Differences in Responses to Sexual Cues

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Abstract
Mate selection theories (Buss & Schmitt, 1993) predict that males choose mates based on cues of youth and fertility, while females choose based on physical and psychological cues (social status and personality). Anecdotal observations of males and females viewing a young female fusion belly dancer (Rachel Brice) suggested more females found the dancer attractive than males. We speculated the difference in response was due to females attending to personality characteristics indicative of status, skill, and discipline. In this pilot investigation we surveyed 46 male and 45 female undergraduates (range 18 to 25 years of age) after viewing a video of the same dancer. A between subjects x 2 MANOVA using three variables identified by a Principal Component Analysis of the Stimulus Specific Survey items revealed no significant differences for gender at the .01 level. Grouping subjects according to sex negatively and sex positive attitudes (Fisher, Byrne, White, & Kelley, 1988) revealed main effects of attractiveness and appropriateness of stimulus at the .05 level. No significant differences were found for Expertise or any of the physiological findings. Findings support female particularity in response to visual sexual stimuli.

Background & Rationale
Parental investment theory and research predict that males and females differ in the cues that indicate attractiveness (Bench 1975) in potential mates (Trivers, 1972; Ogus & Gaddum, 2013). Male cues (regardless of sexual orientation) should be visual, and focus on the potential partner’s anatomical indicators of youth and fertility, and any single cue is sufficient for attractiveness (Ogus & Gaddum, 2013). Female cues (regardless of sexual orientation) include physical appearance, but are primarily psychological and focus on social status, competence, and confidence of the potential partner. No single cue is necessary or sufficient for attractiveness (Ogus & Gaddum, 2013). Some studies report that female subjective and physiological responses to sexual cues are more plastic and less specific than that of males (Rupp & Wallen, 2008).

Hypotheses
1. Males and females will respond differently in their subjective rating of attractiveness of the dancer or dancing.
2. Males and females will respond differently to the dance video in their measures of physiological arousal.
3. Males and females will respond differently in their subjective rating of the expertise of the dancer or dancing.
4. Sex negative and Sex positive participants will respond differently in terms of all dependent measures.

Methods
Participants were recruited from the College of Coastal Georgia’s student body, across disciplines and from upper- and lower-level undergraduate classes. There were a total 46 males and 45 females with a mean age of 26.08 (range 18 to 52 years of age). Sex (+) and sex (-) attitudes were not significantly different across gender and were evenly distributed.

Materials
Stimulus Video of Fusion Belly Dancer
- <http://www.youtube.com/watch?v=GWhmgWg_dJI>
- Stimulus Specific Survey
- Surveys
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- Demographics Survey
- Sexual Opinion Survey (SOS) (Fisher, Byrne, White, & Kelley, 1988)
- Physiological Measures of Arousal
- Pulse (change in pulse from baseline (A Pulse))
- Blood pressure (change in Mean Arterial Pressure (AMAP) from baseline
- Procedure
- Informed consent
- Baseline physiological measures obtained before viewing video, at endpoint, and at the end of three-minute video
- Participants completed two surveys
- Debriefing

Results
We ran a principal component analysis (PCA) with oblique rotation (direct oblimin) on the 24 questions assessed in the Stimulus Specific Survey. The Kaiser-Maeyer-Olkin measure verified the sampling was adequate for the analysis, KMO = .78, and Bartlett’s test of sphericity was significant, indicating that correlation between survey items was large enough for PCA. Eight components had eigenvalues > Kaiser’s criterion of 1, and the components accounted for 80.8% of the variance. The scree plot showed inflections that justified examination of three principal components that accounted for 64.8% of the variance. These were maintained for the final analysis. Items that clustered on the same components suggest that component 1 represents a measure of Attractiveness, component 2 represents a measure of the Expertise of the dancer/dancing, and component 3 represents the appropriateness of viewing by a 13 year old child, i.e., Childsafe. Participants were grouped on the basis of median split of SOS scores into sex (+) and sex (-) groups, we conducted a between subjects x 2 MANOVA using those dependent measures. Because of the controversy concerning Likert Scale data and parametric analyses, we set our alpha level at .05 and interactions to p < .05. Using Pillai’s trace, there was a significant effect of sex attitude only [F(16, 586) = 5.9, p < .05].

H1: Males and females did not differ in their subjective rating of Attractiveness of the dancer or dancing. 
H2: Males and females did not respond differently to the dance video in their blood pressure or pulse.

H3: Males and females did not respond differently in their subjective rating of the Expertise of the dancer or dancing.
H4: Sex (+) participants rated the dancer higher in Attractiveness than Sex (-) participants. Significant main effect for sex [F(1, 586) = 7.980, p < .005, partial η² = .013]

Design and Analysis
- Principal component analysis (PCA) to reduce the number of variables measured within the specific survey
- 2 x 2 MANOVA using three variables identified by the principal component analysis (Attractiveness, Expertise, and Childsafe, e.g. appropriate for a child under 12 to view)
- Physiological data were analyzed using non-parametric statistics

Discussion
Absence of gender effects on perceptions of attractiveness and the tendency for females (M=3.5, S.D. = 12) to find the dance/dancing more attractive than males (M=3.5, S.D. = 12) may be a indicative of female plasticity relative to mate specificity in response to sexual cues (Ogles et al. 2004). Alternatively it may be the result of females locating a level of commitment and discipline necessary to move one’s body like the dancer (Ogus & Gaddum, 2012) or projection to “be” the female in the video (Rupp & Wallen, 2008). Although we failed to find a gender difference in ratings of Expertise. Our findings support the pattern observed among males, i.e., individuals to perceive a greater variety of stimuli as attractive, as well as the appropriateness for viewing by a 12 years old child (Fish & Ogus, 2005). The failure to find any differences in the two physiological measures available in our laboratory suggest that these measures are too crude to be of value. Alternatively, the absence of a gender difference in physiological arousal could be argued as supporting female plasticity, i.e., females’ specific response to sexual cues.

Implications and Future Directions
- We plan to further investigate the reasons for differences in subjective perceptions of the dancer and dancing (e.g., religiosity, mid eastern bias, age of participant).
- In future investigations, we plan to ask male and female participants to identify the specific cues on which they base their subjective response.
- In future investigations, we plan to examine the possibility that males are desensitized to clothed body parts as a function of exposure to pornography.

References

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