Electronic Journal of Human Sexuality, Volume 9, April 17, 2006

www.ejhs.org

# Sex and Affection in Heterosexual and Homosexual Couples:

# An evolutionary perspective

Felicia De la Garza-Mercer, M.A.

Andrew Christensen, Ph.D.

Brian Doss, Ph.D.

# INTRODUCTION

Sexuality and sexual satisfaction are fundamental aspects of marriages and close relationships and are related to overall couple happiness and durability. The identification of factors that promote close relationship satisfaction and stability is crucial to the understanding of marital functioning, and it has been consistently demonstrated that sexual satisfaction figures prominently as a predictor of global marital satisfaction and distress (Sprecher & Cate, 2004; Liu, 2003; Blumstein & Schwartz, 1983; Laumann et al., 1994; Bridges et al., 2004; Hassebrauck & Fehr, 2002). Yet, relationship scientists have neglected the subject of marital and close relationship sexuality although marriage represents the only context that is universally accepted as a context for sexual relationships and expression (Christopher & Kisler, 2004). Sexual behaviors and attitudes outside the context of a close relationship are more likely to be investigated than those within one (Call et al., 1995; Trudel, 2002; Greenblat, 1982).

Likewise, research on sexuality in close relationships has too often focused on Caucasian, middle-class American samples and cannot provide a coherent understanding of sexuality within a variety of close relationships. Investigations of sexuality within lesbian, gay male, and ethnically diverse relationships are even scarcer than the database on heterosexual, Caucasian couple samples, making it difficult to fully generalize what little is known about close relationship sexuality.

Additionally, most studies of sexual satisfaction in close relationships are primarily limited to reports of coital frequency, which are erroneously employed as sole indicators of overall sexual and marital health. Research reveals that although coital rates decline with the relationship's duration, this decrease does not necessarily affect couples' sexual satisfaction. Likewise, current conceptualizations and research of sexuality only identify a meager number of behaviors as "sexual." However, behaviors of physical affection, such as hugging, kissing, eye contact, and holding hands, in addition to genital sex, may enhance and contribute to the experience of physical intimacy and sexual satisfaction in the daily life of a relationship (DeLamater & Hyde, 2004).

Lastly, it is essential that current frameworks of marital and close relationship sexuality expand to incorporate biological theoretical models of sex. Evolutionary psychology maintains that humans have evolved the capability to create relationships and sexual satisfaction in relationships in order to insure reproductive success. When couples are both satisfied with their relationship and sexually satisfied, they increase the chances of transmitting their genes to subsequent generations. Specifically, sexual strategies theory, as defined by David Buss, argues that females should be more satisfied with both sex and their relationships when their male partners behave lovingly and affectionately with them, and these caring men, in turn, are more likely to be more satisfied with a high frequency of sexual activity in order to ensure reproductive success (Buss, 1994, in

#### Sprecher & Cate, 2004).

The current study aimed to contribute to this burgeoning area of research by investigating cross-sectionally the linkage between sexual satisfaction, satisfaction with physical affection, sexual jealousy, and relationship satisfaction, and examine whether these interconnections vary with gender. Specifically, this study looked at the strength of associations between individuals' reports of the frequency and acceptability of partners' behaviors (i.e. physical and verbal affection, sexual activity, and inappropriate sexual behavior with another person), and explored how these associations changed with gender. Additionally, this study endeavored to analyze how different types of relationships (heterosexual and homosexual) diverge and correspond to one another in terms of biological gender, and how these interactions parallel and possibly substantiate evolutionary theory.

# Evolutionary and Sexual Strategies Theory

According to evolutionary theory, all complex human traits, including sexual traits, evolved as either adaptations, or consequences of adaptations to environmental demands. These evolved adaptations are well designed and highly susceptible to context, responding to specific environmental contingencies. In order to explain how these mechanisms apply to human sexuality, Sexual Strategies theorists assert that humans have developed a complex collection of both short-term and long-term mating strategies that are differentially activated in response to environmental context (Pillsworth & Haselton, 2004). As affirmed by David Buss, a leading Sexual Strategies theorist, "the use of the term 'strategies' is meant to connote the goal directed and problem-solving nature of human mating behavior and carries no implications that the strategies are consciously planned or articulated" (Buss, 1993). For example, a short-term strategy necessitates the desire to mate with an extensive variety of partners and the ability to determine which partners are most sexually accessible and desirable; a long-term strategy requires the evaluation of potential partner's reproductive futures and capabilities (Buss, 1998). To summarize, Sexual Strategies Theory emphasizes sexual desire and its consequences: tactics of attraction, denigration of competitor, and mate-expulsion, mate-expulsion and retention, and conflict and accord between the sexes.

Moreover, as women and men have encountered dissimilar mating problems throughout evolutionary history in different areas, the standards that direct the mating of men and women are likewise predicted to be different in these areas. To give birth to a single child a woman must endure a nine-month gestation period, which is burdened by costs in time, energy, opportunity costs, heightened vulnerability, and risk during childbirth; contrarily, a man's sole obligation is the single act of sexual intercourse. Consequently, in order to ensure the survival of offspring, evolutionary theorists argue that women seek immediate resources for themselves and their children, mate insurance should her regular mate die, and genetic benefits by mating with superior men; hence, women place a greater premium on evidence of relationship support and commitment (Buss, 1993). Men, on the other hand, profit from mating with any many partners as possible in order to guarantee the propagation of their own genes (Klussman, 2002). Thus, in order to ensure the survival of their own offspring, it is argued that men seek to mate with women who are more likely to have a successful pregnancy. As human female fertility usually peaks in the mid-twenties, men are cued to the values of age and health. More so than women, men should esteem relative youth and physical attractiveness.

Although it is commonly contended that evolutionary hypotheses are not testable, theorist David Buss asserts that the theory is indeed testable, or at least able to be corroborated, via self-reports and physiological recording devices used in cross-cultural samples. Sexual Strategies Theory is supported by Buss' findings that over a lifetime men report desiring significantly more sexual partners and consent to sex earlier than do women; men are significantly more likely to engage in intercourse with an attractive stranger than are women; men and women diverge greatly on attitudes toward casual sex, masturbation frequency, and sexual fantasy; across all cultures men place a greater emphasis on physical attractiveness and youth; men become significantly more physiologically distressed than women do in response to imagining a partner having sexual intercourse with someone else; and women universally desire mates who had good financial prospects and social status, and who were ambitious, industrious, and older than they were (Buss, 1998). Similarly, Sexual Strategies Theory purports that women and men will become upset by features of the other sex's strategy that interfere with their own; thus, women will become angered by the male tendency for greater sexual assertiveness and aggressiveness, and men will be angered by women's greater tendency to decline intercourse, desire it less frequently, and require evidence of relationship support prior to copulation. Nevertheless, as the successful rearing of offspring may require two parents, both men and women, despite their biological differences, are spurred to maintain a long-term committed relationship such as marriage in order to maximize their reproductive success (Oliver & Hyde, 1993).

# Sexual Activity

Research consistently demonstrates that how married and cohabitating individuals feel about the sex in their relationship is significantly associated to how they feel about their relationship in general (Sprecher, 2002). Indeed, sexual satisfaction and related factors such as sexual intimacy have been connected to multiple indicators of relationship quality, such as love, commitment, and the probability that the relationship will endure. As such, sexuality is crucial aspect of not only close relationships, but of both emotional and physical health, as well (Bridges et al., 2004). Russell and Wells (1994) found that the quality of marriage, which is influenced by both partners' sexual satisfaction, is by far the best predictor of happiness. Hence, happy couples have sex more frequently than unhappy couples; satisfaction with the relationship triggers an increased desire for sex, and this increased frequency of sex in turn leads partners to become even more satisfied with their relationship.

However, it has also been continually established that women and men differ in both their desire for sex frequency and in their sexual satisfaction. Men and women express themselves sexually in different ways and likewise possess varying sexual preferences and interests (Laumann et al., 1994); therefore the quality of marital and relationship sex differs by gender. In regards to heterosexual relationships, most research indicates that women are more satisfied with their sex life than are men, a difference that is usually explained by men's desire for an increased frequency and duration of sexual activity (Trudel, 2002). In general, women report that they are satisfied with the amount of sex they have in their marriages, but men, on average, desire an approximate 50% increase of sexual activity, across all stages of the relationship (Baumeister, 2001). However, research has also demonstrated that women have a higher expectation of sex quality than do men, and that they consequently rate their marital sex lower than do men (Liu; 2002). Evolutionary theory would argue that because married women typically invest more heavily in the relationship than do men, women's anticipation of the sex quality is accordingly higher than that of men, who are less heavily invested.

Gay male and lesbian sexual relationships have been shown to both diverge and coincide with heterosexual sexual relationships on varying factors. Howard et al. (1987) assert that "although homosexual couples may not be consciously concerned with reproductive outcomes, evolutionary mechanisms concerning partner preferences should operate similarly for all humans." Likewise, according to Donald Symons, "homosexuals are the acid test for hypotheses about sex differences in sexuality" because although their sexual orientation differs from those of heterosexuals, their *biological* gender remains the same; their evolutionarily adapted behavior, and their use of sexual strategies should theoretically not diverge from heterosexuals of their same sex. Indeed, because homosexual relationships are composed of two individuals of the same gender, their sexual behavior and desires should be exaggerated. For example, like heterosexual men, gay men place the greatest importance on physical attractiveness and youth for a sexual partner's characteristics, and they tend to view sex and sex-related activities as extremely integral components of a relationship (Symons, 1979). However, unlike heterosexual males, gay males are seven times as likely to have extra-dyadic sexual encounters, and are more likely to engage in an agreed-upon open relationship with their primary partners (Buss, 1998). Moreover, as males desire sex more frequently than do females, it is not surprising that gay males, in comparison to heterosexuals and lesbians, have the highest frequencies of sex across all stages of their relationships. For example, within the first two years of a relationship, two-thirds of gay men but only one third of lesbians had sex three or more times per week; after ten years together 11% of the gay men but only 1% of lesbians still remained in that category of highly frequent sex (Baumeister et al., 2001).

Like men, lesbians tend to emphasize the role of sex in their relationships; but unlike men the majority of their sexual activities is not genitally focused. Although there are conflicting reports of lesbians' average frequency of sexual activity in comparison to heterosexual women's reports, the nature and activities involved in lesbian sex conflict with most heterosexual women's perceptions and definitions of "sex". Lesbians' sex is more focused on peripheral stimulation, and rarely, if at all, emphasizes actions related to the vagina (Symons, 1979). Accordingly lesbians' reports of sexual frequency are usually equal to, or less than, heterosexual women's reports (Blumstein & Schwartz, 1983). Rather, amongst lesbians, sex is usually connected to enduring emotion and a loving partner. As Symons notes, "Even where women are relatively free of male constraints and children are not an issue, as among lesbians, women very rarely behave sexually as men do" (Symons, 1979).

Thus, in line with Sexual Strategies Theory and previous findings that women consistently desire less sexual activity than do men, it is predicted that there will be a stronger positive correlation between the frequency of sexual activity and the acceptability of this frequency in men than in women, with homosexual men presenting the strongest correlations and lesbians the lowest. Similarly, it is believed that there will be a stronger positive correlation between the acceptability of sexual activity

and the overall relationship satisfaction in men than in women. Nevertheless, as sexual activity is generally a feature of relationships that is important to both men and women, it was additionally hypothesized that the frequency and acceptability of sexual activity will be significantly and positively correlated with overall relationship satisfaction in both heterosexual and homosexual couples.

# Affection and Intimacy

One of the reasons why males and females diverge so considerably on desire for sex and sexual frequency may be due to the genders' different requirements for sexual satisfaction. Sexual theorists hypothesize that men connect sexual satisfaction to a higher frequency of sexual and physical interaction, whereas women emphasize the emotional and affectionate aspects of the sexual relationship (Bridges et al, 2004). For example, some researchers have asserted that for men "intimacy is based on shared activity in same-sex interaction and sexuality in opposite-sex interaction, but female intimacy derives from talking and affection regardless of partners" (Reis, 1998). These conjectures suggest that sex differences in intimacy may reflect conflicting criteria for determining what is intimate, rather than actual behavioral and affective differences.

Although both males and females regard intimacy as an important aspect of a relationship, women consider intimacy as more vital to a satisfying relationship than do men, and men deem sexuality as more essential than do women (Hassebrauck & Fehr, 2002). As intimacy and affection are the pathways through which individuals come to feel "understood, validated and cared for" in a relationship (Reis & Patrick, 1996), it is likely that in order to feel content in a close relationship, one's needs for intimacy must be met in all domains of relating—not solely sexual relating. The common finding that intimacy and affection correlate more highly with satisfaction than does passion substantiates this hypothesis (Hassebrauck & Fehr, 2002).

As females are more heavily invested in the romantic relationship and rely on cues of commitment and fidelity, Buss argues that females should be more satisfied with both sex and their relationships when their partners behave lovingly and affectionately with them (Sprecher & Cate, 2004). In contrast, as men predominantly rely on cues for reproductive success in their mates, they should accordingly place a lower premium on verbal affection and intimacy than do women. For example, women commonly cite intimacy (e.g. sharing day's events with partner, being verbally affectionate) as a major contributor to initiating sexual activity with their partner; contrarily, men report that physical feelings of love and desire for their partners are what lead them to initiate sex (Gossman et al., 2003). Moreover, "lack of communication intimacy is an important factor inhibiting frequency of sexual activity and sexual satisfaction, particularly when there is a difference in the importance that wives and husbands assign to this contextual factor" (Gossman et al., 2003). As such, it may be possible that not only do women place greater importance on verbal intimacy, and that men focus more on physical intimacy, but that these various forms of affection and intimacy may be considered if not a part of sexual activity, than at least a crucial contributor and precursor to sexual activity, as well.

Hence, as women desire sex "in order to receive love and intimacy" and men desire sex in order to "release sexual tension" and connect physically, it stands to reason that these desires, which are conflicting in heterosexual relationships, will be more in sync in homosexual relationships.

Due to men and women's divergent needs for verbal and physical affection and the connection between the occurrence of these various affections and the initiation of sexual contact, this study hypothesizes that there will be a stronger positive correlation between the acceptability of verbal affection and the acceptability of sexual activity in women than in men, with lesbians presenting the strongest correlations. Similarly, it is hypothesized that there will be a stronger positive correlation between the acceptability of physical affection and the acceptability of sexual activity in men than in women. Moreover, as previous studies have found significant associations between level of intimacy and overall relationship satisfaction, it is hypothesized that there will be a stronger positive correlation between the acceptability of physical affection and a stronger positive correlation between the acceptability of physical affection in men, and a stronger positive correlation between the acceptability of physical affection in men than in women. However, as intimacy is an essential component to relationship quality, it is further hypothesized that the frequency and acceptability of both physical and verbal affection will be significantly and positively correlated with overall relationship satisfaction in both heterosexual and homosexual couples.

#### Sexual Jealousy and Infidelity

Just as sexual strategies are an evolutionary adaptation to propagate one's genes, so is sexual jealousy an evolved solution to the continual problem of survival and reproduction. According to Sexual Strategies Theory, men should experience both higher rates and greater intensities of sexual jealousy of their partners than should women: "… a woman's sexual infidelity jeopardizes a man's confidence that he is the genetic father of her children . . . a cuckolded man risks investing years, or even decades, in another man's children" (Buss, 2000). Although women experience sexual jealousy as well, their rates of sexual jealousy are much lower than those of men. As women value men's emotional investment as a cue for commitment and stability, women are more primed to pay attention to their partner's feelings for other women. Indeed, "most women find a singular lapse in fidelity without emotional involvement easier to forgive than the nightmare of another woman capturing her man's tenderness, time, and affection" (Buss, 2000).

Donald Symons suggests that a wife's experience of sexual jealousy differs with the degree of threat that she perceives in her husband's infidelity, whereas a husband's response of sexual jealousy is "relatively invariant" as his wife's infidelity is *always* perceived as threatening. A woman may view her partner's adultery to be relatively less meaningful because she is always assured of her maternity—her husband's ability to impregnate her remains the same, and depending on how much she has invested in the relationship, she may stand to lose relatively little if her partner engages in extramarital sex. Indeed, it is conjectured that whereas sexual jealousy is an automatic and overwhelming response in men, it may be a "flexible, facultative response" in women; Symons believes that women have "developed the capacity to learn to distinguish (not necessarily cognitively) threatening from non-threatening adultery, and to experience jealousy in proportion to the perceived threat" (Symons, 1979).

Hence, as women are assured of their maternity and men are perpetually in danger of being cuckolded, this study believes that there will be a stronger negative correlation between the frequency of their partner's flirtatious and/or promiscuous behavior and the acceptability of this frequency in men than in women. Based on biological gender, homosexuals should display responses of sexual jealousy concordant with heterosexuals' reactions, and are therefore included within the preceding hypothesis, although analyzed separately.

As gay men are much more likely than heterosexual men to have outside sexual encounters, more opportunities exist in which to experience sexual jealousy. Buss hypothesizes that "because gay men tend to have more outside involvements, their jealousy might become hyper-activated since they are confronted with rivals and threats of defection more often" (Buss, 2000). However, although gay men may be just as primed as heterosexual men to experience sexual jealousy, terms of mutual agreement and the increased frequency of extra-dyadic encounters may facilitate adjustment and less intense sexual jealousy. Although gay men do report less jealousy than heterosexual men, they simultaneously are less likely and more reluctant to report sexual jealousy, despite their tendency to be more emotionally expressive than heterosexual men (Bringle, in Buss, 2000). It may be that gay men are as likely to experience sexual jealousy as are heterosexual men, but that they are concurrently more likely than heterosexual men to experience emotional jealousy, and are therefore more like heterosexual women (in that they may possess a similar "flexible, facultative response" to infidelity) than heterosexual men in their response to jealousy predicaments.

Less information exists on lesbians' experience of sexual jealousy. A Dutch study demonstrated that lesbians are more distressed than heterosexual women about the sexual infidelity of their partner; however, this may have more to do with the fact that there is a smaller pool of potential mates amongst lesbians than amongst heterosexual women, and less to do with the levels of resources that their partner provides them. It is also possible that lesbians' levels of distress may be more aptly defined by emotional jealousy than by sexual jealousy; indeed, the two are inevitably intertwined and specific investigation of either one is confounded by their perpetual overlap. When women do suffer sexual jealousy there is no reason to believe that their feelings are any weaker or stronger than those experienced by men. Nevertheless, in line with heterosexual women's experience of sexual jealousy, it is believed that lesbian women should similarly feel sexually jealous relative to the amount of perceived threat.

# METHOD

Subjects included 12,752 individuals who responded via the internet website www.acceptancesurvey.com. This site was promoted through newspaper and magazine articles and other internet websites. Participants were ensured of their anonymity and, at the survey's completion, their consent to use their data for research investigation was acquired. Those who completed the survey and consent form received feedback (based on their responses) about the amount of acceptance in their own relationship in comparison to other couples and individuals who completed the survey on the internet. The UCLA Human Subjects Protection Committee approved all of these procedures.

Of the 12,752 respondents, 11,665 were heterosexual and represented 4,686 individuals (1,683 men and 3,003 women) who were married or living with their partner with one or more children in the home, 5,016 individuals (1,598 men and 3,418 women) who were married or living with their partner without children in the home, and 1,963 individuals (526 men and 1,437 women) who were in a dating relationship. 1087 respondents identified that they were in a gay or lesbian relationship (654 men and 427 women), and represented 455 individuals (252 men and 203 women) who were living with their partner, 421 individuals (298 men and 123 women) who identified themselves as "married", and 205 individuals (104 men and 101 women) who were dating their partner. It was assumed that these respondents were not in relationships with each other.

815 responses were excluded from the following analyses. Respondents' surveys were excluded if they were under 18 years of age (n=108), if they were not in a current relationship (n=171), and if did not report either their own or their partner's gender (n=58). Repeatedly submitted responses were also excluded (n=357). 121 responses were deleted for erroneous or intentionally false entry (e.g., reporting that their relationship length was longer than their age or that they had 182 years of education).

#### Measures

Participants completed the Frequency and Acceptability of Partner Behavior Inventory (FAPBI), a measure constructed to assess levels of acceptance in romantic relationships (Christensen & Jacobson, 1997). The FAPBI has been demonstrated to be a valid measure for use in samples of men and women in relationships, with adequate internal consistency and factor structure (Doss et al., in press).

Specifically, the FAPBI evaluates important functional domains of both positive and negative behaviors, and depicts clusters and classes of similar relationship behaviors. The FAPBI includes 24 items consisting of an equivalent amount of positive and negative behaviors. The items describe a specific class of behavior and provide an example of that class. For instance, one positive item is "In the past month, my partner was physically affectionate (e.g., held my hand, kissed me, put arm around me, responded when I initiated affection)" and one negative item is "In the past month, my partner was critical of me (e.g., blamed me for problems, put down what I did, made accusations about me)". The final portion of the FAPBI asks spouses to rank the five items of most importance/concern to them.

Participants are asked to rate the frequency of their partner's behavior during the last month using a chosen, appropriate period (per day, week, or month). They are then asked to rate "how acceptable is it to you that your partner was [functional area of behavior] *at this frequency in the past month?*" Respondents accordingly rate the acceptability of the frequency of that behavior on a 10-point scale, ranging from 1 ("Totally Unacceptable") to 10 ("Totally Acceptable").

# RESULTS

#### Preliminary Analyses

<u>Table 1</u> presents the means and standard deviations for all groups' reports of frequencies and acceptabilities of behaviors, and overall relationship satisfaction. To investigate possible skewness in each group, histograms of residuals for the dependent variables were plotted and examined. With the exception of the acceptability of inappropriate behavior with the opposite/same sex, which was positively skewed for all groups, all of the dependent variables' residuals were normally distributed in each of the four groups.

#### Regression and ANOVA Analyses

Simultaneous regression analyses were run to test the predictive value of each of primary variables (i.e. frequency of sexual activity, acceptability of verbal affection, acceptability of physical affection, frequency of inappropriate behavior with the opposite/same sex) upon each of several principal dependent variables (i.e. acceptability of sexual activity, acceptability of physical affection, acceptability of verbal affection, acceptability of inappropriate behavior, and overall relationship satisfaction). Each analysis controlled for age, gender (male, female), sexual orientation (heterosexual, homosexual), relationship status (married, living together, dating), length of relationship (in years), and education (in years). Analyses pertaining to acceptability of sexual activity, verbal affection, and physical affection also controlled for frequency of sexual activity (total per month).

The focus of this study, however, is on the interaction between gender, sexual orientation, and the aforementioned predictor variables. Therefore each analysis included a three-way interaction between gender, sexual orientation, and one of the aforementioned predictor variables, and three two-way interactions between gender and the predictive variable, and sexual orientation and the predictive variable. In addition, if any of the interactions were found to be significant, ANOVA analyses were run for each analysis to determine whether heterosexual men, heterosexual women, homosexual men, and homosexual women reported significantly different regression coefficients regarding the relationship between the aforementioned predictive and dependent variables. The results of these analyses are shown below and are organized by dependent variable. Only significant results are reported.

#### Acceptability of Sexual Activity

<u>Table 2</u> demonstrates that, the three-way interaction between frequency of sex, gender, and sexual orientation significantly predicted the acceptability of the frequency of sex (B=.068, p<.001), as did both of the two-way interactions. Of the controls, frequency of sex, sexual orientation, gender, education, age, and relationship status were all significant at the .05 level.

<u>Table 3</u> indicates results of ANOVA analyses, demonstrating that, partially in line with the hypothesis, the frequency of sex as a predictor of the acceptability of this frequency was stronger in heterosexual men and women than in homosexuals. <u>Plot 1</u> shows the strengths of the regression coefficients of each group and how all four groups relatively compare. Heterosexual men presented the strongest coefficients and homosexual men the weakest, with both heterosexual and homosexual women along the middle of the continuum.

<u>Table 4</u> demonstrates that, the two-way interaction between the acceptability of verbal affection and sexual orientation significantly predicted the acceptability of the frequency of sex (B=.039, p<.005). Of the controls, acceptability of verbal affection, gender, age, and relationship status were all significant at the .05 level.

ANOVA analyses in <u>Table 5</u> indicate, contrary to the hypothesis, that the acceptability of Verbal Affection as a predictor of the acceptability of sex was stronger men than in women. <u>Plot 2</u> shows the strengths of the regression coefficients of each group and how all four groups relatively compare. Heterosexual men presented the strongest coefficients and heterosexual women the weakest, with homosexual men and women along the middle of the continuum.

<u>Table 6</u> demonstrates that the three-way interaction between gender, sexual orientation, and the acceptability of physical affection significantly predicted the acceptability of sexual activity (B=-.289, p<.001), as did the two-way interactions. Of the controls, the acceptability of physical affection, gender, and relationship status were significant at the .001 level, and age was significant at the .05 level.

ANOVA analyses in <u>Table 7</u> indicate that, in line with the hypothesis, the acceptability of physical affection as a predictor of acceptability of sex was stronger in men than in women. <u>Plot 3</u> shows the strengths of the regression coefficients of each group and how all four groups relatively compare. Heterosexual men presented the strongest coefficients and heterosexual women the weakest, with homosexual men and women along the middle of the continuum.

#### Acceptability of Inappropriate Behavior

<u>Table 8</u> demonstrates that, two-way interactions between frequency of inappropriate behavior (IB) and gender (B=9.189, p<.001, and frequency of IB and sexual orientation (B=2.030, p<.05) significantly predicted the acceptability of the frequency

of sex. Of the controls, the frequency of IB, sexual orientation, age, and relationship status were all significant at the .05 level.

ANOVA analyses in <u>Table 9</u> show that, contrary to the hypothesis, the frequency of inappropriate behavior as a predictor of the acceptability of this frequency was stronger in women than in men. <u>Plot 4</u> shows the strengths of the regression coefficients of each group and how all four groups relatively compare. Homosexual women presented the strongest coefficients and homosexual men the weakest, with heterosexual women and men along the middle of the continuum. Despite the positive skewness of this dependent variable and even though homosexual women reported the lowest mean for frequency of inappropriate behavior, they still presented the strongest association between these two variables.

### **Overall Relationship Satisfaction**

<u>Table 10</u> demonstrates that the three-way interaction between frequency of inappropriate behavior, gender, and sexual orientation significantly predicted overall relationship satisfaction (B=.-.033, p<.05). Of the controls, frequency of IB, relationship status, age, length of relationship, and education were significant at the .05 level.

ANOVA analyses in <u>Table 11</u> demonstrate that, contrary to the hypothesis, the frequency of IB as a predictor of overall relationship satisfaction was stronger in women than in men. <u>Plot 5</u> shows the strengths of the regression coefficients of each group and how all four groups relatively compare. Homosexual women presented the strongest coefficients and homosexual men the weakest, with heterosexual women and men along the middle of the continuum.

# DISCUSSION

Evolutionary theory argues that humans are intrinsically motivated to propagate their genes and ensure the survival of their offspring. According to Sexual Strategies Theory men and women have different strategies for reproduction. Specifically, as men profit from mating with any many partners as possible in order to guarantee the proliferation of their own genes, and women profit from immediate resources for themselves and their children, this study hypothesized that there would be a stronger association between the frequency of sexual activity and the acceptability of this frequency in men than in women. Although homosexuals' sexual orientation differs from those of heterosexuals, their *biological* gender remains the same; hence, their use of sexual strategies should theoretically be comparable to heterosexuals of their same sex. Because homosexual relationships are composed of two individuals of the same gender, their sexual behavior and desires should be matched and therefore exaggerated. Consequently, we hypothesized that the relationship between the frequency and acceptability of sex would be strongest in gay men and weakest in lesbians, with heterosexual men and women along the middle of the continuum.

• However, our results indicated that heterosexual men and women evidenced a stronger relationship between frequency of sex and the acceptability of this frequency than did homosexuals, with heterosexual men showing the strongest relationship and homosexual men the weakest. These results correspond with Sexual Strategies Theory in that heterosexual men's sexual satisfaction was more contingent upon the frequency and duration of sexual activity than was women's. Women's less strong relationship between the frequency and acceptability of sex indicates that their sexual satisfaction may be more based upon the quality of sexual activity (Trudel, 2002) than on its regularity. Our outcome is also in line with previous findings that heterosexuals and homosexuals diverge in their desire for the frequency of sex, and in their sexual satisfaction (Laumann et al, 1994). However, homosexual men's weak regression coefficients run counter to Symon's proposition that gay males should present with the strongest association between frequency of sex and the acceptability of that frequency. It is possible that these results are confounded by gay men's tendency to permit extra-dyadic sexual relationships; the questions regarding sexual frequency only pertained to their primary partner.

This study predicted that because women tend to associate verbal intimacy and closeness with desires for sexual activity and men connect physical affection and arousal with sex, there would be a stronger association between the acceptability of verbal affection and the acceptability of sexual activity in women than in men, with lesbians presenting the strongest correlations and gay men the weakest. However, contrary to the hypothesis, this relationship was stronger in men than in women. These findings run counter to Buss' belief that, in comparison to males, females should be more satisfied with both sex and their relationships when their partners behave lovingly and affection as a precursor to sex than do men (Gossman et al, 2003). Gay men's strong relationship may be due to the consistent finding that gay men are more emotionally demonstrative than

heterosexual men, and may in fact be as affectionate as women. It is also plausible that men perceive *all* affection, regardless of whether verbal or physical, as more of a precursor to sexual activity than do women.

As research indicates that men's sexuality is based more upon physicality than is women's, it was hypothesized that there would be a stronger positive correlation between the acceptability of physical affection and the acceptability of sexual activity in men than in women. Our results confirmed this hypothesis, and men indeed demonstrated a stronger relationship. These results are consistent with Sexual Strategies Theory and previous studies that indicate that men focus more on physical intimacy as an initiation for sex than do women (Gossman et al., 2003). However, when taken together with our results for verbal affection, these findings may simply suggest that men view all signs affection as antecedents to sex, whereas women may recognize affection as less specifically related to sexual activity.

As evolutionary theory focuses on sexual desire and its consequences, it therefore follows that sexual jealousy can be viewed as another adaptation to the continual problem of survival and reproduction. Sexual Strategies Theory asserts that as women are always sure of their maternity and as a woman's infidelity endangers a man's assurance of his genes' proliferation, men should experience both higher rates and greater intensities of sexual jealousy of their partners than should women. We therefore hypothesized that there would be a stronger negative association between the frequency of their partner's flirtatious and/or promiscuous behavior and the acceptability of this frequency in men than in women. Likewise, we believed that, due to biological gender (the idea that each sex should act more in accordance with their maleness or femaleness than with their sexual orientation), homosexuals should demonstrate sexual jealousy similar to heterosexuals' responses. However, our hypothesis was negated in that this association was significantly stronger in women than in men. Homosexual women presented the strongest relationship between the frequency of their partners' inappropriate behavior and the acceptability of this frequency and men along the middle of the continuum.

Although this study's results seemingly run counter to evolutionary assertions, it is possible that because the survey's question only refers to the acceptability of the behavior, and does not explicitly ask about sexual jealousy, the question may have been interpreted as pertaining more to emotional jealousy than to sexual jealousy. Although the question identified inappropriate behavior as being "too flirtatious with other men/women, [having] secret meetings with them, [making] passes at them, or [having] affairs", the respondents had no way of clarifying which of these behaviors their partner carried out. As women are generally more threatened by emotional infidelity, if all four groups perceived the question as indeed as more emotional than sexual in nature, women's stronger association makes sense within the scope of evolutionary theory,.

This study replicates an earlier study that demonstrated that lesbians are more distressed than heterosexual women about the sexual infidelity of their partner. However, as mentioned in the introduction, this finding may reflect the fact that there is a smaller pool of potential mates amongst lesbians than amongst heterosexual women, and therefore be less related to the levels of investment that their partner provides them. Moreover, lesbians' strong association may suggest that women, because they tend to be more physically and verbally affectionate with both males and females than are men, have more opportunities to feel either sexually or emotionally jealous of their partner.

Similarly, as Sexual Strategies Theory purports that "... a woman's sexual infidelity jeopardizes a man's confidence that he is the genetic father of her children . . . a cuckolded man risks investing years, or even decades, in another man's children" and that women should focus on men's emotional investment as a cue for commitment and stability (Buss, 2000), we hypothesized that men should evidence a stronger association between the frequency of their partners' inappropriate behavior with the opposite/same sex and overall relationship satisfaction, this relationship was stronger in women than in men, with lesbian women presenting the most robust associations and homosexual men the weakest.

As just discussed, this finding may be due to how women and men differed in how they interpreted the question regarding inappropriate behavior. Hence, it is difficult to ascertain whether respondents primarily understood the question as relating more to emotional involvement or more to sexual involvement. Buss claims that as women emphasize men's emotional investment as a cue for commitment and stability, they are in turn more prone to notice their partner's feelings for other women. Conversely, men are more apt to pay attention to cues that their partner is sexually involved with another man. Consequently, whereas most women, in comparison to men, are more forgiving of a single infidelity without emotional involvement, they are less forgiving of discovering that their partner has dedicated "tenderness, time, and affection" to another woman (Buss, 2000).

Our results affirmed the hypothesis that men would show a stronger relationship between the frequency of physical affection and overall relationship satisfaction. Heterosexual men demonstrated the strongest relationships and heterosexual women the weakest. These findings correspond to previous research that suggests that men's sexuality is more bodily-centric and contingent upon physicality than is women's. As previously discussed, it is possible that men association physical affection with sexual activity more so than do women.

The present study was only able to look at respondents' reports of frequency and acceptability of generalized behaviors, and could therefore not examine more specific behaviors (e.g. different kinds of sexual activity, displays of affection, and inappropriate behaviors). Future studies would benefit from closely following the intricate associations between these respondents' behaviors and desires day-to-day, month-to-month and year-to-year. In this way research could clarify how relationships function and change within short and long periods of time. Another limitation was that the FAPB measure only looked at one partner's perceptions, and was therefore unable to analyze how *both* partners' desires and behaviors affected couple satisfaction and stability.

Additionally, respondents were asked to report the frequency of sexual and intimate experiences from memory. It is possible that memories of sexual events and affectionate experiences were affected by the passage of time, and, in addition, it is a common finding that men and women tend to report discrepant frequencies of sexual encounters. Likewise, another limitation is that men and women, and heterosexuals and homosexuals may have interpreted the measure's questions differently. For example, the term "sexual activity" is ambiguous and could be perceived by different genders as inclusive of intercourse, oral sex, and a variety of other behaviors, or could have only been perceived as pertaining to intercourse. This is especially relevant to the current study as it has been consistently found that lesbians' reports of sex are generally not genitally-focused, and that heterosexual men and women diverge on what they consider "sex" to include (Blumstein & Schwartz, 1983).

In essence, this study's results were only in line with evolutionary and Sexual Strategies theories' most fundamental assertions: namely, that men, in comparison with women, should demonstrate stronger relationships between the frequency of sex and the acceptability of this frequency, and the frequency of physical affection and overall relationship satisfaction. It is also important to note that this study did not demonstrate evolutionary beliefs that homosexuals, due to biological gender, should present associations similar to, or more exaggerated than those of heterosexuals. Hence, for the most part, our study's outcomes suggest that it may not be possible to generalize evolutionary theory to specific behaviors of both heterosexuals' and homosexuals' sexual and intimate relationships. Rather than being robustly divergent from one another, heterosexuals and homosexuals seem to exist along a continuum of sexual desire and activity that is not solely, or even perhaps primarily prompted by evolutionary issues. For example, both heterosexual and homosexual men's stronger relationship between both verbal and physical affection and the acceptability of sexual activity, and both lesbians' and heterosexual women's stronger relationship between frequency of inappropriate behavior and its acceptability are intriguing findings that conflict with both sexual strategies theory and previous sex research. It is possible that theories pertaining to more socially and/or culturally defined factors may better account for differences such as those found by this study. For instance, Erotic Plasticity theory asserts that whereas male sexuality remains relatively stable over time and is more contingent upon evolutionary demands, female sexuality seems to be much more malleable and influenced by cultural than evolutionary factors (Baumeister, 2000). This perspective would argue that women's stronger relationship between the frequency and the acceptability of inappropriate behavior, and weaker relationship between the frequency and acceptability of verbal affection could be explained by natural fluctuations and plasticity in women's sexuality.

# REFERENCES

Baumeister, R. F., Catanese, K. R., & Vohs, K. (2001), Is there a Gender Difference in Strength of Sex Drive? Theoretical Views, Conceptual Distinctions, and a Review of Relevant Evidence. *Personality and Social Psychology Review*, 5, 242-273.

Baumeister, R. F., Catanese, K. R., Campbell, W. K., & Tice, D. (2000) Nature, Culture, and Explanations for Erotic Plasticity. *Psychological Bulletin*, 126, 385-389.

Baumeister, R. F., & Twenge, J. M. (2002) Cultural Suppression of Female Sexuality. Review of General Psychology, 6,

166-203.

Blumstein, P. & Schwartz, P. (1983) American Couples. NY: William Morrow & Co. Call, V., Sprecher, S. & Schwartz, P. (1995) The Incidence and Frequency of Marital Sex in a National Sample. *Journal of Marriage and the Family*, 57, 639 - 652.

Bridges, S., Lease, S., Ellison, C. (2004) Predicting Sexual Satisfaction in Women: Implications for Counselor Education and Training. *Journal of Counseling and Development*, 82, 158-166.

Buss, D. (2000) The Dangerous Passion: Why Jealousy is as Necessary as Love and Sex. NY: The Free Press.

Buss, D. (1998) Sexual strategies theory: historical origins and current status. The Journal of Sex Research, 35, 19-32.

Buss, D. & Schmitt, D. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review*, *100*, 2, 204-232.

Call, V., Sprecher, S., & Schwartz, P. (1995) The Incidence and Frequency of Marital Sex in a National Sample. *Journal of Marriage and the Family*, 57, 639-652.

Caporael, L.R. (2001) Evolutionary Psychology: Toward a Unifying Theory and a Hybrid Science. *Annual Review of Psychology*, 52, 607-28.

Christopher, F.S., & Kisler, T.S. (2004) Exploring Marital Sexuality. In J. Harvey, A. Wenzel, & S. Sprecher (Eds.), *Handbook of sexuality in close relationships*. Mahwah, NJ: Erlbaum.

DeLamater, J. & Hyde, J.S. (2004) Conceptual and Theoretical Issues in Studying Sexuality in Close Relationships. In J. Harvey, A. Wenzel, & S. Sprecher (Eds.), *Handbook of sexuality in close relationships*. Mahwah, NJ: Erlbaum.

Gossman, I., Julien, D., Mathieu, M., & Chartrand, E. (2003). Determinants of Sex Initiation Frequencies and Sexual Satisfaction in Long-term Couples Relationships. *The Canadian Journal of Human Sexuality*, 12, 3-4, 169-181.

Greenblat, C. S. (1983) The Salience of Sexuality in the Early Years of Marriage. *Journal of Marriage and the Family*, 45, 289-299.

Jacobson, N.S. and Christensen, A. (1996), *Integrative Couple Therapy: Promoting Acceptance and Change*. New York: W.W. Norton.

Heavey, C.L., Larson, B., Christensen, A., & Zumtobel, D.C. (1996) The Communication Patterns Questionnaire: The reliability and validity of a constructive communication subscale. *Journal of Marriage and the Family*, 58, 796-800.

Hassebrauck, M., & Fehr, B. (2002) Dimensions of Relationship Quality. Personal Relationships, 9, 253-270.

Howard, J., Blumstein, P., & Schwartz, P. (1987) Social or Evolutionary Theories? Some Observations on Preferences in Human Mate Selection. *Journal of Personality and Social Psychology*, 53, 194-200.

Klussman, D. (2002) Sexual Motivation and the Duration of Partnership. Archives of Sexual Behavior, 31, 275-287.

Laumann, E.O., Gagnon, J.H., Michael, R.T., & Michaels, S. (1994) *The Social Organization of Sexuality*. Chicago: The University of London Press.

Liu, C. (2003) Does Quality of Marital Sex Decline with Duration? Archives of Sexual Behavior, 32, 55-60.

Oliver, M., & Hyde, J.S. (1993) Gender Differences in Sexuality: A Meta-Analysis. Psychological Bulletin, 114, 29-51.

Peplau, L.A. (2003), Human Sexuality: How do men and women differ? *Current Directions in Psychological Science*, *12*, (2), 37-40.

Pillsworth, E., Haselton, M. G., & Buss, D. M. (2004). Ovulatory shifts in female sexual desire. *Journal of Sex Research*, 41 (1), 55-65.

Russell, R. J. H. & Wells, P. A. (1994). Predictors of happiness in married couples. *Personality and Individual Differences*, *12*, 407-412.

Sprecher, S. (2002) Sexual Satisfaction in Premarital Relationships: Associations with Satisfaction, Love, Commitment, and Stability. *Journal of Sex Research*, 39, 190 - 196.

Sprecher, S. & Cate, R. M. (2004) Sexual Satisfaction and Sexual Expression as Predictors of Relationship Satisfaction and Stability. In J. Harvey, A. Wenzel, & S. Sprecher (Eds.), *Handbook of sexuality in close relationships*. Mahwah, NJ: Erlbaum.

Trudel, G. (2002) Sexuality and Marital Life: Results of a Survey. Journal of Sex and Marital Therapy, 28, 229-249.