Female Mate Retention, Sexual Orientation, and Gender Identity

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The current study investigated the influence of sexual orientation on mate retention behavior whilst controlling for the potentially confounding effects of gender identity. Heterosexual (N=70), bisexual (N=55) and homosexual (N=73) women (aged 18-53, $M = 21.75$, $SD = 5.44$) completed the Mate Retention Inventory and Masculine Gender Identity Scale for females. When controlling for gender identity, women of heterosexual, bisexual and homosexual orientation differed in their use of four mate retention acts (resource display, verbal possession signals, physical possession signals, and possessive ornamentation). Retention behaviors were most and least frequently employed by homosexual and heterosexual women respectively. The results suggest that gender identity does not explain the sexual orientation differences in female mate retention.

Keywords: Female; gender identity; masculinity; mate retention; sexual orientation
Introduction

Infidelity represents a substantial threat to romantic relationships (Schmitt & Buss, 2001; Schmitt et al, 2004). Consequently, jealousy and suspicion of infidelity promote a range of behaviors intended to maintain the current romantic relationship such as monitoring the partner, threatening rivals and enhancing the quality of the relationship (Buss, 2000; Kaighobadi, Starratt, Shackelford, & Popp, 2008). Consistent with the sex differences identified for other sexual or relationship behaviors (Oliver & Hyde, 1993), men and women differ in their experience of jealousy (Buss, Shackelford, Choe, Buunk, & Dijkstra, 2000) and use of mate retention acts (Buss, 1988). In particular, men are more likely to use resource display, concealment of the mate, submission and debasement and intra-sexual threats whereas women are more likely to use appearance enhancement, jealousy induction, verbal possession and punishment of infidelity threats (Buss, 1988; Buss & Shackelford, 1997). The selection of these behaviors may reflect the importance that mates place on specific traits such as physical attractiveness or possession of resources. Furthermore, the selection of these mate retention acts remains relatively stable over time (Kaighobadi, Shackelford, & Buss, 2010), indicating that sex differences remain at all stages of the lifespan.

Compared to heterosexual relationships, there is a paucity of research addressing homosexual relationships. These relationships represent a particularly complex subject area, as whilst homosexual women are sex-typical for some aspects of sexual behavior, they are sex-atypical for others (Bailey, Gaulin, Agyei, & Gladue, 1994). With regard to mate retention, VanderLaan and Vasey (2008) conclude that homosexual women behave in a sex-atypical (i.e. male) manner for each of the mate retention acts investigated. In particular, VanderLaan and Vasey (2008) report that homosexual women report more frequent use of resource display than heterosexual women, whilst heterosexual women report more frequent experience of derogation of competitors, sexual inducements, appearance enhancement, monopolizing mate’s time and punishment of infidelity threats. This is consistent with those studies
reporting that the sexual preferences and behavior of homosexual women (Silverthorne & Quinsey, 2000) are sex-atypical.

Although bisexuality is cross-culturally and historically well documented (Dynes & Donaldson, 1992a, 1992b) and evident in other species (Bagemihl, 1999), relationship research typically excludes bisexual participants, combines bisexual and homosexual samples or allocates bisexual participants to a relationship category based on the sex of their current partner. The exclusion of bisexual participants restricts our knowledge of bisexual relationships and the grouping of bisexual participants according to current partner sex may distort our understanding of heterosexual and homosexual mating. With regard to mate retention, VanderLaan and Vasey (2008) did not investigate the behavior of bisexual participants. Furthermore, VanderLaan and Vasey (2008) asked participants to report their partner’s retention behavior. Whilst men and women can provide reliable accounts of their partner’s mate retention behavior (Shackelford, Goetz, & Buss, 2005), some acts (e.g. ‘snooped through my partner’s personal belongings’) may be difficult to monitor. The present study includes a bisexual sample and asks participants to report their own rather than their partner’s mate retention behavior.

Gender identity (i.e. sex atypicality, “butch” and “femme” erotic roles, masculinity and femininity of behavior) is a recurrent theme in homosexual relationship research (e.g. Singh, Vidaurri, Zambarano & Dabbs, 1999), though research investigating differences between sexual orientation groups often fail to control for participant gender identity. Masculinity and femininity influence a range of thoughts, emotions and behaviors such as career preference (Eddleston & Powell, 2008), substance use (Kulis, Marsiglia, Lingard, Nieri, & Nagoshi, 2008) and eating disturbance (Kiyotaki & Yokoyama, 2006), together with physical characteristics such as waist-to-hip ratio (Singh, et al, 1999). With regards to romantic relationships, masculinity is related to sexual prowess (Falgout, 2009; Szasz, 1998), emotional expression (Bennett, 2007) partner preference (Cunningham & Russell, 2004) and partner number (Fink, Brewer, Fehl, & Neave, 2007). Furthermore, organizing or activating hormone levels are associated with masculinity or femininity of personality (Gill, Stockard, Johnson & Williams, 1987; Iijima, Ariska, Minamoto & Arais, 2001), romantic jealousy (Fussell, Rowe, & Park, 2011) and the rival
characteristics that elicit jealousy (Park, Wieling, Buunk, & Massar, 2008). Therefore gender identity may mask the influence of sexual orientation per se on relationship behaviors and responses to romantic rivals.

The current study investigates the self-reported mate retention behaviors employed by homosexual, bisexual and heterosexual women. As a number of factors including masculinity and the partner preferences of a mate may influence the selection of mate retention acts, the potentially confounding effects of gender identity are controlled. It was predicted that homosexual, bisexual and heterosexual women would differ in the frequency and type of mate retention behaviors used.

**Method**

**Participants**

Participants (N=198) were opportunity sampled from British Universities. The sample included 70 heterosexual, 55 bisexual and 73 homosexual women, classified according to self-identified sexual orientation. Women were not required to provide detailed sexual histories. Participants were aged 18-53yrs (He: M = 23.325, SD = 8.119, Bi: M = 21.429, SD = 3.517: Ho: M = 20.351, SD = 1.829) and age did not significantly differ across sexual orientation groups (F(2,109) = 3.069, p>.05). Gender identity did significantly differ across sexual orientation groups (F(2,128) = 15.220, p<.001), with homosexual (M = 2.28 , SD = .794) women reporting a more masculine gender identity than bisexual (M = 2.09 , SD = .818) or heterosexual (M = 1.440 , SD = .666) women.

**Procedure**

Participants were asked to complete a questionnaire containing a number of preliminary demographic questions, the Mate Retention Inventory (Buss, 1988) and Masculine Gender Identity Scale for females (Blanchard & Freund, 1983). The research was approved by the University Ethics Committee and conducted in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki).

The original Mate Retention Inventory (Buss, 1988) contains 104 items. In the present study one item “Got my partner pregnant so she would stay with me” was removed. All Inventory items are rated on a four point Likert scale, reflecting the frequency with which the participant has performed the act in the
previous year (0 = never, 1 = rarely, 2 = sometimes and 4 = often). The Inventory measures 19 mate retention acts, with each act subscale demonstrating acceptable reliability in the current study: vigilance e.g. “called at unexpected times to see who my partner was with” (.788); concealment of mate e.g. “refused to introduce my partner to my same-sex friends” (.572); monopolization of time e.g. “monopolized my partner’s time at a social gathering” (.766); jealousy induction e.g. “flirted with someone in front of my partner” (.700); punish mate’s infidelity threat e.g. “became angry when my partner flirted too much” (.737); emotional manipulation e.g. “told my partner that I was dependent on my partner” (.762); commitment manipulation e.g. “told my partner that we need a total commitment to each other” (.780); derogation of competitors e.g. “told my partner that another man/woman was stupid” (.778); resource display e.g. “spent a lot of money on my partner” (.803); sexual inducements e.g. “gave in to my partner’s sexual requests” (.608); appearance enhancement e.g. “dressed nicely to maintain my partner’s interest” (.779); love and care e.g. “went out of my way to be kind, nice, and caring” (.634); submission and debasement e.g. “gave in to my partner’s every wish” (.779); verbal possession signals e.g. “introduced my partner as my spouse or romantic partner” (.609); physical possession signals e.g. “put my arm around my partner in front of others” (.741); possessive ornamentation e.g. “wore my partner’s clothes in front of others” (.707); derogation of mate e.g. “told others my partner was a pain” (.650); intra-sexual threats e.g. “confronted someone who made a pass at my partner” (.810) and violence against rivals e.g. “got my friends to beat up someone who was interested in my partner” (.558). The aforementioned acts are combined to assess five broad mate retention tactics, each of acceptable reliability in the present study: direct guarding (.870); intersexual negative inducements (.902); positive inducements (.852); public signals of possession (.827); and intrasexual negative inducements (.833).

The Masculine Gender Identity Scale for females (Blanchard & Freund, 1983) measures the prevalence of male sex-typed behaviors in women. The first section of the Scale (Part A) contains 20 items addressing a range of behaviors such as the preference for male or female games, playmates and chores during childhood. The second section (Part B) containing nine items presumes homosexuality and focuses on erotic preferences. Part A is completed by all participants and Part B is completed by bisexual
and homosexual women only. Both sections of the Scale achieved acceptable reliability (Part A: .567; Part B: .622) in the current study. Part A and Part B scores are summed to provide the total Masculine Gender Identity Scale for females score, which also demonstrated acceptable reliability in the present study (.701). In contrast with other gender identity measures, responses to the Masculine Identity Scale for females are not related to social desirability (Allumbaugh, 1987).

Results

As shown in Figure 1, the mate retention acts most frequently used by women were love and care, physical possession signals and appearance enhancement. Violence, concealment of mate and derogation of mate were the least common acts.


Analyses of covariance (ANCOVAs) controlling for gender identity revealed that heterosexual, bisexual and homosexual women significantly differed in their use of four mate retention acts. As shown in Figure 2, resource display, \( F(2,126) = 4.554, p<.05 \), verbal possession signals, \( F(2,126) = 3.637, p<.05 \), physical possession signals, \( F(2,126) = 8.043, p<.005 \), and possessive ornamentation, \( F(2,126) \)
= 6.983, $p < 0.005$ were most frequently employed by homosexual women and least frequently employed by heterosexual women. Heterosexual, bisexual and homosexual women did not significantly differ in their use of the remaining mate retention acts.

Figure 2: Mate Retention Acts Employed by Women with Heterosexual, Bisexual and Homosexual Sexual Orientations: Four mate retention acts significantly differed between sexual orientation groups, with each of the four acts most frequently reported by homosexual women and least frequently reported by heterosexual women. RD: Resource Display, VPS: Verbal Possession Signals, PPS: Physical Possession Signals, PO: Possessive Ornamentation. Error Bars indicate Standard Deviations.

Post hoc (Tukey) tests revealed that homosexual women were significantly more likely than heterosexual women to employ resource display (ho: $M = 2.692$, $SD = .633$; he: $M = 2.286$, $SD = .536$) and verbal possession signals (ho: $M = 2.619$, $SD = .594$; he: $M = 2.214$, $SD = .590$). The use of resource display ($M = 2.500$, $SD = .714$) and verbal possession signals ($M = 2.434$, $SD = .603$) by bisexual women did not differ from the heterosexual or homosexual groups. Heterosexual ($M = 2.719$, $SD = .640$) women were less likely than both bisexual ($M = 2.914$, $SD = .558$) and homosexual ($M = 3.166$, $SD = .486$) women to use physical possession. Similarly heterosexual ($M = 1.314$, $SD = .303$) women were less likely than both bisexual ($M = 1.697$, $SD = .616$) and homosexual ($M = 1.842$, $SD = .716$) women to use possessive ornamentation.

With regards to broader mate retention tactics, ANCOVAs revealed that when controlling for gender identity, the use of public signals of possession significantly differed between groups ($F(2,126) =$
Homosexual \((M = 2.542, SD = .469)\) and bisexual \((M = 2.349, SD = .495)\) women were more likely than heterosexual \((M = 2.083, SD = .703)\) women to use public signals of possession to retain a partner. The use of public signals of possession did not differ between homosexual and bisexual women. The use of the remaining mate retention tactics did not differ for heterosexual, bisexual and homosexual women.

**Discussion**

Controlling for gender identity, sexual orientation groups differed in their use of four mate retention acts (resource display, verbal possession signals, physical possession signals, and possessive ornamentation), with each act most frequently employed by homosexual women and least frequently employed by heterosexual women. The more frequent use of these mate retention acts by homosexual women may reflect a greater motivation to maintain current romantic relationships. This is consistent with the importance homosexual women place on their relationships, the closeness reported between partners (Schreurs & Buunk, 1996) and the greater difficulty replacing romantic partners due to the low proportion of non-heterosexuals in the environment (Hayes, et al, 2012). Alternatively, the more frequent use of mate retention behaviors employed by homosexual and bisexual women could indicate greater awareness of female sexual fluidity (Chivers, Rieger, Latty, & Bailey, 2004; Diamond, 2007, 2008) and retention behaviors targeted at rivals of both genders.

The more frequent resource display and possessive ornamentation employed by homosexual women is consistent with previous findings (VanderLaan & Vasey, 2008), and suggests a sex-atypical approach to mate retention not dependent on gender identity. In part this behavior may reflect a response to their partner’s preference for particular characteristics such as status (Bailey, et al. 1994). The greater use of verbal possession skills and physical possession skills by homosexual women is however inconsistent with the higher frequency of these acts by heterosexual women reported by VanderLaan and Vasey (2008). The present study asked participants to report their own mate retention behaviors rather than those of their partner. These differences may therefore reflect a greater knowledge of specific behaviors such as telling friends that they were in love (verbal signals of possession) and awareness of the
mate retention motivation for acts such as holding hands or kissing (physical signals of possession) that may not be recognized by the guarded mate.

The results indicate that the frequency of mate retention behaviors employed by bisexual women is greater than heterosexual women, but lower than homosexual women. Therefore, research that combines bisexual and homosexual samples may fail to identify important differences between homosexual and heterosexual behavior. Future research should consider the influence of sexual orientation and gender identity on other aspects of sexually differentiated partner retention, including jealousy-induced interrogations (Kuhle, Smedley, & Schmitt, 2009), reactions to infidelity cues (Sagarin, et al., 2012) or the effectiveness of mate retention acts (Buss, 1988). Research regarding bisexual women as a distinct group (i.e. separate from homosexual participants) is of particular importance and adopting a longitudinal design may present valuable opportunities to compare women’s mate retention behavior when partnered with men or women.

The Mate Retention Inventory (Buss, 1988) considers a range of behaviors such as “Hung up a picture of my partner so others would know she was taken” (possessive ornamentation). Future research may extend the range of mate retention behaviors investigated to include the use of social media. Social networking sites are frequently used to maintain existing relationships (Tokunaga, 2011) and online mate retention behaviors may include posting specific information about a relationship on a partner’s site or monitoring communication with potential rivals. As most social network site users do not employ strict privacy settings (Jones, Millermaier, Goya-Martinez & Schuler, 2008; Tufekci, 2008) the use of social networking sites for surveillance is widespread (Stern & Taylor, 2007). The importance of online activity for mate retention is further reinforced by the relationships between jealousy and time spent on social networking sites (Muise, Christofides & Desmarais, 2009) and social networking site surveillance (Phillips, 2009). Previous research has documented important sex differences with women spend greater time on social networking sites than men (Hargittai, 2007; Muise et al, 2009) and studies investigating the use of technology for mate retention by those of different sexual orientations and gender identities is recommended.
Heterosexual, bisexual and homosexual women may differ in body satisfaction (Share & Mintz, 2002) or physical characteristics such as height and weight (Bogaert, 1998; Koff, Lucas, Migliorini & Grossmith, 2010), body shape and gait (Johnson, Gill, Reichman, & Tassinary, 2007) and facial features (Rule, Ambady & Hallet, 2009). As physical characteristics (Brewer & Riley, 2009) and mate value (Miner, Shackelford, & Starratt, 2009; Starratt, & Shackelford, 2012) are associated with relationship satisfaction, jealousy and the use of specific mate retention behaviors, the manner in which differences between sexual orientation groups are influenced by objective or subjective physical attractiveness should be investigated.

Previous research identifies relationships between sexual orientation and a range of behaviors which may mediate or moderate the selection of particular mate retention acts by heterosexual, bisexual and homosexual women. These include risk taking (Hershberger, & Bogaert, 2005), competition (Li, Smith, Griskevicius, Cason & Bryan, 2010), aggression (Sergeant, Dickins, Favies, & Griffiths, 2006) and violence (Ellis, Hoffman & Burke, 1990). These findings are of particular importance as physically or psychologically violent mate retention behaviors have a detrimental impact on victim health (Brewer, Roy, & Smith, 2010) and there is a paucity of research investigating domestic violence within non-heterosexual relationships. Further studies which examine abusive forms of mate retention should therefore be considered.

In conclusion, controlling for gender identity, heterosexual, bisexual and homosexual women differed in their use of four mate retention acts; resource display, verbal possession signals, physical possession signals, and possessive ornamentation. The current findings indicate that mate retention behaviors are most frequent amongst homosexual women, followed by bisexual and heterosexual women and highlight the importance of considering bisexual women as a distinct population.

References


