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Alcohol's Effects on Sexual Perception*

ANTONIA ABBEY, PH.D.[†], **TINA ZAWACKI, M.A.**[†], and **PAM McAUSLAN, PH.D.**[†]

Department of Community Medicine, Wayne State University, 4201 St. Antoine, Detroit, Michigan 48201

Abstract

Objective—This study examines hypotheses about alcohol's effects on sexual judgments based on both alcohol and misperception theories. It was hypothesized that gender, alcohol consumption and alcohol expectancy set would influence perceptions of sexuality.

Method—Participants were unacquainted women and men (88 dyads) who interacted for 15 minutes within the context of the balanced placebo design. After the conversation ended, participants answered questions about their behavior and their partners' behavior. Conversations were videotaped and coded by trained raters.

Results—Men perceived their female partner and themselves as behaving more sexually than women perceived their male partner and themselves. When alcohol was consumed, both women and men were perceived as behaving more sexually and in a more disinhibited manner than when alcohol was not consumed. Ratings made by members of white and black dyads were largely comparable. Trained observers coded participants' use of active attention and dating availability cues. Both types of cues interacted with alcohol consumption such that intoxicated participants exaggerated the meaning of strong (dating availability) cues and ignored the meaning of ambiguous (active attention) cues when making sexual judgments.

Conclusions—Supporting past research on gender differences in perceptions of sexuality, men were more sexually attracted to their opposite-sex partner than women were. Both women's and men's sexual judgments were influenced by alcohol consumption but not by alcohol expectancy set. Intoxicated participants' responses to their partners' behavioral cues supported cognitive impairment models of alcohol's effects. The implications of these findings for theories about alcohol's effects on sexuality and for prevention programming are discussed.

THE STUDY described in this article links two distinct theoretical traditions that address the role of alcohol in perceptions of sexuality. A brief review of each strand of research is provided below, followed by the study's hypotheses and methods.

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†Antonia Abbey may be reached at the above address or via aabbey@med.wayne.edu. Tina Zawacki is also with the Department of Psychology at Wayne State University. Pam McAuslan is with the Department of Behavioral Science, University of Michigan-Dearborn, Dearborn, MI.

Theory regarding gender differences in perceptions of sexual intent

Men frequently perceive women as behaving more sexually than women intended (Abbey and Melby, 1986; Abbey et al., 1987; Edmondson and Conger, 1995; Johnson et al., 1991). In the original study (Abbey, 1982), an unacquainted woman and man interacted for 5 minutes and then evaluated their own and their partner's behavioral intentions. The same ratings were made by a man and woman who observed the interaction from behind a one-way mirror. Male actors and observers rated the woman as behaving in a more sexual manner and as being more sexually attracted to her partner than did female actors and observers. This has been labeled a "misperception" effect because the men perceive women's behavior differently from how it was intended. Men also rated their own behavioral intentions as being more sexual than women did, thus women also misperceive men's intentions but in the opposite direction.

Overall, this line of research suggests that men's schemas regarding sex are more central and more salient than women's. Given that men traditionally have the responsibility for initiating dates and sexual behavior, they may need to focus on their female companion's potentially sexual cues in order to decide if they should make a sexual advance. This focus on the implicit sexual meaning of women's actions can lead an interested man to make errors and assume that friendly behavior has a sexual intent. Such misperceptions are usually easily resolved; however, they have been linked to sexual assault and sexual harassment (Abbey et al., 1998; Stockdale, 1993).

Theory regarding alcohol's effects on sexuality

Folklore, the mass media and empirical research emphasize the relationship between alcohol and sexuality. Several studies have demonstrated that women and men are perceived as being more sexually available when they are drinking alcohol than when they are sober, and that consensual sex is anticipated when a woman and man drink together (Abbey and Harnish, 1995; George et al., 1988; Norris and Cubbins, 1992). Although the emphasis is on positive aspects of sexuality, alcohol consumption has been consistently linked to sexual assault (Abbey et al., 1998; Testa and Parks, 1996). Pharmacological and psychological theories have been proposed and empirically supported, suggesting that both pathways are needed to fully explain alcohol's effects on consensual and forced sexual behavior.

Alcohol consumption

Recent theory about alcohol's pharmacological effects has focused on alcohol-induced cognitive impairments. Alcohol consumption disrupts higher order cognitive processes (e.g., abstraction, conceptualization, planning and problem solving), making it difficult to interpret complex stimuli (Hindmarch et al., 1991). This group of cognitive skills has been labeled the "executive function" (Pihl and Peterson, 1995) because these skills are associated with the coordination and integration of potentially conflicting stimuli. Under the influence of alcohol, people have a narrower perceptual field. They are less able to attend to multiple cues and instead tend to focus on the most salient ones (Chermack and Giancola, 1997; Taylor and Leonard, 1983).

As noted above, many men have a propensity to perceive friendly women as being sexually attracted to them, therefore signs of sexual attraction will be most salient. The cognitive deficits associated with alcohol consumption encourage individuals to focus on instigatory cues and ignore or minimize inhibitory cues. This suggests that if an intoxicated man is talking with a woman to whom he is sexually attracted, he will focus on her instigatory cues (e.g., smiling when he made a sexual remark) but conveniently ignore inhibitory cues (e.g., changing the topic when he continued talking about sex).

Alcohol expectancy set

Many authors have found effects of expectancy set using the balanced placebo design. In these studies, men who thought they were drinking alcohol experienced more subjective and physiological sexual arousal than men who did not think they were drinking alcohol, regardless of whether or not they actually consumed alcohol (for a review, see George and Norris, 1991). These studies commonly measure sexual arousal in response to erotic materials that depict consensual or forced sex.

Few balanced placebo studies have been conducted with women and they have produced mixed results (for a review, see Norris, 1994). These contradictory findings are generally explained in terms of society's negative messages regarding women's alcohol consumption and sexuality. Sexual behavior and drunken excess are tolerated more in men than in women. Unlike men, women must be concerned about being labeled "loose" or promiscuous. Women are also more concerned about their increased vulnerability to sexual and non-sexual aggression when intoxicated. There are more costs for women, thus their expectancies about alcohol's sexual effects are frequently less positive than men's.

This research suggests that the mere expectancy of drinking alcohol should enhance men's likelihood of misperceiving women's friendly cues as sexual. Expectancies tend to be self-fulfilling. If a man is hoping to find evidence that his partner is sexually attracted to him, then he is predisposed to seek out confirmatory evidence and to interpret ambiguous cues as fitting his hypothesis, whether or not alcohol is involved (Snyder and Stukas, 1999). The belief that one has consumed alcohol enhances this effect because it activates additional expectancies about sexuality. Thus, a man who believes he has been drinking alcohol will feel sexually aroused and sexually attractive and look for signs that his female companion feels the same way.

Overview of design and hypotheses

A study was conducted that combined Abbey's (1982) methodology, in which an unacquainted woman and man converse with each other, and the balanced placebo design (Rohsenow and Marlatt, 1981), in which actual alcohol consumption and the belief that one has consumed alcohol are crossed. Main effects of gender of participant were hypothesized such that men would perceive their female companion and themselves as behaving more sexually than women would report. Alcohol consumption was hypothesized to increase men's perceptions of their female companion's sexuality through alcohol's effects on cognitive processing (a gender of participant by alcohol consumption interaction). Furthermore, the belief that alcohol had been consumed was hypothesized to increase men's

perceptions of their female partner's sexuality because enhanced sexuality is one of the expected effects of alcohol (a gender of participant by expectancy set interaction). Past studies have found mixed results for women; therefore, specific hypotheses were not made regarding alcohol's effects on women's responses.

Past research was conducted primarily with white participants. Equal numbers of white and black dyads participated in this study (within dyads, women's and men's ethnicity were matched). Ethnicity was not expected to affect men's perceptions of their female partner (Orbe, 1995).

In addition to the data provided by participants' self-reports, conversations were videotaped and coded by trained observers. The goal was to determine the types of cues that influenced perceptions of sexual intent, and whether these cues interacted with alcohol consumption or expectancy set. Given that these were initial interactions within the constraints of the laboratory setting, participants were not expected to act in an overtly sexual manner. Based on earlier research (Abbey, 1982), the most extreme behavior we anticipated were hints about being interested in dating one's partner. Within the context of an initial interaction, this was anticipated to be a fairly rare but strong sign of potential sexual interest. The primary means of conveying potential sexual interest was expected to be friendly but not overtly sexual signs of attentiveness (e.g., nodding, making eye contact, leaning forward and using animated speech). These cues are ambiguous and easily misunderstood because, depending on the situation, they are used to convey platonic liking, attentiveness or sexual attraction (Fichten et al., 1992; Friedman et al., 1988; Muehlenhard et al., 1986). Cognitive impairments associated with alcohol consumption were expected to increase drinking participants' focus on the strongest cues displayed by their partner (a cue by alcohol consumption interaction).

Method

Participants

Participants were 88 male and 88 female undergraduates at Wayne State University who were recruited through advertisements in the student newspaper, fliers distributed on campus and announcements made in classrooms. Participants were required to be at least 21 years of age; their mean (SD) age was 25.72 (5.56). Study participants were also required to drink alcohol on a regular basis; participants averaged 4.55 (4.28) drinks per week.

Procedure

Potential participants were screened by telephone to insure that they met the recommended requirements for alcohol administration studies (National Institute on Alcohol Abuse and Alcoholism, 1989). Participants were required to have consumed at least one alcoholic beverage in the past 30 days, to have consumed at least three alcoholic beverages in one sitting in the past 6 months, to have no history of problem drinking and not to have any health problems that contraindicated alcohol use. Participants were required to be single, heterosexual and not in an exclusive dating relationship, because of the study's focus on sexual attraction to a member of the opposite gender.

Participants who met the screening criteria were scheduled for appointments with someone of the opposite gender whom they did not know. Dyad members were matched on ethnicity (black or white), age within 10 years and relative height and weight. Participants were asked to fast for 4 hours and abstain from alcohol for 24 hours prior to their laboratory appointments.

When they arrived at the study site, participants were introduced to each other and escorted into a large reception area. The study was described as an investigation into the effects of food, drink and topic of conversation on initial interactions. Participants were given a breath analyzer test in order to insure that their blood alcohol concentration (BAC) was at zero. They were then escorted to separate rooms. The consent form was reviewed and signed, and a health screening (including a pregnancy test for women) was conducted.

Both participants were then escorted to the interaction room and asked to sit in chairs positioned 54 inches (137 cm) apart so that they faced each other across a round table. Standard double-blind balanced placebo procedures were used (Rohsenow and Marlatt, 1981). The bartender poured the beverages from apparently unopened containers in front of the participants in order to facilitate the alcohol deception. The actual contents of the containers varied according to the alcohol conditions of the participants (dyad members were randomly assigned to the same condition). Participants in the alcohol conditions were administered a 1.25 ml/kg body weight dose of 80-proof Absolut vodka, calculated to induce a peak BAC of 0.04%. This dose was mixed in a 5:1 ratio with Canada Dry tonic. A peak of 0.04 was selected because it is high enough for cognitive deficits to occur yet low enough for participants who are given alcohol but told they are drinking tonic to remain deceived (Hindmarch et al., 1991; Pernanen, 1993). Past vignette research has demonstrated that only one or two drinks are necessary to evoke alcohol expectancies about sexuality and stereotypes about drinking women (George et al., 1988). Participants in the two no-alcohol conditions received an amount of nonalcoholic mixture calculated according to the formula described above, but with flattened tonic replacing the vodka. All participants' beverages were divided into three cups, with a squirt of the contents from a lime juice container added to each drink. For conditions in which participants believed they consumed alcohol, the lime juice container was filled with vodka in order to give the drink the smell and taste of alcohol (Sayette et al., 1992); in the other conditions it contained lime juice.

Participants were given 5 minutes to consume each of their three drinks, followed by a 10-minute absorption period. During the drinking and absorption phases of the study, participants watched a video of a stand-up comedian in order to keep them from talking. After the 10-minute absorption period, a breath analyzer test was administered and participants were given BAC feedback that corresponded to their condition.

Next, the interaction phase of the study commenced. Participants talked for 15 minutes, usually about their experiences at college, their jobs and their hobbies. After 15 minutes, the conversation was stopped and participants received another breath analyzer test and BAC feedback. They then completed the postinteraction questionnaires in separate rooms. After participants completed their surveys, they individually answered feedback questions that were designed to assess whether or not they were suspicious about any aspect of the study.

The participants were brought together in the interaction room where they were thoroughly debriefed and paid $25. Participants who received alcohol were required to remain at the laboratory until their BACs returned to 0.005%.

Measures

Participants completed the Marlowe-Crowne Social Desirability Scale (Crowne and Marlowe, 1960) before they drank or interacted. Participants responded “true” or “false” to each of the 33 items, which were then summed. This scale had a Cronbach’s coefficient alpha of 0.77.

After the conversation, participants completed a questionnaire that included measures used in past research on perceptions of sexual intent. These measures were developed through extensive pilot testing and have demonstrated high reliability and validity (Abbey, 1982; Abbey and Harnish, 1995). The first section of the questionnaire included questions about the conversation, to support the cover story. The next two sections included parallel sets of questions about their partner and themselves. Filler items were included to avoid demand characteristics. Each question was rated on a 7-point Likert-type scale, with response options ranging from “not at all” (1) to “very” (7). Each measure was formed by averaging participants’ responses to the individual items.

Sexuality—Six adjectives comprised the sexuality measure: flirtatious, sexy, seductive, promiscuous, romantic and attractive. Participants rated themselves and their partner on each of the adjectives. Cronbach’s coefficient alpha was 0.86 for ratings of the woman and 0.91 for ratings of the man.

Sexual behavior—Participants answered four questions about the extent to which they behaved sexually during the interaction and a parallel set of four questions about their perceptions of their partner’s sexual behavior. Participants were asked to rate the extent to which each of them flirted with their partner, came on to their partner, acted like they would want to be seduced by their partner and behaved in a sexual manner. Cronbach’s coefficient alpha was 0.95 for ratings of the woman’s sexual behavior and 0.93 for ratings of the man’s sexual behavior.

Sexual attraction—Participants were asked four questions to assess their degree of sexual attraction to their partner and four parallel questions to assess their perception of their partner’s sexual attraction to them. They indicated the extent to which each of them was sexually attracted to their partner, would be interested in dating their partner, would be receptive to a sexual advance from their partner and would be interested in having sex with their partner. Cronbach’s coefficient alpha was 0.90 for ratings of the woman’s sexual attraction to her partner and 0.93 for ratings of the man’s sexual attraction to his partner.

Friendliness—Friendliness was measured with seven adjectives: friendly, cheerful, kind, likable, sincere, sociable and warm. Participants rated themselves and their partner on each of the adjectives. Cronbach’s coefficient alpha was 0.92 for ratings of the woman and 0.90 for ratings of the man.

Disinhibition—Disinhibition was assessed with six adjectives: uninhibited, expressive, confident, outgoing, impulsive and silly. This was a new scale, developed to assess common perceptions of alcohol's effects. Items were selected after reviewing other scales (Leigh, 1987; Southwick et al., 1981), with revisions made after pilot testing and factor analyses. Participants rated themselves and their partner on each of the adjectives. Cronbach's coefficient alpha was 0.76 for ratings of the woman and 0.78 for ratings of the man.

Videocoding—Participants' conversations were coded by five raters who were unaware of the hypotheses and conditions of the study. Raters were advanced undergraduate psychology students (one black man, one white man, one black woman and two white women). Raters coded ten 30-second segments spaced throughout the conversation, for a total time sample of 5 minutes (33% of the conversation). Raters made independent judgments, without discussing their answers with each other. Depending on the cue, raters used either a dichotomous (behavior occurred during the interval: yes/no) or Likert-type (degree of the given behavior displayed during the interval) scale. Coders' ratings were summed across the 10 coding segments and scores were standardized with a *z*-score transformation. Interrater agreement ranged from 0.82 to 0.98; the average was 0.91. Thus, the five raters' scores were averaged into a single indicator of cue usage (Bakeman and Gottman, 1997).

Coding sheets listed behaviors that communicate liking, attentiveness and dating availability. Based on past research and preliminary data analyses (Fichten et al., 1992; Muehlenhard et al., 1986), the active attention cue composite included leaning forward, stretching one's arms toward one's partner and using animated speech. These behaviors occurred fairly frequently (prior to *z* transformation: women's mean [SD] = 4.20 [1.42]; men's mean [SD] = 4.47 [1.25]). Past research indicates that these behaviors express one's degree of interest in an interaction, regardless of whether the interest is platonic or sexual (Fichten et al., 1992; Muehlenhard et al., 1986). Thus, these cues are ambiguous. The dating availability composite included hinting about being single or available to date, obliquely referring to sexual topics (e.g., mentioning a movie with explicit sexual content) and complimenting a partner's appearance. For women only, wearing revealing clothing (e.g., short skirt, low neckline) was also included. As found in past research (Abbey et al., 1987), coders could not reliably evaluate men's clothing. As expected, these behaviors were fairly rare (prior to *z* transformation for those who used cues: women's mean [SD] = 0.24 [0.16]; men's mean [SD] = 0.18 [0.26]). These cues are not overtly sexual, but they are likely to be perceived as a stronger indicator of potential sexual interest than are the active attention cues.

Results

Preliminary analyses

Blood alcohol concentrations (BAC)—Participants were given an amount of alcohol calculated to induce a peak BAC midway through the 15-minute conversation. Participants who were given alcohol had a mean (SD) BAC of 0.033 (0.01) just prior to the dyadic interaction and 0.033 (0.01) directly following the interaction, which was appropriate for a 0.040 peak during the conversation period. A 2 (Gender: male, female) × 2 (Ethnicity: black,

white) analysis of variance (ANOVA) indicated that the mean BAC directly before the conversation did not differ significantly between men (mean [SD] = 0.035 [0.01]) and women (mean [SD] = 0.032 [0.01]); $F = 2.32$, 1/87 df, $p > .13$. Neither did it differ significantly between blacks (mean [SD] = 0.033 [0.01]) and whites (mean [SD] = 0.033 [0.01]); $F = 0.05$, 1/87 df, $p > .81$.

Manipulation checks—In response to the open-ended question, "What beverage did you drink during the study?" all participants responded that they drank the beverage that matched their alcohol instructions. Participants who were told that they were given alcohol reported a higher BAC (mean [SD] = 0.028 [0.01]) than participants who were told that they were not given alcohol (mean [SD] = 0.000 [0.00]). $F = 268.67$, 1/118 df, $p < .001$. All participants in the *told no alcohol/given alcohol* condition reported a BAC of 0.000. The mean BAC reported by participants in the *told alcohol/received no alcohol condition* (mean [SD] = 0.030 [0.01]) was comparable to the mean BAC reported by participants in the *told alcohol/given alcohol condition* (mean [SD] = 0.027 [0.02]), $F = 0.602$, 1/118 df, $p > .44$.

Social desirability analyses—Participants' responses to all dependent measures were correlated with social desirability to insure that they were answering honestly. The only significant correlations were for women's and men's sexual behavior (r's = −0.16. p's < .04), indicating that greater social desirability was associated with lower sexual behavior ratings. Most correlations were not significant, and those that were significant were of low magnitude, which suggests that social desirability did not have a sizable influence on participants' responses.

Analyses of questionnaire data

A 2 (Gender: female, male) × 2 (Ethnicity: white, black) × 2 (Alcohol Consumed: yes, no) × 2 (Thought Alcohol Consumed: yes, no) × 2 (Target Rated: male, female) repeated measure multivariate analysis of variance (MANOVA) was conducted with ratings of the two targets on each of the dependent measures described below as the within-subject factor. There were three significant between-subject effects: the main effects of participant gender, alcohol consumption and ethnicity (Pillai's F's = 9.67, 4/157 df, $p < .001$; 2.39, $p < .05$; and 5.05, $p < .001$, respectively). There were two significant within-subject effects: target gender and the target gender by participant gender interaction (Pillai's F's = 4.42, 4/157 df, $p < .002$ and 4.87, $p < .001$, respectively).

To examine the significant within-subject effects, follow-up repeated measure ANOVAs were conducted for each dependent measure: sexuality, sexual behavior, sexual attraction, disinhibition and friendliness. The main effect of target gender was only significant for the sexual attraction measure ($F = 15.24$, 1/160 df, $p < .001$). This was moderated by a gender of participant by target gender interaction that was significant for sexual behavior, sexual attraction, disinhibition and friendliness (F's = 6.90, 1/160 df, $p < .01$; 9.66, $p < .002$; 12.57, $p < .001$; and 8.40, $p < .004$, respectively). These interactions explicate differences in men and women's ratings of partner and self. For the sexual and disinhibition variables, women rated themselves and their partner comparably; in contrast, men rated themselves higher than their partner. For friendliness, participants of both genders rated themselves as being

friendlier than their opposite-sex partner. (The means associated with each of these effects are described in the next section and are included in Table 1.) There were no other significant interactions; thus, neither alcohol consumption nor alcohol expectancy set influenced these differential perceptions of self and partner.

To examine the between-subject effects that were significant in the MANOVA, follow-up analyses were conducted for each dependent measure, separately for the male and female target. There were no significant interaction effects; therefore, only main effects are described below.

Effects of participants' gender—There were significant main effects of participants' gender on ratings of the female target's sexuality, sexual behavior and sexual attraction. As can be seen in the top half of Table 1, men perceived women as being significantly more sexual than women perceived themselves. There were also significant main effects of participants' gender on ratings of the male target (see the bottom half of Table 1). Men perceived themselves as behaving in a significantly more sexual and disinhibited manner than women perceived them. There were no significant gender differences in perceptions of the woman's or man's friendliness.

Effects of alcohol consumption—As noted above, there were no significant effects associated with the expectancy that one had consumed alcohol; in contrast, actual alcohol consumption had several significant effects. As can be seen in the top half of Table 2, when alcohol was consumed by members of the dyad, the woman was perceived as behaving significantly more sexually (on one of the three sexual measures) and more disinhibited than when alcohol was not consumed. As can be seen in the bottom half of Table 2, men in dyads that consumed alcohol were perceived as behaving significantly more sexually (on two of the three sexual measures) and more disinhibited than men in dyads in which alcohol was not consumed. Alcohol consumption had no significant effects on perceptions of the man's or woman's friendliness. There were no interactions of alcohol consumption with participant gender, indicating that both women and men perceived alcohol as increasing sexuality.

Effects of ethnicity—There was only one significant univariate ethnicity effect (out of a possible 10). Black men were significantly more sexually attracted to their partners (mean [SD] = 3.37 [1.94]) than were white men (mean [SD] = 2.84 [1.69]); $F = 4.52$, 1/160 df, $p < .04$.

Analyses of videocoding data

MANOVAs parallel to those described above were computed adding cue usage as an additional independent variable. Four MANOVAs were conducted (with follow-up ANOVAs), separately examining the effects of the four composites described in the Method section: women's use of dating availability cues, men's use of dating availability cues, women's use of active attention cues and men's use of active attention cues. Each cue was dichotomized using a median split.

For women's use of dating availability cues, the only significant effects involved alcohol consumption by dating availability cue interactions (F's = 4.48, 4.35, 4.92, 1/145 df, p's < .

04 for sexuality, sexual behavior and disinhibition, respectively). In conversations in which alcohol was consumed and women used high rather than low levels of dating availability cues, women were perceived as behaving most sexually and as being most disinhibited (Figure 1; in follow-up Newman-Keuls' tests this cell significantly differed from all others, $p < .05$). There were no significant interactions associated with participant gender, thus both women's and men's judgments were affected similarly.

Men's use of dating availability cues was associated with cue main effects and cue by alcohol consumption interactions. Men who used high levels of dating availability cues were perceived as being more sexual and more disinhibited than men who used low levels of dating availability cues. F's = 6.07, 16.28, 4.62, 1/144 df, p's < .03 for sexuality (mean [SD] = 3.12 [0.24] vs 2.45 [0.12]), sexual behavior (mean [SD] = 2.43 [0.18] vs 1.60 [0.09]) and disinhibition (mean [SD] = 4.64 [0.21] vs 4.14 [0.10]), respectively; for sexual attraction, $F = 3.43$, $p < .07$ (mean [SD] = 3.60 [0.30] vs 2.99 [0.14]). For sexuality and sexual behavior, this cue main effect was moderated by a cue by alcohol consumption interaction ($F = 3.05$, 1/144 df, $p < .08$; $F = 10.64$, $p < .001$, respectively). As can be seen in Figure 2, the pattern of results was similar to that found for women. When men drank alcohol and used a high level of dating availability cues, they were perceived as behaving most sexually (follow-up Newman-Keuls' tests indicated that this cell significantly differed from all others, $p < .05$). There were no significant interactions associated with participant gender, thus both women's and men's judgments were affected similarly.

Women who used high levels of active attention cues were perceived as behaving more sexually and more disinhibitedly than women who used low levels of active attention cues. F's = 5.73, 6.34, 1/144 df, p's < .02 for sexual attraction (mean [SD] = 2.97 [0.16] vs 2.45 [0.15]) and disinhibition (mean [SD] = 4.37 [0.13] vs 3.92 [0.12]), respectively; $F = 2.81$, $p < .10$ for sexual behavior (mean [SD] = 1.87 [0.12] vs 1.59 [0.11]). There were also significant alcohol consumption by cue interaction effects for the woman's use of the active attention cues; however, the pattern of the means was different from that described above for dating availability cues (F's = 3.88, 5.24, 1/144 df, p's < .05 for sexual behavior and sexual attraction, respectively). As can be seen in Figure 3, when participants were drinking alcohol, the woman's use of this cue had no impact on perceptions of her sexuality. In contrast, when participants were sober, they rated her as behaving more sexually when she used high rather than low levels of active attention (in Newman-Keuls' follow-ups, the *no alcohol/high attention* cell was significantly different from the others, $p < .05$). Again, there were no interactions with participant gender. In addition, no significant effects were associated with men's use of this cue. Thus, dating availability cues influenced intoxicated participants' sexual judgments of women and men, whereas active attention cues influenced sober participants' sexual judgments of women.

Discussion

These findings replicate and extend past research regarding misperception of sexual cues and alcohol's effects on sexuality. As predicted, and as found in past studies, men perceived their female companions as behaving in a more sexual manner during their interaction and as being more sexually attracted to them than the women themselves reported. The target by

gender of participant interactions demonstrated that men realized they felt more sexual than their female partners did, yet they still overestimated women's degree of sexual interest. This has been labeled a "misperception" effect because men are misunderstanding women's intentions. Women also misperceived men's intentions, but in the opposite direction; women saw less sexuality in men than men intended. Not surprisingly (given that participants only interacted for 15 minutes), sexuality means were below the scale midpoint. Overall, participants rated themselves and their partner as being very friendly. The fact that there were no gender differences in perceptions of friendliness demonstrates that gender differences in sexuality ratings are not simply a methodological artifact associated with men giving everyone higher ratings.

The results support the theoretical argument that sexual behavior is more salient to men than to women and men are more likely to perceive people's actions as having sexual meaning. Although a focus on sexuality may be adaptive for men in traditional dating relationships, this biased informational search also sets the stage for communication problems and, in extreme cases, sexual harassment or sexual assault (Abbey et al., 1998; Stockdale, 1993). We are not suggesting that women are never interested in sex or that they never initiate sex; neither are we implying that men are always interested in sex or that they always push sex when it is unwanted. Men are more interested in casual sexual relationships, and are willing to engage in sex with someone attractive of the opposite sex at a much earlier point in a relationship than are women (Oliver and Hyde, 1993).

Alcohol consumption had many of the anticipated effects. We had hypothesized that men would perceive their partners and themselves as behaving more sexually and in a more disinhibited way when drinking alcohol than when drinking tonic; we were uncertain about how alcohol would affect women's perceptions. Alcohol consumption enhanced both men's and women's perceptions of their own and their partner's sexuality and disinhibition. Effects were somewhat stronger for male targets, corresponding to society's stereotypes about drunken excess being more acceptable for men.

Trained observers were able to reliably code participants' (1) hints about dating availability, which in this context are fairly clear, strong signs of potential sexual interest and (2) attentive cues, which are more ambiguous signals that may be indicators of sexual interest or may be signs of platonic friendliness or sociability. Alcohol consumption had opposite effects on these two types of cues. For the dating availability cue, sexual ratings were highest when dyads were drinking alcohol and partners hinted about their dating availability. This fits the authors' hypothesis that alcohol consumption causes men to overemphasize any cue that suggests sexuality; however, this effect was found for women as well. In contrast, active attention cues, which are signs of interest that can be intended as nonsexual or sexual, showed a different pattern of results. Sober participants used these cues and thought that women who acted very attentive were more sexually attracted to their partners than women who did not act attentive. Intoxicated participants, however, ignored these cues and perceived women as being moderately attracted to their partners whether they acted attentive or not, Thus, intoxicated participants failed to consider the meaning of this behavior. This fits the argument that intoxication causes people to focus on the cues most salient to them and to miss cues that do not fit their hypothesis (Taylor and Leonard, 1983). Intoxicated

participants could ignore the fact that the woman was not very attentive, whereas sober participants could not. Thus, the effect of alcohol consumption depends on the type of cue being evaluated. Alcohol allows people to concentrate on strong cues that fit their hypotheses and disregard more ambiguous cues that do not fit their hypotheses.

Contrary to prediction, there were no significant main effects or interactions associated with alcohol expectancy set. This finding suggests several avenues for future research. One issue concerns measurement of participants' pre-existing alcohol expectancies rather than relying on instructional set. Believing that one drank alcohol should lead to enhanced perceptions of sexuality only among individuals who think that alcohol increases sexuality (George et al., 2000). A second direction for future alcohol expectancy research involves determining the types of situations in which they influence perceptions. Alcohol expectancies may have the greatest impact on perceptions of others when there is limited personalizing information available. Participants in this study spoke together for an extended period of time; they could refer to specific, individualized information when rating their partner. In vignette studies (e.g., George et al., 1988), participants read only a brief story about people who drink alcohol; in this case, expectancies may play a large role because very limited information is available about the characters.

Past research has focused on white participants. This study extends previous research by including an equal number of black and white dyads. With only one exception, there were no main effects or interactions associated with ethnicity. Black and white women and men are exposed to the same general societal messages about appropriate gender roles and alcohol's effects on sexuality, therefore it is not surprising that they were equally affected by the study's procedures. Although there were no interactions between ethnicity and alcohol in this study, ethnic and cultural differences in alcohol consumption and beliefs do exist (Caetano et al., 1998); thus researchers need to be sensitive to potential differences in diverse samples of drinkers.

These results have implications for college prevention programs. Most students realize that there are dangers associated with intoxication, although this knowledge does not necessarily keep them from drinking heavily (Norris et al., 1996). This study demonstrates that two drinks are enough to affect perceptions of disinhibition and sexuality. Students who feel sexy and uninhibited when drinking are at risk for having sex with someone they do not know well, having unprotected sex, being the victim of forced sex, or feeling comfortable forcing sex on someone. A challenge for prevention practitioners is to make students take these risks seriously, rather than feeling that they are personally invulnerable (Cue et al., 1996). Students could view videotapes that simulate potentially risky situations and discuss them in mixed-gender groups. Hearing the other gender's perception of the actors might help students realize that they may not always understand their opposite-gender companion's motives and intentions. Creating campus norms that encourage students to clearly communicate their perceptions of dating partners' sexual intentions, as well as their own sexual desires, would help students feel less embarrassed about forthright sexual discussions.

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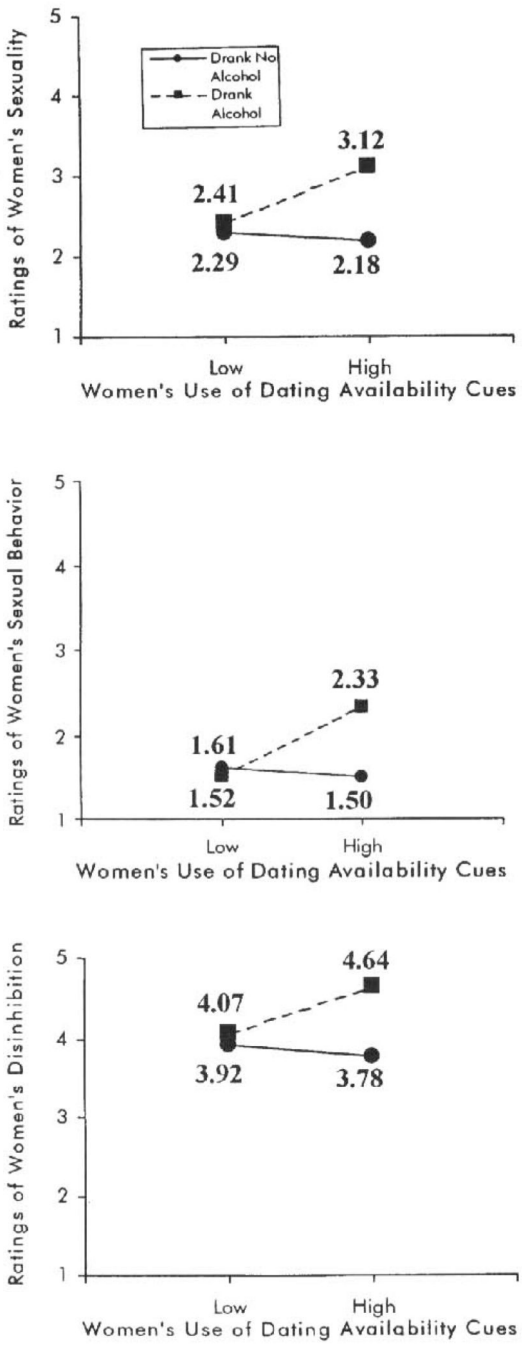

Figure 1.

Effects of women's use of dating availability cues and alcohol consumption on ratings of their sexuality

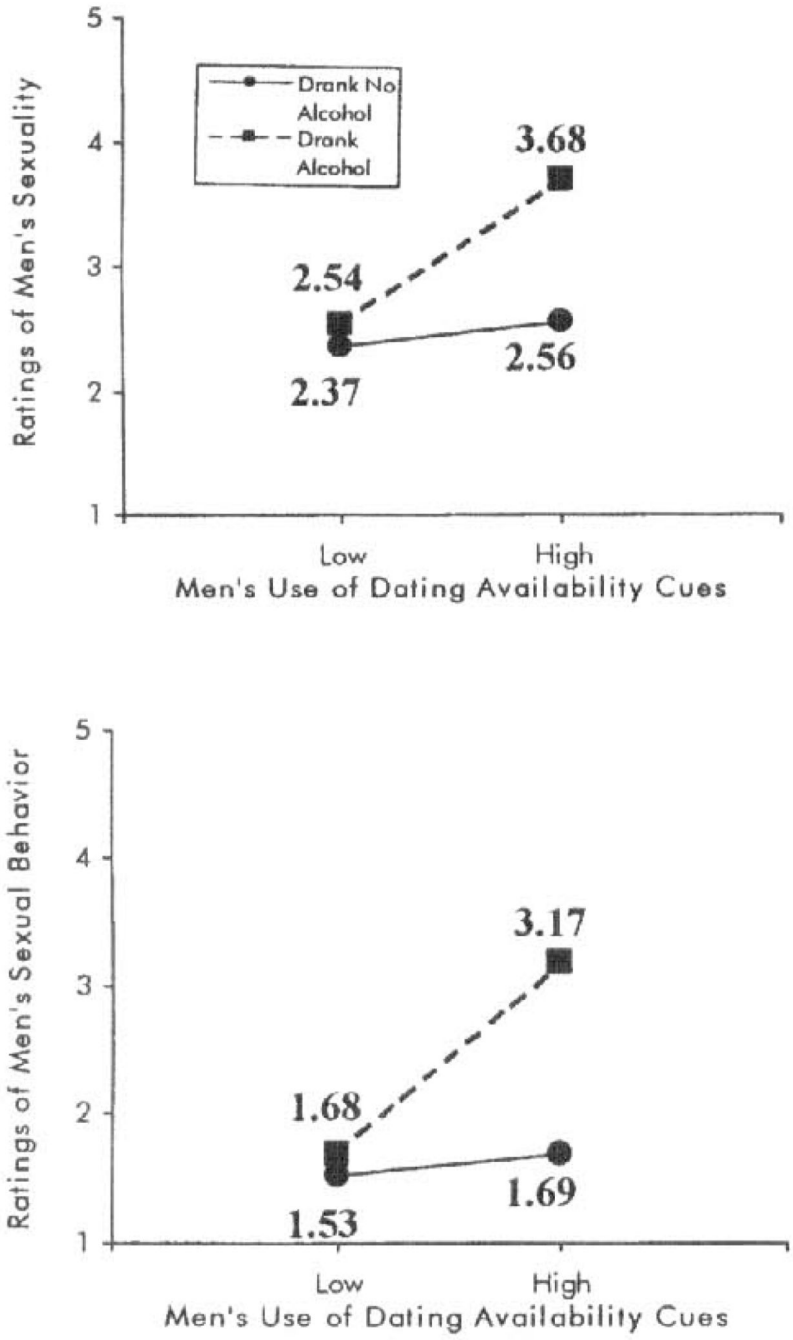

Figure 2.
Effects of men's use of dating availability cues and alcohol consumption on ratings of their sexuality

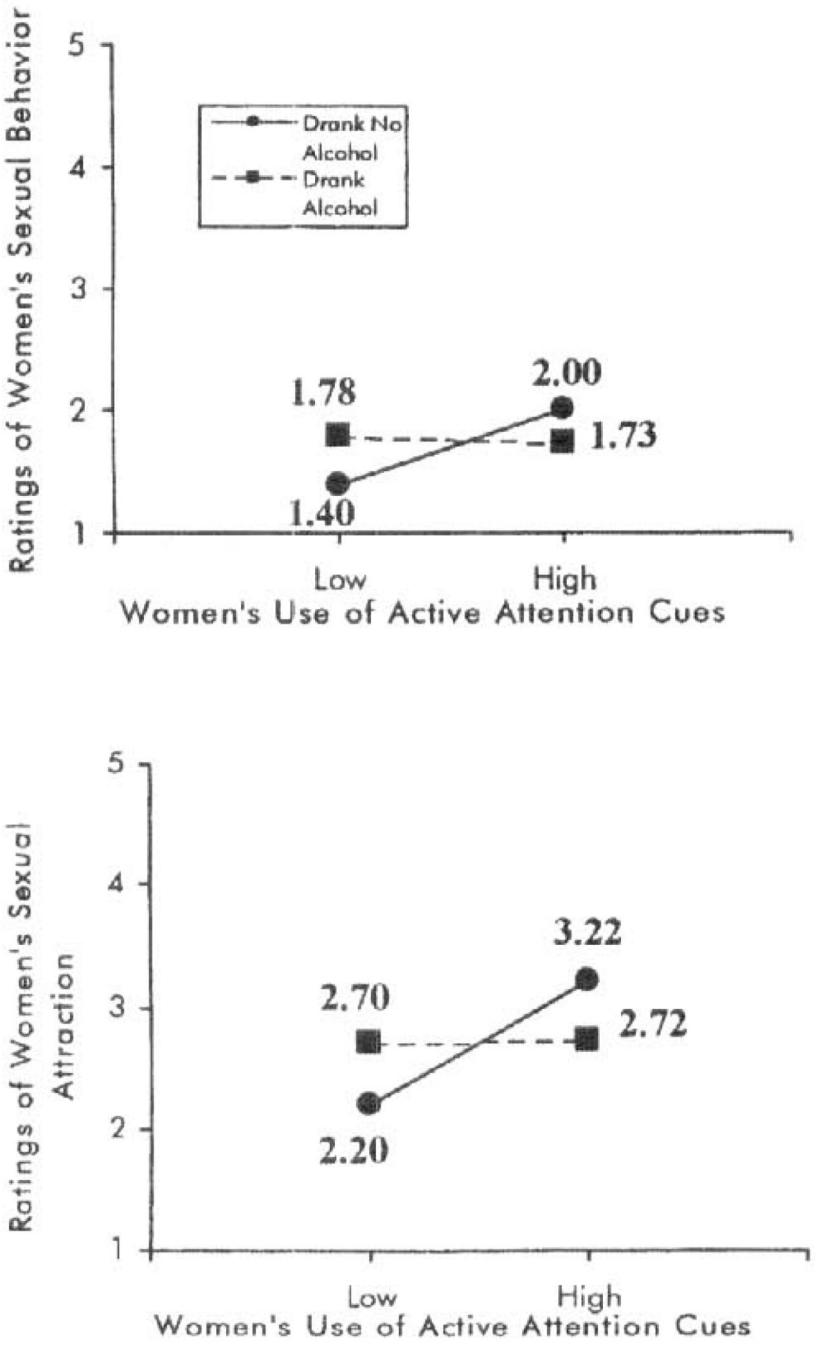

Figure 3.
Effects of women's use of active attention cues and alcohol consumption on ratings of their sexuality

Table 1

Gender of participant effects, (N = 176)

	Participant gender			
	Mean Mean (SD)	**Women Mean (SD)**	***F* (1/160 df)**	***p* value**
Ratings of female targets				
Sexuality	2.81 (1.25)	2.10 (1.12)	16.00	.001
Sexual behavior	1.92 (1.14)	1.14 (0.96)	10.16	.002
Sexual attraction	2.97 (1.24)	2.26 (1.50)	11.29	.001
Disinhibition	3.97 (1.14)	4.20 (1.20)	1.76	NS
Friendliness	5.56 (1.09)	5.77 (1.11)	1.54	NS
Ratings of male targets				
Sexuality	3.04 (1.56)	2.12 (1.09)	21.48	.001
Sexual behavior	2.19 (1.25)	1.34 (0.92)	25.52	.001
Sexual attraction	3.84 (1.88)	2.36 (1.46)	35.81	.001
Disinhibition	4.44 (1.21)	4.03 (1.18)	5.35	.02
Friendliness	5.78 (0.96)	5.56 (1.13)	1.81	NS

Table 2

Alcohol consumption effects (N = 176)

	Alcohol condition			
	Alcohol Mean (SD)	**No alcohol Mean (SD)**	***F* (1/160 df)**	***p* value**
Ratings of female targets				
Sexuality	2.63 (1.34)	2.27 (1.10)	4.05	.05
Sexual behavior	1.73 (1.24)	1.60 (0.90)	0.66	NS
Sexual attraction	2.68 (1.52)	2.56 (1.52)	0.30	NS
Disinhibition	4.26 (1.17)	3.90 (1.14)	4.43	.04
Friendliness	5.73 (1.26)	5.60 (0.92)	0.61	NS
Ratings of male targets				
Sexuality	2.74 (1.51)	2.42 (1.32)	2.71	NS
Sexual behavior	1.95 (1.38)	1.58 (0.90)	5.01	.03
Sexual attraction	3.36 (1.88)	2.84 (1.76)	4.32	.04
Disinhibition	4.47 (1.15)	4.00 (1.23)	7.18	.01
Friendliness	5.78 (1.02)	5.56 (1.02)	1.91	NS