Sex Roles, Vol. 32, Nos. 3/4, 1995

The Impact of Mode of Presentation on Gender Differences in Social Perception[1]

Christine Bowman Edmondson and Judith Cohen Conger[2]
Purdue University

This research investigated the conditions under which males might perceive sexuality in females in heterosexual interactions (the Abbey effect). Caucasian male and female couples participated in a brief interaction in which they were rated by observers. Interactants also rated themselves as well as their partners. These live interactions were videotaped, audiotaped, and photographed, and subsequently rated by other observers (subjects). Subjects made ratings on a variety of dimensions, including adjectives relating to the "sexuality" of the interactants as well as the interactants' desire for future interaction with their partners. Results indicated that males attributed more sexuality and a higher desire for future interactions to females they observed or with whom they interacted than females did. Further, the tendency to attribute sexuality was affected by way in which stimuli were presented to the raters. Photos, which had the least amount of information relative to the other methods, produced the highest sexuality and future interaction ratings, suggesting that stereotyping might play a role. Implications of the results and future research are discussed.

There is a common belief in the general population that men may (mis)attribute flirtatiousness to women who behave in a friendly manner. Abbey (1982) provided empirical support for this contention when she found that males, who observed or briefly interacted with females, rated them as more seductive and promiscuous than females did. Further, males perceived the female interactant as more attracted to and more willing to date the male interactant than females did. Interestingly, it appeared that males rated all

[1]This research was based on a master's thesis conducted by the first author under the direction of the second author. We gratefully acknowledge the assistance of Anthony J. Conger in the design and analysis of this research.
[2]To whom reprint requests should be addressed at Purdue University, Department of Psychological Sciences, West Lafayette, IN 47907.

0360-0025/95/0200-0169$07.50/0

targets more highly on sexual interest variables than females did . . . including other males. Abbey concluded on the basis of this research that "men are more likely to perceive the world in sexual terms and to make sexual judgments than women" (p. 836).

The finding that males may misattribute sexuality to females has been implicated by Shotland (1985) as a possible factor in acquaintance rape and by Saal, Johnson, and Weber (1989) as a factor in sexual harassment. While it is tempting to invoke misattribution as a causal variable in sexual coercion and sexual harassment, a closer examination of the data suggests caution. As Gaulier and Allgeir (1989) point out, while Abbey (1982) certainly found significant sex-of-rater effects, the means for these effects were all well below the midpoint (4) of the scale and the differences were not very large.

While the effect has certainly been replicated by Abbey and her colleagues (Abbey, Cozzarelli, Harnish, Abbey, & DeBono, 1990; Abbey, Cozzarelli, McLaughlin, & Harnish, 1987; Abbey & Melby, 1986) as well as other researchers (Gaulier & Allgeir, 1989; Saal, Johnson, & Weber, 1989), there have been some unsuccessful attempts (Koralewski and Conger, 1992; Sigal, Gibbs, Adams, and Derfer, 1988, Study 1; and Quakenbush, 1987). Perhaps more importantly, the magnitude of the effect as well as the absolute level of the sexual adjective ratings has varied. Thus, in the original study (Abbey, 1982), the multivariate analysis based on the combination of three sexual adjectives-flirtatious, seductive, and promiscuous was significant; however, follow up univariate analyses indicated that the effect was primarily due to the rating of the female target on promiscuousness, 2.2 vs 1.7 on a 7-point scale (There was a trend for seductiveness, $p \geq .09$, and no effect for flirtatiousness). On the other hand, Abbey et al. (1987), found significant female target effects for ratings of sexy and seductive and a marginal effect for promiscuous with the absolute levels of the ratings *at* or *above* the midpoint of the scale (e.g., seductiveness ratings for the male and female subjects of the female target were 4.53 vs 3.88). Further, the effect was considerably enhanced when the female target wore revealing vs nonrevealing clothing (e.g., ratings on flirtatious, sexy, seductive, and promiscuous were all significant).

The initial study was based on live interactions, while the Abbey et al. (1987) study used photographs. Undoubtedly, the variability of the effect is contributed to by the different methodologies that have been used. Specifically, stimuli have been presented in different modalities (self as stimuli, live persons as stimuli, videotaped stimuli, audiotaped stimuli, and photographed stimuli). For example, Abbey (1982) used live actors, Shotland and Craig (1988) used videotaped dyads, Gaulier and Allgeir (1989) used audiotaped dyads, and Abbey and Melby (1986) used photographs.

The mode of presentation of the stimulus dyads is important because it influences the amount of information available to the rater. In particular, when subjects rate a live stimulus dyad, they are basing their ratings on a different type and amount of information than when subjects rate photographs. It is also likely that there are additional self-presentational effects when subjects rate themselves and their partners after interacting that are not present when subjects rate stimulus dyads that they observe.

A related issue is the number of stimuli or target dyads that are to be judged. This has varied from 36 male-female target dyads, with each dyad rated by two observers—one male and one female (Abbey, 1982), to as few as one male-female stimulus dyad rated by 60 male and 60 female subjects (Gaulier and Allgeir, 1989). While increasing the number of raters can enhance the reliability of the ratings, restricting the number of stimuli to be judged decreases the generalizability. Other variations in methodology that might influence the results include the number of dimensions to be rated, wording of questions, and the settings in which the interaction took place (See Edmondson, 1992). Additionally, if the effect is small (one-half of a point on a seven-point scale) and subjects' endorsements tend to be below the midpoint of the scale, perhaps some modes of presentation of the stimuli (i.e., live, audio, video, etc.) are more powerful in fostering this effect than others.

Thus, it was decided to more systematically explore possible (mis)attribution effects in heterosexual interactions as a function of mode or type of stimulus presentation used. In order to accomplish this, heterosexual stimulus dyads were presented to raters using five modes of presentation (i.e., self as stimuli, live actors as stimuli, videotaped stimuli, audiotaped stimuli and photographic stimuli) with the effect assessed by the impact on sexual interest ratings (attributions) assessed.

One of the unique features of this study was its attempt to closely replicate the Abbey (1982) study while investigating the impact of mode. In the original study, Abbey had a male-female dyad interact, while another male-female dyad observed. In total, there were 36 interacting dyads who were evaluated by 36 observer dyads. In order to preserve this basic experimental design and extend it to other modes, each pair of interacting dyads in this study was videotaped, audiotaped, and photographed, so that same interacting dyad could be presented across all modes (live, video, audio and photographs). That is, each interacting dyad was presented to a different male and female subject pair across all modes of stimulus presentation, thereby preserving the original rating context. Further, since Abbey (1982) collected self as well as observer ratings, this study included self-rating as one of the mode of presentation conditions.

Thus, the final design consisted of three factors: a 2 (gender-of-rater) by 2 (gender-of-target) by 5 modes-of-presentation (self, live, videotape, audiotape, and photographs).

METHOD

There were two data collection procedures: live data collection and media data collection for the presentation of the stimulus pair in the five modes. The live data collection procedures describe the collection of the live interactions, the method for videotaping and photographing these interactions, as well as the procedures for gathering the self and live observer ratings. The media data collection procedures describe the method for the presentation of the videotaped, audiotaped, and photographed interactions to male-female subject pairs who served as raters.

Live Data Collection Procedures

Subjects. The current study used the data and media from 128 subjects who participated in the live data collection phase of the study.[3] Seventy-two of the subjects earned credit in their introductory psychology course in return for their participation in the study. Subject recruitment problems necessitated the use of advertisements to solicit 56 subjects who earned five dollars in return for their participation in the study. Subjects were Caucasian, between the ages of 18 and 23, and were *not* married, engaged, or dating exclusively. A one-way MANOVA on the three dependent measures indicated that paid subjects gave responses similar to those of non-paid subjects ($F(4,251) = .59$, NS).

Procedure. As mentioned previously, this procedure is very similar to Abbey (1982). Subjects signed up to participate in groups of four (two females and two males). The experimenter told subjects that the purpose of the study was to investigate how "topic choice" influenced the flow of conversation. Next, the experimenter told them that they would converse with two different partners and complete questionnaires about these conversa-

[3]A total of 208 subjects participated in phase 1 of the data collection. However, the media and data from only 128 of these subjects were used. A subject's media and data were not used in the following circumstances: One of the subjects participating in the session was of non-Caucasian background (12%); Fewer than four subjects attended the experimental session (50%); There were technical difficulties with the equipment (4%); Subjects did not comply with experimental instructions (5%); or one of the subjects in the session refused to give permission to use their videotape, audiotape, or photograph (29%). All subjects were given credit or paid whether or not their data were used.

tions. Subjects drew numbers in order to determine pairings, and one couple remained in the room, while the experimenter escorted the other couple to the observation room.

The experimenter told the couple in the observation room that instead of having their own conversation they would watch the other couple converse and then complete questionnaires about the interaction. Next, the couple in the interaction room selected the topic "Life at Purdue University" through a bogus drawing. The experimenter instructed them to converse for about five minutes, after the experimenter left the room.

After five minutes, the experimenter stopped the interaction and distributed either the actor or observer questionnaires to the subjects. When the questionnaires were completed, the interacting couple was informed that they had been observed by the other couple and were asked to observe the other couple during their conversation. The couples then switched rooms and the procedure was repeated. The purpose of the second interaction was to help subjects to feel that everyone had been treated fairly. Since the conditions of the second interaction were different from those of the first interaction and different from Abbey (1982), the data from the second interaction were not analyzed.

After completing the interactions and the ratings, the experimenter debriefed the subjects and told them the purpose of the study. The experimenter also informed the subjects that they had been videotaped and asked for their permission to use both the video and audio recordings on the videotape in another study. Subjects were offered the opportunity to watch the experimenter erase their videotapes without anyone seeing it, if they so desired. If subjects gave their permission for the experimenter to use their videotape and audiotape, the experimenter asked them to pose for a photograph and give permission to use it in another study.

Questionnaires. The questionnaire consisted of three sets of ratings that used a 7-point Likert rating scale ranging from 1 (not at all) to 7 (very). The first set of ratings were questions that asked the subjects to rate the quality of the conversation (How interesting, creative, and educational was it? How much did each person contribute and was there enough time?). The second set of ratings consisted of 15 adjectives (cheerful, friendly, assertive, flirtatious, considerate, interesting, likable, seductive, attractive, warm, intelligent, promiscuous, sincere, sexy, and socially skilled); and the third set of ratings consisted of questions pertaining to how much the actor was attracted to and might want to interact with their partner in the future (Were they interested in becoming friends, Were they sexually attracted to each other, and Did they want to date the other person?).[4] These ratings

[4]Copies of this material can be obtained by contacting the second author.

included the questions and adjectives that were used in the Abbey (1982) study, as well as two additional adjectives (sexy and socially skilled). Actors rated themselves and rated their partners using "actor" questionnaires. Observer questionnaires were the same except that the wording was changed to take into account the observer's frame of reference. Finally, half of the actors rated themselves first and half of the actors rated their partners first. Similarly, half of the observers rated the male actor first and half rated the female actor first.

Media Data Collection Procedures

There were 32 videotapes, 32 audiotapes, and 32 photographs (collected during the 32 live interactions described above). Two subjects (one male and one female) rated a stimulus dyad in either the video, audio, or photograph mode-of-presentation condition, just as two subjects had rated a stimulus dyad in the self and live mode-of-presentation conditions.

Subjects. Ninety-six female and 96 male Caucasian subjects, recruited from introductory psychology classes, were randomly assigned to either the video, audio, or photographic condition, and then randomly assigned to a specific stimulus dyad.

Equipment. Subjects in the videotape condition viewed and listened to the videotaped interaction on a Panasonic Color Pilot 19" monitor, while subjects in the audiotape condition listened to the videotape play while the video monitor was disconnected. Subjects in the photographic condition viewed a 4" × 6" photograph matted in a 7" × 9" frame that was hand held. The subjects in the video, audio, and photograph conditions were not told a cover story, instead, they were told that the researchers were interested in their impressions of the people they observed.

Questionnaires. Subjects used the observer questionnaire described above, except in the photographic condition where questions about the quality of the conversation were excluded.

Procedure. Subjects signed up for the experiment in groups of two (one male and one female). When subjects arrived they sat in two chairs, separated by a wooden screen, facing a monitor. This setup was used to prevent subjects from influencing each others' ratings. Subjects were asked to refrain from talking or laughing during the experiment. Observations of subjects during the experiment indicated that they complied with these instructions. The experimenter asked the subjects to sign a confidentiality agreement stating that they would not discuss the videotapes, audiotapes, or photographs with anyone in order to ensure confidentiality of the target couple in the videotape. The experimenter, then, gave subjects in the pho-

tographic condition a photo to view for two minutes, or, if the subjects were in the other conditions, the experimenter instructed the subjects to watch or listen to the interaction. Subjects then completed the questionnaires and the experimenter debriefed them.

RESULTS

Statistical Procedures

Abbey (1982) analyzed her data by conducting a MANOVA and following it up with an univariate analyses of variance (ANOVA) on each dependent variable. Conducting univariate ANOVAs on items that comprise a significant multivariate composite without correcting for Type I error could be problematic because the variance of a multivariate composite is not equivalent to the variance of the sum of the items from which it is comprised. That is, it is still necessary to control for a Type I error when conducting the univariate tests (Conger, 1984; Dar, Serlin, and Omer, 1994).

Since we were not interested in the multivariate composite per se, it was decided to use a procedure for analyzing the data that would allow us to directly examine univariate effects without unduly increasing our Type 1 error rate. Thus, initially a principal component analysis was conducted in order to derive composites to use as dependent variables. Next, ANOVAs were conducted on the dependent variables and a Bonferroni correction was used to control for Type I error inflation.

Principal Component Analysis

A principal components analysis was carried out on the 15 adjectives and three future interaction questions. Data from the residual matrix from a 2 (gender-of-subject) by 2 (gender-of-target) by 5 (mode of presentation) between-subjects MANOVA were used for the principal components analysis (use of the residual matrix removes the effect of the experimental conditions on the adjectives so that relationship among the adjectives devoid of any manipulation can be examined). A varimax rotation yielded a fairly straight forward three-factor solution which were labeled: Nice, Sexuality, and Future Interaction that accounted for 33, 16, and 10% of the variance, respectively (see Table I for individual adjective loadings on each component). The adjectives that loaded on each component were summed to produce the three composite variables (Sexuality, Nice, and Future Interaction).

Table I. Principal Components Analysis: Adjective Loadings on Each Component[a]

	Components		
Adjectives	Nice	Sexuality	Future actions
Friendly	.802		
Likable	.786		
Warm	.761		
Considerate	.741		
Cheerful	.723		
Interesting	.684		
Sincere	.667		
Social skill	.663		
Intelligence	.548		
Seductive		.830	
Sexy		.757	
Promiscuous		.746	
Flirtatious		.709	
Attractive		.545	
Dating			.900
Sexual attraction			.877
Friends			.831

[a]Loadings less than .35 are excluded. An additional adjective, assertive, was eliminated.

The Nice, Sexuality, and Future Interaction composite scores were then analyzed in three separate analyses of variance using a Bonferroni correction (.05/3 = .0167) to adjust the alpha level. As mentioned previously, this study had three factors of interest: gender-of-rater (male and female), gender-of-target (male and female) and mode-of-presentation (self, live, video, audio, and photo). A 2 (gender-of-rater) by 2 (gender-of-target) by 5 (mode-of-presentation) "between stimulus" ANOVA[5] was conducted on each of the three dependent variable composites.

[5]All of the factors are repeated across stimulus dyad. Because of this, we use the term "stimulus dyad" rather than "subjects" when discussing statistical analyses. Thus, mode-of-presentation, gender-of-rater, and gender-of-target are all within-stimulus dyad factors. Gender-of-target is a within-subjects factor as well as a within-stimulus dyad factor because it is repeated across subjects. For this data analyses, one could use a design that controls the within-stimulus dyad and the within-subject variance (i.e., a repeated measures randomized block design). The within-subjects design reduces the overall error term by parceling out the variance from dyad and subject sources and typically increases power. On the other hand, the between-subjects design has been used more frequently and is somewhat more straightforward. Further, power was not issue in this data set and thus we chose to present the between-subjects results. In reality, we analyzed the data using both designs, and because the analyses indicated that stimulus dyad and subject accounted for very little of the variance, the between-subjects analysis seemed preferable for ease of presentation. Both designs produced similar results (i.e., effects that were significant in one analysis were also significant in the other analysis and effects that were not significant in one analysis were also not significant in the other analysis).

Table II. Means and Standard Deviations for Rater and Target Effects[a,b] Based on Composites

	Sexuality		Future		Nice	
	Mean	SD	Mean	SD	Mean	SD
			Sex of rater			
Males vs	15.22	5.19[c]	11.63	4.05[c]	43.00	7.78
females	13.56	5.47	10.45	4.42	43.56	8.71
			Sex of target			
Males vs	13.59	5.26[c]	10.66	4.15	41.68	8.59[c]
females	15.19	3.04	11.41	4.37	57.45	7.58

[a]Means and standard deviations for the mode-of-presentation main effects are in Table III.
[b]Composite scores are based on the mean sum of different total numbers of adjective ratings for each composite. See Table I for adjectives that comprise each composite.
[c]$p < .001$.

Sexuality Composite. The Sexuality Composite yielded three significant main effects: gender-of-target ($F(1,620) = 15.95$, $p < .0001$), gender-of-rater ($F(1,620) = 17.02$, $p < .0001$), and mode-of-presentation ($F(4,620) = 12.92$, $p < .0001$). (See Table II for means and standard deviations.) Main effects indicated that female targets were rated as more sexual than male targets and that male raters gave higher sexuality ratings than female raters. The self-rating mode of presentation condition produced the lowest sexuality rating, while the photo condition produced the highest rating and was most disparate from the other methods. While Neuman-Keuls post hoc procedures revealed several differences among these methods (See Table III); the most striking of these was the degree to which the method that had the least information (the photo) produced the highest ratings.

In addition, there was a strong trend ($F(4,620) = 2.83$, $p < .024$) for a gender-of-rater by mode-of-presentation effect, which is worth considering even though it fell short of the specified significance level, as it has implications for understanding the effect of the mode of presentation upon gender differences in perception.[6] That is, while males always gave higher ratings than females across all modes, the maximum discrepancy between male and female raters occurred in the self-rating condition (difference = 4.27), while the average discrepancy across all the other conditions was only .67. This is noteworthy in that the self-rating condition produced the lowest sexuality ratings which seemed to be largely determined by the fe-

[6]The gender-of-target by gender-of-rater interaction also reached a trend level ($F(1,620) = 2.35$, $p < .05$); however, we chose to discuss only those trends that came close to the alpha level we specified. Thus, trends that were $p < .025$ were discussed.

Table III. Means and Standard Deviations and Summary of Neuman-Keuls Comparisons for the Mode-of-Presentation Effect

	Sexuality composite[a,b,c]				
Mode of Presentation	Self	Video	Live	Audio	Photo
Mean	12.80	13.30	14.22	14.69	16.95
Standard deviation	5.47	4.86	4.73	5.20	5.64

	Nice Composite				
Mode of Presentation	Video	Audio	Photo	Live	Self
Mean	40.64	40.72	43.33	44.51	47.10
Standard deviation	8.61	8.01	8.30	7.37	7.02

	Future Interactions				
Mode of Presentation	Self	Video	Live	Audio	Photo
Mean	8.98	10.53	10.81	11.48	13.39
Standard deviation	3.92	4.21	4.00	4.11	3.96

[a]Composites are based on the mean sum of ratings.
[b]Composite sums are based on different total numbers of adjective ratings. See Table I for adjectives that comprise each composite.
[c]Mode presentation effects *not sharing an underline* are significantly different, $p < .05$.

male raters who rated themselves as much lower in sexuality than their male counterparts rated themselves (14.92_{males} versus 10.65_{females}).[7]

Nice Composite. The Nice composite yielded a main effect for gender-of-target ($F(1,620) = 27.09$, $p < .0001$) and a main effect for mode-of-presentation ($F(4,620) = 16.97$, $p < .0001$) with no other significant effects. Female targets were seen as "nicer" than male targets (See Table III). Further, individuals rated themselves as "nicest" in the self-rating condition, which was significantly different from all other conditions. They were rated as least "nice" in the video and audio conditions, which were not different from one another (See Table III).

[7]Since this interaction was just a trend, we did not do follow-up analyses; however, inspection of the data reveals such large differences between males and females in the self-mode in comparison to other modes, that one comes to the inescapable conclusion that it was this difference that was the major determinant of this interaction.

Future Interaction Composite. Significant effects for the Future Interaction composite included a gender-of-rater ($F(1,620) = 14.39, p < .0001$) and a mode-of-presentation effect ($F(4,620) = 21.15, p < .0001$), with a strong trend for a gender-of-target effect ($F(1,620) = 5.67, p < .018$). Basically, the main effects indicated that males were more desirous of future interactions than were females and females were sought after more than males were (Table III). Neuman-Keuls analysis carried out on the mode-effect indicated that raters were most inclined toward future interactions when viewing a photo and least inclined in the self-rating condition (Table II). Of interest is the fact that both the photo and audio modes produced the highest ratings, although they contained the least amount of information about the other person in comparison to the other modes.

The three two-way interactions did not reach significance. However, the strong trend for the gender-of-rater by mode-of-presentation effect ($F(4,620) = 2.80, p < .025$) might be worth considering because of its implications for the mode-of-presentation effect.[8] This trend suggests that while male raters reported that they would seek future interactions more than females across all modes, the largest difference between male and female raters again occurred in the self-mode (3.2), as it did with the sexuality composite. The average discrepancy across all other modes between male and female raters was only .61. Again, females in the self-rating condition gave the lowest ratings indicating a lesser desire for future interactions as compared with males, consistent with the previous results of the sexuality ratings.

DISCUSSION

The present study confirms the results of Abbey (1982) who found that men tend to attribute more sexuality to women they observe or with whom they interact than do women. They also attributed more sexuality to themselves and to other men as well. However, with the exception of the self-rating condition, the differences between male and female raters were not very large, the magnitude of the sexuality ratings were not very high and the ratings tended to be affected by the way (mode) in which the stimuli were presented. The maximum discrepancy between males and females that occurred in the self-rating condition may have particular ecological relevance, since the interacting couples were also the observers. That

[8]The two other two-way interactions were also trends: gender-of target by gender-of-rater ($F(1,620) = 4.12, p < .043$) and gender-of-target by mode-of-presentation ($F(4,620) = 2.03, p < .089$). Again, since they were weaker trends, we chose not to discuss them further.

is, the self-ratings by females indicated very low ratings of sexuality and a desire for future interaction in comparison with the males' ratings on those adjectives. If we accept the premise that individuals have the best access to their own thoughts and feelings, than it appears that the disparity between the genders is maximized under this condition.

It is further noteworthy that the condition with the least amount of information available, the photo, produced the highest sexuality and future interaction ratings, perhaps suggesting more reliance on sex stereotyping in the absence of information. The fact that the audio condition, which had the second lowest amount of information, also produced the second highest ratings in both the sexuality and future interactions measures, also tends to support the notion that the respondents tended to rely more on sex stereotyping in the minimal information conditions. Eagly, Ashmore, Makhijana, and Longo (1991) found, in their meta-analyses of attractiveness, that the strength of the physical attractiveness stereotype was affected by the amount of information provided about the target stimulus. That is, the presence of "individuating" information weakened the attractiveness stereotype. We suspect that something very similar may explain these results. Thus, a photo or merely a voice might foster sex stereotyping, whereas the presence of individuating information in the live and video condition tended to dampen this effect. Also as Eagly et al. (1991) note, averaging models predict a decrease in the contribution or weight of a particular item of information as the perceiver takes more information into account. They further note that repeated studies have shown that perceivers' inferences from sex to behavior is weakened by providing additional information about the targets. Watching a videotape or a live interaction allows the rater access to more information than a photo or an audiotape which might well reduce the tendency to sexualize the target.

The finding for the Nice Composite, however, produced a different pattern of results. The self-mode produced the highest ratings, followed by the live and photo ratings, which were similar in magnitude, with the video and audio ratings producing the lowest ratings, which were also not different from one another (Table III). The high ratings for the self-mode might indicate that a self-enhancing bias was operating when subjects were evaluating themselves. However, the remaining pattern of results are not easily explained. One possibility is that the live-rating condition also engendered a bias to perceive others as having positive traits. If this were the case, then the amount of individuating information available might explain the fact that there were higher ratings in the photo mode (with little information) compared to the audio and video conditions (with more information). This is, however, a highly speculative and not entirely satisfactory explanation that is in need of replication.

While there was a tendency for males to attribute more sexuality and a stronger desire for future contact than females, the effect was not very strong in the laboratory (i.e., the absolute magnitude of the ratings tended to be below the midpoint of the scale). Further, if one considers the magnitude of experimental effects (w^2) in terms of the amount of variance accounted for, the gender-of-target effect for the sexuality component accounted for about 2% of the variance (w^2 = .021) as did the gender-of-rater effect (w^2 = .022), while the mode effect accounted for about 6.5% of the variance (w^2 = .066). The results were similar for the future interaction composite except that the mode effect accounted for even more variance (w^2 = .107) and the gender-of-target and gender-of-rater even less (w^2 = .006 and w^2 = .018, respectively).

However, we have no way of knowing how this (mis)attributional process might be intensified by "real world conditions" and potentiated by the presence of other contextual factors. Misattribution has been invoked as a risk factor in date rape and sexual harassment (Shotland, 1985; Saal, Johnson and Weber, 1989). The presence of alcohol in a fraternity party setting might well promote the sexualization of women and subsequent misunderstanding and distortion in the communication processes, particularly when there are normative pressures to behave in stereotypic "masculine ways". Although, presumably there is a wealth of "individuating" information available about another person, this information might not be readily accessible when viewed through a "filter" of alcohol in a party atmosphere. Further, Allgeir and Royster (1991) note that women do not always communicate their lack of interest in a very direct way, but tend to communicate indirectly. Subtleties of this nature may well be lost or easily misinterpreted in this type of context.

Males in this study also tended to give higher sexuality ratings to men as well as women, as they did in the original Abbey (1982) study. Abbey et al. (1987) noted that the observers in the original study had also interacted or observed the interaction and that verbal cues present may have influenced males' ratings of other males' sexuality. Indeed, studies using live interactions or videotapes of naturalistic interactions have found that males attribute more sexuality to other men than women do (Harnish, Abbey, & DeBono, 1990; Shotland and Craig, 1988). However, we obtained this effect and the ratings were *strongest* in the photographic condition. Similarly Abbey and Melby (1986), using photographs, also found that males attributed more sexuality to males than females did, although the cues (touch, distance, and eye contact) in those photographs were systematically manipulated and their salience may have been strongly enhanced. Harnish, Abbey, and DeBono (1990) subsequently argued that perhaps more cues are required for a male to perceive another man sexually than

to perceive sexuality in a women. While the photographic condition in this study did not contain any additional or more salient cues than is typical, we did use multiple photographs (one of each dyad). Thus, there was likely a greater range of cues available than in the Abbey et al. (1987) where only two photographs were used. Using fewer photographs increases the possibility that individual characteristics peculiar to those participants might be more influential in determining the ratings. Nevertheless, it is an interesting finding and Harnish et al.'s (1990) suggestions would be worth following up.

Finally, the generalizability of the results of this study may be limited because only Caucasian subjects were used; thus, it would be useful to replicate this study with different ethnic groups to determine if there are similar gender and mode of presentation effects. A similar limitation is that of age and social economic status of the subjects, who were young college students.

In summary, this research replicated the findings of Abbey (1982) who found that men had a tendency to sexualize women's behavior more than women did, although the absolute ratings tended to be low and the difference between male and female raters rather small. A comparison, however, of the self-ratings of female targets to the ratings of male observers reveals a larger discrepancy between self-stated "interest" and a desire for future interactions and males' attributions than in other conditions. This research further indicates that the way in which the target stimuli are presented (mode) affects the strength of the attributions made.

Further research might benefit from examining how these processes might operate in more real world settings as laboratory conditions might well "dampen" these effects.

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