

### Original Article

## Hooking Up: Gender Differences, Evolution, and Pluralistic Ignorance

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**Abstract:** “Hooking-up” – engaging in no-strings-attached sexual behaviors with uncommitted partners – has become a norm on college campuses, and raises the potential for disease, unintended pregnancy, and physical and psychological trauma. The primacy of sex in the evolutionary process suggests that predictions derived from evolutionary theory may be a useful first step toward understanding these contemporary behaviors. This study assessed the hook-up behaviors and attitudes of 507 college students. As predicted by behavioral-evolutionary theory: men were more comfortable than women with all types of sexual behaviors; women correctly attributed higher comfort levels to men, but overestimated men’s actual comfort levels; and men correctly attributed lower comfort levels to women, but still overestimated women’s actual comfort levels. Both genders attributed higher comfort levels to same-gendered others, reinforcing a pluralistic ignorance effect that might contribute to the high frequency of hook-up behaviors in spite of the low comfort levels reported and suggesting that hooking up may be a modern form of intrasexual competition between females for potential mates.

**Keywords:** hooking up, hook-up, pluralistic ignorance, gender differences, evolution

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### Introduction

In recent years, “hooking up” has become part of the cultural consciousness of adolescents and young adults. Hook-ups consist of sexual behaviors between partners in the absence of a traditional romantic relationship and without the promise of other benefits. They are often considered a form of “no-strings-attached” (NSA) sex.

Hooking up has become a norm on college campuses throughout North America (Bogle, 2008; Paul, McManus, and Hayes, 2000). The “dating scene” has disappeared from many campuses, and uncommitted sexual behavior takes place in the absence of a

traditional romantic relationship framework (Reitman, 2006). A majority of individuals in college student populations studied so far have reported at least one casual sexual experience or hook-up (England, Shafer, and Fogarty, 2007; Garcia and Reiber, 2008; Grello, Welsh, and Harper, 2006; Gute and Eshbaugh, 2008; Lambert, Kahn, and Apple, 2003; Paul, McManus, and Hayes, 2000). The prevalence of hook-ups varies from campus to campus, likely as a result of ecological differences between college environments, historical time of data collection, age of participants, and the demographics of the population being surveyed. However, estimates consistently range from nearly 65% to approximately 80% of undergraduate participants reporting having engaged in a hook-up at least once in their college career (England, Shafer, and Fogarty, 2007; Garcia and Reiber, 2008; Lambert, Kahn, and Apple, 2003; Paul and Hayes, 2002; Paul, McManus, and Hayes, 2000).

Popular interest in the topic is ubiquitous, evidenced by the spate of books addressing it, including such exemplars as *The Hookup Handbook: A Single Girl's Guide to Living It Up* (Rozler and Lavinthal, 2005), *The Happy Hook-Up: A Single Girl's Guide to Casual Sex* (Sherman and Tocantins, 2004), *Hooking Up: A Girl's All-out Guide to Sex and Sexuality* (Madison, 2006), and an occasional retort, such as *Unhooked: How Young Women Pursue Sex, Delay Love, and Lose at Both* (Stepp, 2007). Exposés fill the pages of magazines (Reitman, 2006), attempting to understand the shift in how young women approach sex and relationships, while young adult magazines conduct and publish results from massive electronic polls about the hook-up behavior of their readership (Seventeen Magazine, 2006). Popular cosmetic companies use slogans such as “hook-up perfect” to widely market and sell beauty products to young women. Academic contributions to the topic of hooking up are fewer, but the body of literature is growing; for example, see *Hooking Up: Sex, Dating, and Relationships on Campus* (Bogle, 2008).

Popular media coverage may be sensationalistic, and undoubtedly influences attitudes and sexual behavior in adolescents and young adults. However, the hook-up phenomenon is not merely a creation of the media; rather, the media seems to be reflecting an actual shift in behavior. Such casual sexual experiences among college students are by no means a product of the 21st century; “one-night stands” and “casual sex” have been studied without the current “hook-up” context (Boswell and Spade, 1996; Cates, 1991; Maticka-Tyndale, 1991). However, the high prevalence of these behaviors, coupled with an openness to display and discuss them, appears to be recent, particularly with respect to women (see Reitman, 2006).

Pluralistic ignorance (PI) has been demonstrated to play a role in hook-up behavior. PI is characterized by individuals behaving in accordance with (generally false) beliefs attributed to the group, regardless of their own beliefs (Fields and Schuman, 1976; Miller and McFarland, 1987). Lambert, Kahn, and Apple (2003) found that young adults routinely believe that others are more comfortable with various sexual behaviors than they, themselves, are. This leads them to behave as if they were more comfortable than they actually are, and engage in behaviors with which they are not actually comfortable. Note that if everyone is affected by this fallacy, no one will be behaving in accordance with their own beliefs and comfort levels. As a result, research on hook-ups has focused on personal consequences (e.g., Fielder and Carey, in press; Lambert, Kahn, and Apple, 2003; Paul and

Hayes, 2002; Paul, McManus, and Hayes, 2000), including the convoluted issue of consent and its ramifications (particularly for women), and the role of alcohol and/or drugs in hook-up behavior on campuses. However, there remains the broader question of why individuals harbour such false beliefs about the social norm, and whether the patterns of beliefs are predictable, and thus, potentially correctable. We expect that because human psychological processes are the product of evolution, the capacity and tendency to exhibit pluralistic ignorance – particularly with respect to sexual/reproductive behavior – must reflect the evolved best interest of individuals, and thus be predictable on the basis of evolutionary theory and sexual selection.

### *Behavioral-Evolutionary Approach and Predictions*

It is likely that a complex set of interacting factors – human evolution, evolved neurobiology and psychological processes, social and cultural context – all contribute to the expression of uncommitted sexual behavior (see Garcia and Reiber, 2008). It is possible that novel sociocultural factors are currently driving up the prevalence of contemporary NSA sexual hook-up behavior. However, we expect that the evolved psychology underlying sexual behavior will still be apparent and contributing to contemporary expressions of sexual behavior. Here we focus specifically on evolutionarily designed psychological responses – specifically, psychological comfort levels that might elucidate the PI effect.

Humans are, as a species, biological organisms with a polygynous evolutionary history. Thus, male humans are, on average, expected to be more sexually eager than female humans, and females are, on average, expected to be relatively “coy” and choosy concerning mates and mating (Buss, 1989, 2003; Daly and Wilson, 1983; Low, 2000; Symons, 1979). The higher potential male reproductive rate (Clutton-Brock and Parker, 1992) and lower cost of reproduction to males (Trivers, 1972) should lead to males seeking out a variety of mates and engaging in sex often. That men willingly and eagerly engage in hook-up behavior is therefore not surprising. But the lower potential female reproductive rate (Clutton-Brock and Parker, 1992) and higher cost of reproduction to females (Trivers, 1972) should lead to female reluctance to engage in sexual (historically, costly and potentially reproductive) behavior in the absence of resources, security, and/or commitment from a potential partner. Even the less-obvious potential advantages to women, such as good genes and immediate access to resources, seem not to apply. That women engage in hook-up behavior therefore demands an explanation.

Several predictions follow from these evolutionary sex differences. First, men are predicted to be more comfortable than women with all hook-up behaviors. Second, each gender is predicted to know the gender-specific strategy of the opposite gender. Compared to their own comfort levels, men are predicted to attribute to women lower comfort levels with all sexual hook-up behaviors, and women are predicted to attribute to men higher comfort levels with all sexual hook-up behaviors. This is consistent with evolutionary interpretations of the importance of recognizing and responding to “in-group” norms (Kurzban and Neuberg, 2005), and with evolutionary error management theory, which argues that natural selection can lead to adaptively biased systems of judgment (Haselton and Buss, 2000).

Third, individuals of each gender are predicted to know the gender-specific strategy of their own gender. For men, the comfort levels they attribute to other men (for all sexual behaviors) are predicted to be higher than the comfort levels they feel themselves. In evolutionary terms, this would lead to men being more likely to engage in such behavior even if they personally have a lower comfort level, thus potentially increasing reproductive success. Thus, this is an evolutionarily predictable demonstration of PI. For women, however, the comfort levels they attribute to other women can discriminate between two competing evolutionary hypotheses. On one hand, women could be predicted to attribute to other women comfort levels that are quite similar to, or lower than, the comfort levels they, themselves, feel. This might result if a belief in other women's greater discomfort and restraint reinforced the stereotypical choosy coyness of females, and led women to more conservative sexual behavior, and thus, fewer errors in sexual (potentially reproductive) decision-making. On the other hand, modern Western women live in cultures in which there are simultaneously large differentials in male resources and status, and imposed marital monogamy, the combination of which is expected to provoke intrasexual competition among females for potential mates (Gaulin and Boster, 1990). Engaging in uncommitted sex may be one form of female-female competition. If this is so, we would predict that women attribute to other women comfort levels that are higher than they, themselves, feel; this would generate PI that would heighten women's awareness of potential threats from female competitors and may motivate women to engage in competition.

### *Current Study*

Goals of the current survey were to: 1) assess the prevalence of hook-up behaviors in a random sample of students at the target university, 2) evaluate the PI effect by assessing participants' own comfort levels with various hook-up behaviors, as well as the comfort levels they attribute to others of the same and opposite genders, and 3) evaluate the predictions of the behavioral-evolutionary approach with respect to hook-up behaviors. This will set the stage for a larger risk-reduction project at the target university, including the development of a holistic educational intervention program geared at breaking down the PI effect by disseminating accurate evolutionarily-informed behavioral information.

## **Materials and Methods**

### *Survey Procedures*

The use of humans as research subjects in this study was approved by the appropriate Institutional Review Board (IRB), and the study was carried out in a manner consistent with the requirements of the IRB. Data included in this report were collected as part of a larger, 70-item, self-report questionnaire containing demographic information as well as a history of sexual behavior and intimate relationships. The questionnaire focused on experiences and motivations surrounding hook-up behavior. At the beginning of the questionnaire, hook-up behavior was defined for participants as follows: "A hook-up is a sexual encounter between people who are not dating or in a relationship, and where a more traditional romantic relationship is NOT an explicit condition of the encounter."

The questionnaire was administered electronically via StudentVoice ([www.studentvoice.com](http://www.studentvoice.com)), a higher-education assessment provider. The questionnaire was uploaded and formatted to their web-based survey tool. StudentVoice randomly generated a sample of 1,000 undergraduate email addresses from the population of approximately 11,500 undergraduates attending the university. To protect potential participants and maintain complete anonymity, this list was not shared with the researchers (Thus, no comparisons can be made between responders and non-responders). A voluntary recruitment email was sent to these 1000 students requesting their participation in the study, and providing a link to the web-based survey. Potential participants were notified that the study was completely anonymous and that they could skip any question(s) they did not wish to answer. Six hundred fifty-three students responded to the invitation by clicking the link and reading the introductory materials (informed consent and description of the survey). Of those, 507 (77.6%) continued beyond the informed consent and description, and provided the data analyzed here.

### *Survey Participants*

Participants included 507 undergraduate students at a mid-sized public university. The sample was 55% female ( $n = 277$ ) and 45% male ( $n = 227$ ). The mean age of participants was 19.7 years ( $SD = 1.7$ ). Participants included 42% first-year/freshmen ( $n = 214$ ), 28% second-year/sophomores ( $n = 140$ ), 16% third-year/juniors ( $n = 82$ ), and 14% fourth-year/seniors ( $n = 71$ ).

### *Survey Questions*

For comparison purposes, the substantive questions on the survey were designed to be consistent with the methodology of others studying PI and hook-up behavior, notably Lambert, Kahn, and Apple (2003), following Prentice and Miller's (1993) application for alcohol use. Students used an 11-point scale to rate comfort levels of self and others with various hook-up behaviors. The anchor points of the scale were labelled "very uncomfortable" and "very comfortable", respectively, and the midpoint was labelled "neutral." Diverging from Lambert, Kahn, and Apple (2003), the midpoint of the scale was set at zero in this study so that feelings reflecting negative states (i.e., discomfort) were rated as negative numbers, and feelings reflecting positive states (i.e., comfort) were rated as positive numbers. Thus, the range of this 11-point scale was -5 to +5, with a midpoint of 0 (neutral). Participants responded to 3 questions about sexual behaviors:

- (1) How comfortable are **you** with engaging in the following activities during a hook-up?
- (2) Think of the average person **of the same sex as you**. How comfortable do you think this person **of the same sex** is with engaging in the following activities during a hook-up?
- (3) Think of the average person **of the opposite sex as you**. How comfortable do you think this person **of the opposite sex** is with engaging in the following activities during a hook-up?

The five behaviors that participants rated for each question were: sexual touching above the waist, sexual touching below the waist, oral sex (giving), oral sex (receiving), and intercourse. Participants also indicated which of these behaviors they had actually engaged in during a hook-up.

### *Analyses*

Data were imported into SYSTAT v.10.2 for Windows for analyses. We collected data on many demographic and life-history variables – age and year in school, religiosity, ethnicity, family composition and upbringing – for complex exploratory analyses that will inform our ongoing longitudinal work. However, the first step is a simple assessment of the prevalence of various behaviors and an evaluation of attitudes. These basic summaries of the data are presented here (percents, means, standard deviations).

## **Results**

### *Prevalence of Specific Hook-Up Behaviors*

When asked to self-report whether they had hooked up, 64% of participants reported having done so. However, when asked about specific sexual behaviors, only 19% indicated that they had *not* engaged in any of the specific sexual behaviors in the context of a hook-up. Therefore, in actual behavioral terms, 81% of the participants had engaged in some form of sexual behavior during a hook-up.

There was tremendous variation in prevalence of the various sexual behaviors that comprise hook-ups. Overall, 58% of participants reported having engaged in sexual touching above the waist during a hook-up, and 53% reported sexual touching below the waist during a hook-up. Performing and receiving oral sex during hook-ups were reported by 36% and 35% of participants, respectively. Intercourse during a hook-up was reported by 34% of participants. Nineteen percent of participants reported having engaged in none of these behaviors during a hook-up. Table 1 shows the prevalence of the various hook-up behaviors by gender. It is important to note that this is not a closed sample; that is, participants could have engaged in these behaviors with individuals who are not part of this sample. Thus, for instance, it is not contradictory that 40% of women report having performed oral sex, but only 36% of men report having received oral sex.

**Table 1.** Percent of participants reporting having engaged in various hook-up behaviors

Behavior	Women ( <i>n</i> = 277)	Men ( <i>n</i> = 227)
Sexual touching above the waist	58%	58%
Sexual touching below the waist	53%	54%
Oral sex, performer	40%	31%
Oral sex, recipient	34%	36%
Intercourse	32%	35%
None	20%	17%

Comfort Levels, PI, and the Behavioral-Evolutionary Predictions

Comfort levels were rated on a scale from +5 (very comfortable) to -5 (very uncomfortable). Women reported being somewhat comfortable ( $M = 2.72$ ,  $SD = 3.13$ ) with sexual touching above the waist during a hook-up, fairly neutral ( $M = 0.92$ ,  $SD = 3.91$ ) with sexual touching below the waist, somewhat uncomfortable with oral sex as performer ( $M = -1.87$ ,  $SD = 3.80$ ) and receiver ( $M = -1.99$ ,  $SD = 3.68$ ), and even more uncomfortable with intercourse ( $M = -2.23$ ,  $SD = 3.62$ ). On average, men reported being highly comfortable with sexual touching above the waist ( $M = 3.36$ ,  $SD = 2.99$ ) during a hook-up, and somewhat comfortable with sexual touching below the waist ( $M = 3.02$ ,  $SD = 3.14$ ). Men were fairly neutral with oral sex as performer ( $M = 0.48$ ,  $SD = 4.05$ ), but much more comfortable with oral sex as receiver ( $M = 2.91$ ,  $SD = 3.19$ ) during a hook-up; and they were somewhat comfortable with intercourse ( $M = 2.26$ ,  $SD = 3.62$ ) during a hook-up. Figure 1 shows men’s and women’s reported comfort levels with various sexual behaviors during a hook-up, and illustrates that for all sexual behaviors, men reported higher comfort levels than women. This supports the first prediction.

Figure 1. Comfort levels with various hook-up behaviors, by gender

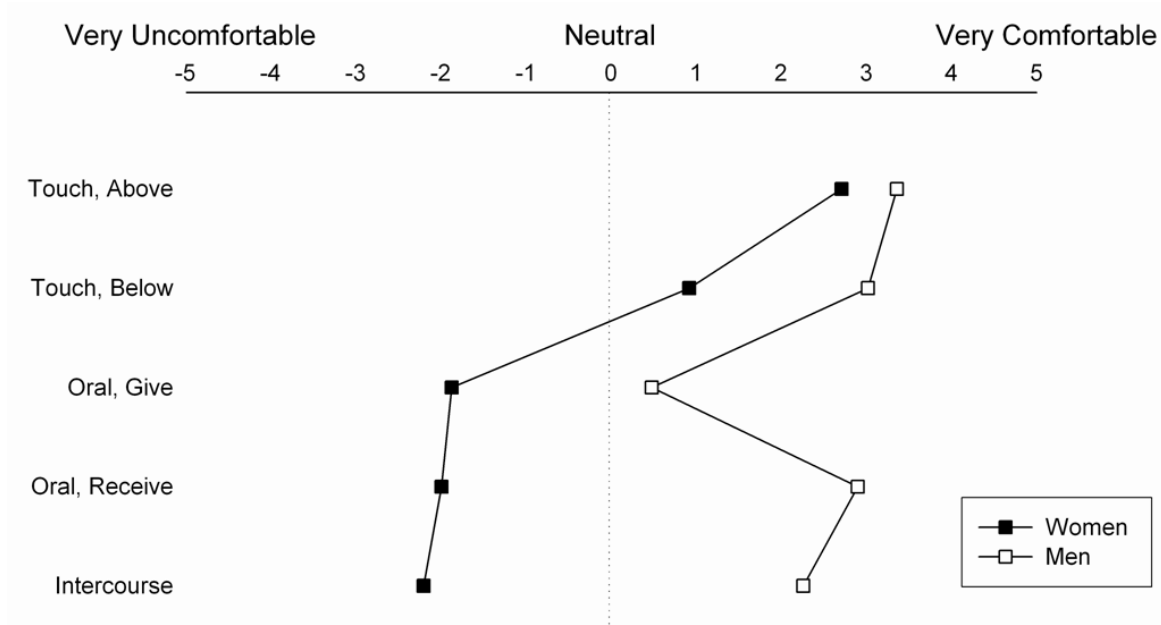


Figure 2 illustrates women’s (top panel) and men’s (bottom panel) comfort levels with various hook-up behaviors, and the comfort levels that each gender attributes to others of the same and opposite gender. Table 2 shows the means (and standard deviations) for these results. What is clear from this table is that women attributed to men higher comfort levels (than the women themselves had) with every behavior. This supports the second prediction. Moreover, the comfort levels attributed to men by women were higher than what men actually reported. Similarly, men attributed to women lower comfort levels (than the men themselves had) with every behavior. This also supports the second prediction. Men overestimated women’s comfort levels with every behavior.

Individuals of both genders attributed to others of the same gender higher comfort levels than they themselves had (Table 2). For men, attributing higher comfort levels to other men supports the third prediction. For women, attributing higher comfort levels to other women is consistent with the female-competition hypothesis. Both of these results expose evolutionarily-predictable instantiations of PI.

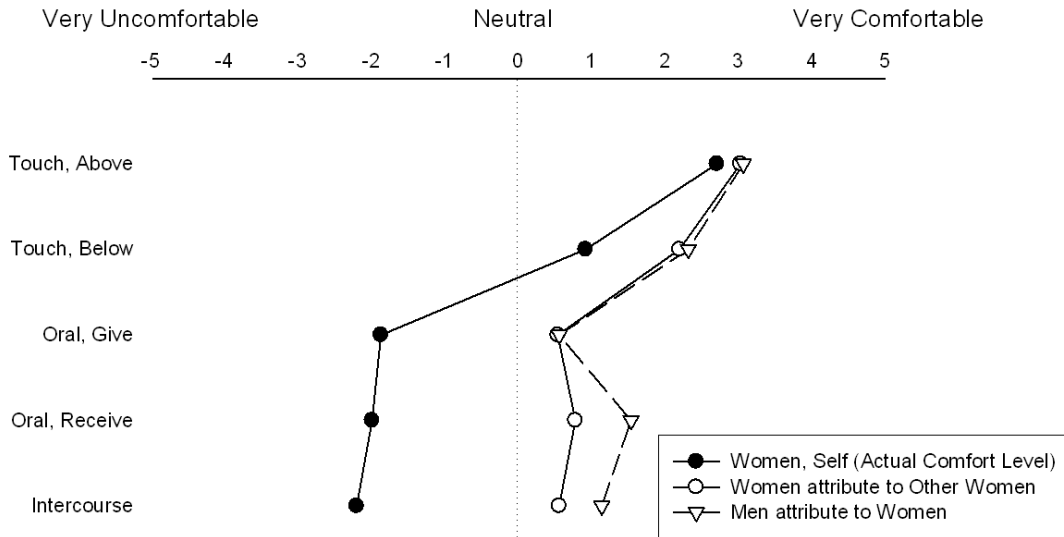
**Table 2.** Comfort levels for self and attributed to others of each gender, for various hook-up behaviors

Behavior	Self <i>M (SD)</i>	Attributed to others of the...	
		same gender <i>M (SD)</i>	opposite gender <i>M (SD)</i>
<b>Women reporting</b>			
Sexual touching above the waist	2.72 (3.13)	3.03 (2.65)	4.19 (2.05)
Sexual touching below the waist	0.92 (3.91)	2.20 (3.27)	4.05 (2.05)
Oral sex, performer	-1.87 (3.80)	0.54 (3.64)	1.55 (3.71)
Oral sex, recipient	-1.99 (3.68)	0.78 (3.65)	3.99 (2.24)
Intercourse	-2.23 (3.62)	0.06 (3.72)	3.35 (2.68)
<b>Men reporting</b>			
Sexual touching above the waist	3.36 (2.99)	3.75 (2.44)	3.07 (2.50)
Sexual touching below the waist	3.02 (3.14)	3.47 (2.69)	2.32 (3.20)
Oral sex, performer	0.48 (4.05)	0.89 (3.84)	0.56 (3.90)
Oral sex, recipient	2.91 (3.19)	3.68 (2.34)	1.54 (3.60)
Intercourse	2.26 (3.62)	3.12 (3.01)	1.14 (3.75)

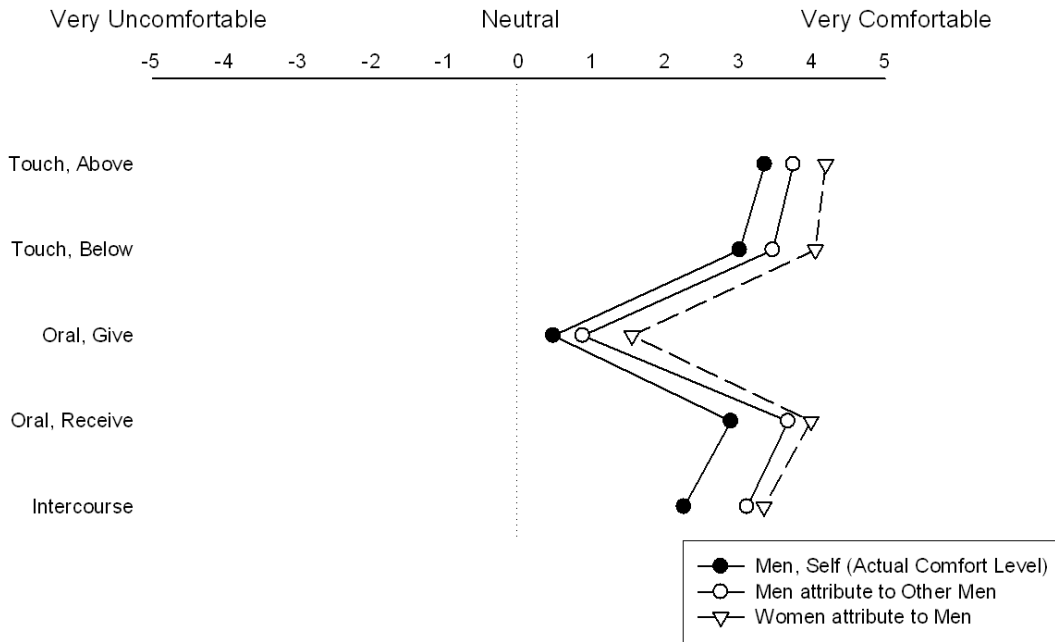
*Note:* Comfort levels reflect ratings made on an 11-point scale, from -5 (very uncomfortable) to +5 (very comfortable), with 0 reflecting neutrality.

**Figure 2.** Comfort levels for self and attributed to others of each gender, for various hook-up behaviors (top panel, women; bottom panel, men)

**Women**



**Men**



**Discussion**

The prevalence of hooking up in the current study is within the range reported by other studies. Eighty-one percent of participants in the current study report having engaged

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in some form of sexual hook-up behavior. This is slightly higher than the 78% reported by Paul, McManus, and Hayes (2000). In addition, the sex difference in intercourse during a hook-up found by Paul, McManus, and Hayes (2000) was not found in this study. While they reported 47.5% of men and 33% of women engaging in intercourse during a hook-up, the current study found 35% of men and 32% of women reporting intercourse during a hook-up. This difference might be explained by differences in university type, structure, size, student body demographics, overall environment, or a number of other factors. Although we do not predict strict consistency between various campuses, large-scale surveying is continuing at the target university to explicate this issue.

In the current study, as in several others (Cohen and Shotland, 1996; Knox and Wilson, 1981; Lambert, Kahn, and Apple, 2003; Oliver and Hyde, 1993), men reported higher comfort levels than women with all sexual behaviors. They also overestimated women's comfort levels with several of the behaviors, particularly the more serious behaviors (i.e., oral sex and intercourse) that pose higher physical and/or mental health risks such as sexually transmitted diseases, unintended pregnancy, and/or psychological injury. Men's higher comfort levels with these behaviors, paired with their overestimations of women's comfort levels with these behaviors, may have unfortunate consequences including men inadvertently pressuring women, and women outwardly succumbing to the pressure in spite of their inward aversion to such behaviors in the context of hooking up.

Also building on the work of Cohen and Shotland (1996), Lambert, Kahn, and Apple (2003), and Prentice and Miller (1993), the current study demonstrated clear patterns of PI with respect to comfort levels with various sexual behaviors during hook-ups. For all sexual behaviors, both genders attributed to others of the same gender higher comfort levels than they, themselves, felt. This may help explain the high rates of these behaviors in spite of the low comfort levels reported. For instance, while women reported moderate discomfort with intercourse during a hook-up, 32% of women and 35% of men reported having engaged in intercourse during a hook-up. Over a third of the women reported engaging in oral sex (in one role or the other) even though women's comfort levels with these behaviors were generally negative. The pressure to act in accordance with these false perceived norms may be leading individuals to engage in behavior with which they are uncomfortable, and that poses potential risks in terms of sexually transmitted diseases, pregnancy, and psychological trauma.

These three factors – men's higher comfort, men's overestimation of women's comfort, and women's overestimation of other women's comfort – may dovetail and inadvertently result in sexual assault. As noted by Lambert, Kahn, and Apple (2003, p.132), "In this context it is possible for a woman to experience sexual assault but not interpret the behavior as such, believing it to be normative behavior with which her peers are comfortable." Indeed, at the university where the current study took place, our university counseling center's internal reports show rapidly rising numbers of women clients presenting with symptoms generally considered sequelae of sexual assault. Yet, it is increasingly common for these same women to outwardly deny having been sexually assaulted. In other words, clients are presenting to the counseling center following traumatic and regretful sexual hook-up experiences, but are seemingly not self-identifying as victims or registering their discomfort as legitimate. It appears that women are behaving

in accordance with their false beliefs in spite of their own discomfort with particular sexual behaviors, and are facing negative psychological and emotional consequences as a result.

These findings are also consistent with error management theory (Haselton and Buss, 2000). Specifically, Haselton (2003) has used error management theory to suggest a sexual overperception bias where men genuinely misperceive women's sexual interest as being greater than it actually is, but there is no bias in women's sexual inferences. This can then lead to purposeful manipulation. Paired with the PI effect that applies to hook-up behavior, this sets the stage for conceivably dangerous sexual activity where partners have differing and misinformed perceptions of their engagement, with potentially severe clinical, psychological, and potentially legal ramifications.

### *Behavioral-Evolutionary Paradigm and Implications*

Our data support the predictions of the behavioral-evolutionary paradigm. First, men were predicted and found to be more comfortable than women with all hook-up behaviors. Second, each gender was predicted to know the gender-specific strategy of the opposite gender. Compared to their own comfort levels, men were predicted and found to attribute to women lower comfort levels with all behaviors, although they overestimated women's comfort levels with all behaviors, consistent with Haselton (2003). Compared to their own comfort levels, women were predicted to attribute to men higher comfort levels with all behaviors. The current study also found support for this, although women overestimated men's comfort levels with all behaviors. This is consistent if interpreted as a protective mechanism; that is, women believing that men in general are more comfortable with sex in all its forms than they really are (i.e., women perceiving men as more sexually permissive), might make women more guarded and careful prior to engaging in sexual activity.

Third, each gender was predicted to know the gender-specific strategy of their own gender. The comfort levels attributed by men to other men (for all sexual behaviors) were predicted and found to be higher than the comfort levels men reported for themselves. In evolutionary terms, this would lead to men being more likely to engage in such behavior in spite of their own (lower) comfort levels, thus potentially increasing reproductive success.

Women were found to attribute higher comfort levels to other women than they, themselves, felt. This is consistent with women viewing other women as competitors for mates, and is somewhat paradoxical given the definition of "NSA" sex – that no relationship exists, and no relationship is on offer. Although the vast majority of these participants reported having no actual *expectation* that hook-ups would develop into traditional romantic relationships, 51% (of both men and women) indicated the desire to initiate a traditional romantic relationship when asked to identify the factors that motivate them to hook up (data reported elsewhere; see Garcia and Reiber, 2008). This evidence, like that of Fisher (2009), strongly suggests that "NSA sex" may not actually be "string-free." In fact, "NSA sex" may be an oxymoron. This conflict between behavior, desires and perceptions regularly puts young adults at risk of negative consequences from the PI effect.

### *Limitations*

This study has several limitations. It represents a cross-sectional snapshot of a

single point in time. Further studies will be required to understand change over time for these behaviors and the associated attitudes and perceptions. This will be important to assess the impact of aging, experience, and related factors on these behaviors and/or attitudes. Additionally, the collected reports of actual hook-up behavior in this study are retrospective, but the data on comfort levels reflects feelings at the time of the survey. Comfort levels reported may be affected not only by previous experience, but also by peer reactions to behavior. Thus, for example, it should *not* be concluded from this study that all 32% of women participants who reported having engaged in intercourse during a hook-up were markedly uncomfortable with it during the actual event. Such a conclusion would require concurrent reports of behavior and comfort levels. Future studies are planned to address these important issues.

### *Future Directions*

These findings illustrate the power of an evolutionary approach in understanding psychological phenomena such as Pluralistic Ignorance (PI). If evolution fosters PI in predictable ways, and PI contributes to actual uncommitted sexual behavior, then an understanding of evolutionary psychology will be important in the development of successful holistic health education programs aimed at undermining PI and addressing sexual behavior (along with other high-risk behaviors) and the associated negative downstream sequelae.

Social norms marketing is "...a theory and evidence-based methodology for addressing health and social justice issues that can be used to foster (healthy) environments..." (Berkowitz, 2006, p. 2). Others have pointed to the success of social norms marketing programs in reducing the PI surrounding alcohol use on campuses, and noted the similarity between alcohol use and hook-up behavior in terms of the PI effect (see Lambert, Kahn, and Apple, 2003). While social norms marketing may serve as a strong health promotion model for colleges (Haines, 1998), no intervention programs aimed at breaking down the PI surrounding hook-up behavior have been described in the literature.

Research and program planning is continuing at the target university. We intend to continue surveying on an ongoing basis to track trends in these sexual behaviors, and to develop and implement an educational campaign about sexual (hook-up) behavior on campus that is similar to the "Most of Us" program for alcohol use (see DeJong and Langford, 2002; Haines, 1998; Perkins, 2003; Perkins, Haines, and Rice, 2005). Collaboration with the campus counselling center, the student life office, and the student health service will aid in designing and implementing a strong and consistent program across campus, and assessing the impact in multiple domains. By consistently disseminating accurate information about hook-up attitudes and behavior on campus, the PI surrounding hooking up may be reduced, leading to changes in behavior and reducing negative outcomes (e.g., psychological and physical trauma, harm to reputation, sequelae of sexual assault, sexually transmitted diseases, and unintended pregnancy). *We neither condemn nor condone sexual activity, but rather, we endorse the need for young adults to be aware of, honestly communicate, and act in accordance with, their own comfort levels and those of their partner(s) during engagement in sexual activity.*

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