1.55)	5.91 (2.44)	4.48 (3.09)
Lesbo	6.56 (2.73)	4.72 (2.84)	3.06 (2.34)	4.45 (2.99)
Bulldyke	7.24 (1.26)	7.40 (1.80)	1.96 (1.43)	5.80 (2.79)
Lesbians	8.48 (1.03)	2.88 (2.29)	4.45 (2.45)	4.97 (2.78)
Lesbianism	8.39 (1.10)	2.69 (2.19)	4.53 (2.33)	5.07 (2.78)
Tomboy	5.42 (2.67)	5.63 (2.62)	2.51 (1.84)	5.74 (2.47)
Heterosexual-Male				
Dude	1.06 (0.25)	1.40 (0.91)	5.13 (2.93)	1.84 (2.19)
Hunk	1.92 (1.71)	3.11 (2.38)	5.65 (2.50)	2.36 (2.17)
Bro	1.38 (1.45)	5.09 (3.54)	2.71 (2.43)	2.32 (2.30)
Stud	2.13 (1.78)	1.83 (1.40)	6.85 (2.45)	2.71 (2.45)
Manly	3.64 (2.90)	3.36 (3.23)	3.55 (2.72)	3.28 (2.98)
Virile	2.51 (2.29)	2.64 (2.62)	4.63 (2.93)	2.94 (2.59)
Guy	1.39 (0.87)	1.31 (0.86)	5.58 (3.07)	1.97 (1.98)
Heterosexual-Female				
Girl	2.22 (2.14)	2.22 (2.13)	5.00 (3.16)	2.03 (1.80)
Woman	2.56 (2.03)	4.33 (3.04)	3.69 (3.27)	3.31 (2.38)
Lady	1.27 (0.88)	4.45 (3.42)	3.15 (2.53)	2.28 (2.23)
Bimbo	1.61 (1.42)	3.83 (3.29)	4.51 (3.25)	2.24 (2.09)
Ho	1.49 (1.07)	4.54 (3.34)	3.70 (2.89)	2.46 (2.21)
Skank	1.76 (1.48)	5.15 (3.36)	3.76 (3.09)	2.58 (2.19)
Chick	1.26 (0.67)	5.22 (3.10)	2.03 (1.49)	2.09 (2.19)
Homosexual- Male				
Picture AA	3.23 (2.57)	1.83 (1.82)	4.13 (2.57)	2.24 (1.81)
Picture AJ	2.69 (2.24)	1.59 (1.02)	4.48 (3.26)	1.93 (1.94)
Picture BC	2.50 (2.04)	1.53 (1.04)	4.37 (2.65)	2.17 (2.02)

Picture CC	3.66 (2.45)	2.40 (2.07)	4.40 (2.38)	3.29 (2.38)
Picture CD	4.18 (2.49)	2.19 (1.77)	4.45 (2.57)	3.36 (2.43)
Homosexual-Female				
Picture AE	3.20 (2.67)	2.30 (2.18)	3.25 (2.30)	2.79 (2.37)
Picture AH	2.90 (2.19)	1.34 (0.86)	4.44 (2.57)	2.54 (1.93)
Picture BD	3.13 (2.32)	2.20 (1.97)	3.79 (2.27)	2.52 (2.21)
Picture DA	4.24 (2.72)	2.99 (2.25)	3.84 (2.13)	3.97 (2.67)
Picture DH	4.07 (2.76)	2.71 (2.33)	4.01 (2.39)	3.96 (2.82)
Heterosexual-Male				
Picture AC	1.53 (1.63)	1.67 (1.69)	4.00 (2.84)	1.52 (1.35)
Picture BG	1.93 (1.62)	2.14 (1.88)	3.40 (2.46)	1.90 (1.74)
Picture BJ	1.30 (0.84)	1.57 (0.94)	4.53 (2.91)	1.83 (1.89)
Picture CA	1.54 (1.18)	2.13 (1.96)	4.93 (2.38)	1.75 (1.76)
Picture CF	2.33 (1.99)	2.21 (1.82)	4.06 (2.49)	2.37 (1.97)
Heterosexual-Female				
Picture AF	1.37 (1.03)	1.17 (0.38)	5.10 (3.20)	1.34 (1.04)
Picture AI	3.31 (3.09)	2.41 (2.37)	3.79 (2.88)	2.93 (2.71)
Picture BA	1.50 (1.22)	1.57 (1.36)	4.13 (2.84)	1.76 (1.96)
Picture BH	1.30 (0.88)	1.40 (0.93)	4.80 (3.01)	1.52 (1.53)
Picture CJ	1.39 (0.90)	2.07 (1.73)	5.06 (2.68)	1.66 (1.53)

Table 3

Means and Standard Deviations of Ratings of Prime Categories

Prime Category	Homosexuality	Negativity	Positivity	Gender Non-Conformity
Homosexual Male	5.26 (1.92)	4.45 (1.58)	3.23 (1.44)	4.14 (1.97)
Homosexual Female	6.04 (1.35)	3.77 (1.56)	3.67 (1.62)	4.63 (2.02)
Heterosexual Male	1.99 (1.14)	2.44 (1.36)	4.74 (2.01)	2.33 (1.59)
Heterosexual Female	1.72 (0.79)	3.63 (1.64)	4.09 (1.84)	2.35 (1.48)

Table 4

Erotic Value, Attitudes Toward Lesbians, and Ambivalent Sexism by Prime Category

	Homosexual-Male	Homosexual-Female	Heterosexual-Male	Heterosexual-Female
Erotic Value	7.26 (1.46)	6.63 (1.08)	5.59 (1.61)	6.81 (1.39)
ATL	2.23 (1.14)	2.11 (1.42)	2.35 (1.18)	2.21 (0.93)
Hostile Sexism	3.57 (0.72)	3.10 (0.72)	3.41 (0.94)	3.38 (0.93)
Benevolent Sexism	3.54 (0.67)	3.18 (0.79)	3.39 (0.56)	3.55 (0.58)

Figure 1. Self-reported sexual orientation in the priming experiment sample.

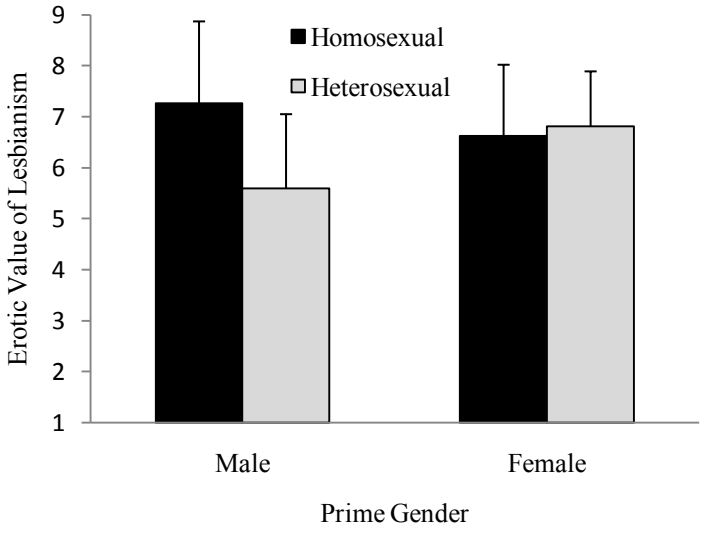


Figure 2. Erotic value as a function of prime sexual orientation and prime gender.