The environment’s influence on mate preferences

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Abstract
Two studies tested the hypothesis that the degree to which individuals are selective in a location is influenced by the perceived probability that others within a given location can support reproductive goals. In Study 1 (n = 72), participants were asked to imagine themselves in various locations and asked their minimum criteria for a one-night stand. Both male and female participants were less selective in locations that were perceived to support their reproductive goals and became more selective in non-supportive locations. Study 2 (n = 300) extended and replicated the findings in a field study in which experimenters collected criteria in six locations. Limitations and implications of the current research are discussed.

Keywords: Erotic plasticity, mate preferences, gender differences, evolution, sexual strategies

Introduction
A commonly overheard statement in the dating scene today is something akin to “there just aren’t any good men around here”. Anecdotal evidence suggests that such comments are more likely to be stated in bars and at local parties than in classrooms or libraries. But are the men that frequent bars truly different from those who attend classes? Ninety percent of college students claimed to have attended a party in the past month (Clark, 1985) and over 66% of college students agreed that they have visited a bar in the last month (Kraft, 1982). This large percentage suggests that the same men and women that frequent classes and libraries are also the ones who visit the local bars and parties. However, if the same men and women frequent both locations, then why do
women expound such comments about men in bars but not in other locations? And alternatively, why don’t men say such comments about women in bars? A possible explanation for this phenomenon comes from the model of variable sexual responsiveness (Thiessen, 1994). The model of variable sexual responsiveness provides a theoretical account to understand how the environment influences perceptions of the opposite sex. In the following sections, Thiessen’s (1994) model is used to describe why different locations are hypothesized to lead to different reactions by men and women, then how different locations influence women, then men, is discussed.

Model of variable sexual responsiveness

The classic view of the mating strategies of men and women is derived from Trivers’s investment model (1972), which suggests that women, due to the large initial investment in child rearing, tend to have a long-term relationship orientation; whereas men, due to their small initial investment, tend to have a shorter relationship orientation. This model is clearly oversimplified because it accounts only for an average person in an average situation. Obviously, in some situations men exhibit a longer relationship orientation and at other times women exhibit a shorter relationship orientation.

The model of variable sexual responsiveness (Thiessen, 1994) attempts to address this simplification by considering the environment’s influence on an individual’s relationship orientation. Thiessen argues that the motivation for a particular type of relationship is influenced by specific cues within the environment that infer the ability of the others within an environment to support reproductive goals. In other words, a key determinant of evaluations of others is influenced by the perceived ability of others to support reproductive goals. Because of inherent sex difference in reproductive goals, men’s and women’s responses to an environment are discussed separately.

Female responsiveness

For women, due to the potential tremendous parental investment from a single sexual act (i.e., 9 month pregnancy, 18 years of child rearing), women tend to have a long-term relationship orientation (Buss & Schmitt, 1993; Gangestad & Simpson, 2000; Schmitt, Shackelford, & Buss, 2001). Women, more than men, tend to prefer traits that predict long-term investment ability (such as good earning capacity, ambition, professional degrees), have a preference for a smaller number of sex partners over a lifetime, and have a preference for longer relationships (Buss & Schmitt, 1993; Regan, 1998). One consequence of a long-term relationship orientation is that women evaluate the quality of men with respect to their ability to support these long-term reproductive goals. Specific cues that may point to this ability include cues to resource accumulating abilities, cues to resource extraction, professional attire, and age (Gangestad & Simpson, 2000; Schmitt et al., 2001; Thiessen, 1994). In contexts perceived to be able to support reproductive goals, women exhibit responses consistent with an r-reproductive strategy: decreased
mate preferences, extensive reproductive capacity, interest in many offspring, high level of risk taking (Stearns, 1976). In contexts perceived to be unable to support reproductive goals, women exhibit responses consistent with a K-reproductive strategy: increased mate preferences, limited reproductive capacity, interest in few offspring, and low levels of risk taking (MacArthur & Wilson, 1967; Stearns, 1976).

The negative consequences of engaging in sexual activity within an environment unable to augment long-term goals are obvious. Women who mate in contexts unable to support reproductive goals are at risk of: mating with a man of poor gene quality, mate switching or expulsion, desertion, and out-of-wedlock pregnancy (Schmitt et al., 2001). This is not to say that women never engage in a short-term mating strategy; women may seek a short-term mating strategy to gain access to good genes (Gangestad & Simpson, 2000) or for immediate resource provisioning (Buss & Schmitt, 1993).

Male responsiveness

Men evaluate the environment differently because of their different mating strategy. Due to a smaller minimum parental investment (i.e., a single sexual act), men tend to have a shorter relationship orientation than women (Buss & Schmitt, 1993; Schmitt et al., 2001). Men express an interest for more mating partners, display an increased willingness to engage in intercourse after a short courtship (Clark, 1990; Clark & Hatfield, 1989), and express lower mate preferences for a one-night stand (Kenrick, Groth, Trost, & Sadalla, 1993). As a result, men evaluate women with respect to their ability to support his shorter-term reproductive goals. Specific cues that point to the ability of women to augment his mating strategy include sex appeal, promiscuity, and sexual experience (Buss & Schmitt, 1993; Schmitt et al., 2001). In contexts perceived to be unable to support reproductive goals (i.e., when women require large investments before sexual intercourse), men exhibit responses consistent with an r-reproductive strategy. In contexts perceived to be able to support reproductive goals (i.e., environments in which little investment is necessary before sexual intercourse), men exhibit responses consistent with a K-reproductive strategy.

Similar to the problems for women, men who mate in environments that do not support their reproductive goals face analogous problems: risk of contracting sexually transmitted diseases, risk of acquiring a social reputation as a “womanizer” (i.e., someone unable to engage in a long-term relationship), and risk of violence from jealous relationship partners (Buss & Schmitt, 1993).

Reproductive goals and relationship preferences

One approach to providing empirical support for this model would be to demonstrate that preferences for a romantic partner would increase or decrease to the extent that the partner had the capacity to support reproductive goals. Kenrick et al. (1993) assessed participants’ minimum mate
preference criteria for five levels of relationship involvement (single date, one-night stand, sexual relations, steady dating, marriage) for seven personality dimensions (physical attractiveness, extraversion, dominance, intelligence, status, family orientation, agreeableness). Kenrick and colleagues found that male and female mate preferences were maximally discrepant for a one-night stand: men were least selective (i.e., expressed low mate preferences), whereas women were their most selective (i.e., expressed high mate preferences). This finding is consistent with the current approach: One-night stands reflect activity inconsistent with women's reproductive goals and, as a consequence, women exhibited greater selectivity. Alternatively, one-night stand opportunities support a man’s short-term reproductive goals and, thus, reduced selectivity resulted.

**Mate preferences**

To maximize responsiveness to the supportive or non-supportive context, men and women should be particularly cognizant of those characteristics in others that predict the ability to support reproductive goals. For men, desirable traits are those qualities that reflect a woman’s reproductive potential (Buss, 2004; Geary, Vigil, & Byrd-Craven, 2004). Because a woman’s body is always essential to the number of offspring and offspring survival, several factors are associated with male preferences: (a) age (Kenrick & Keefe, 1992); (b) health (Symons, 1979) and (c) reproductive capacity (such as waist-to-hip ratio; Singh, 1993). Each trait is then reflected in a woman’s physical attractiveness (Li, Bailey, Kenrick, & Linsenmeier, 2002; Symons, 1979). Due to the relevance of physical attractiveness to men, men should be more selective for physical attractiveness. Research supports this view: In a study comparing dating preferences, men, more than women, were willing to work with, date, and marry members of the opposite sex who they judged to be physically attractive (Feingold, 1990; Stroebe, Insko, Thompson, & Layton, 1971).

Of which traits should women be aware? Men’s reproductive investment cannot be as easily evaluated from physical cues. In humans, a man’s investment usually does not end with insemination. The investment men contribute to their offspring is indirect: it is manifested often in resource accumulation abilities and dominance (Buss, 2004; Geary et al., 2004). In one of the more consistent findings in social psychological research, women, compared with men, tend to prefer high social status, dominance, and cues to good earning capacity (e.g., Buss, 1984; Buss & Barnes, 1986; Howard, Blumstein, & Schwartz, 1987; Sprechner, Sullivan, & Hatfield, 1994).

**Erotic plasticity**

Although this research suggests that both men and women should change with respect to supportive and non-supportive contexts, a considerable amount of research demonstrates that women are more variable than men in their responsiveness to different contexts. Women, more than men,
tend to fluctuate their desire for sexual activity (Kinsey, Pomeroy, Martin, & Gebhard, 1953), their frequency of masturbation (Adams & Turner, 1985), their preferences for sex in marriage (Ard, 1977), and their sexual standards (Harrison, Bennett, Globetti, & Alsikafi, 1974; for a review see Baumeister, 2000). Greater variability in women is attributed frequently to evolved responses to prevent women from making unwise mate choices. Due to the greater initial investment in offspring, the failure to adjust appropriately the level of selectivity to match the environment impacts more dramatically on women (e.g., raising a child alone) than men (e.g., a single sexual act). To help avoid the more deleterious consequences, women adjust more dramatically to environmental cues (Thiessen, 1994). In the case of across-context variability, increased variability would be manifested by the expression of more polarized responses to contexts that either could or could not support reproductive goals.

**Purpose of the studies**

In American culture, there are locations that differ in their perceived likelihood to support different reproductive goals. For instance, bars and fraternity parties are perceived as relatively more likely to support a short-term mating strategy than a long-term mating strategy. Other locations, such as churches or temples, are perceived as more likely to support a long-term relationship orientation than a short-term orientation. The present studies were conducted to investigate the relationship between mate preferences and locations that are thought to either support, or not support, a short-term mating strategy (i.e., a one-night stand).

A short-term strategy, compared with long-term strategy, was the focus of this investigation because: (a) previous research has found that various locations tend to vary more and more consistently for short-term strategies compared with long-term strategies (Kenrick et al., 1993); (b) gender differences in long-term mate preferences tend to be similar to the gender differences of short-term preferences, but smaller in size (Kenrick et al., 1993); and (c) the relative salience of short-term strategies and locations in popular and youth culture.

Investigation of the relationship between the location, the participant’s sex, and selectivity resulted in two hypotheses.

**Hypothesis 1**

Locations marked by a perception that others are interested in a short-term mating strategy (e.g., bar, discotheque) should result in increased selectivity in women and lowered selectivity in men. On the other hand, in locations marked by the perception that others are not interested in a one-night stand (e.g., church or temple), women should be less selective whereas men should be more selective.

Further, because not all traits predict the overall quality of a potential mate, it was hypothesized that, as the location changes, women should change their
preference for status, dominance, and intelligence, whereas men should change their preference for physical attractiveness.

**Hypothesis 2**

Women’s more responsive reactions to locations should result in a greater increase or decrease in selectivity compared with men’s responses. As a result, it was hypothesized that, across locations, women should vary in their selectivity more than men.

This paper describes two studies designed to evaluate the influence of the location and sex on selectivity. In Study 1, a laboratory study, participants reported their minimum criteria to participate in a one-night stand after imagining themselves in different locations. In Study 2, a field study, participants in six locations were asked their minimum criteria for a one-night stand.

**Method: Study 1**

**Participants**

Seventy-two participants (47 women and 25 men) at a large Southern university participated in this study for partial completion of an introductory psychology class requirement.

**Materials**

*Mate preference questionnaire.* Twenty-four characteristics (from Buss & Barnes, 1986; Kenrick et al., 1993) were used to assess the minimum percentile of each characteristic that would need to be present in order to find it acceptable to have a one-night stand. Each characteristic was rated on a 0 to 100 percentile score, in which 0 was used to indicate someone below the rest of the population and 100 was used to indicate someone above the rest of the population.

The 24 characteristics were combined to form seven composite indices (Kenrick et al., 1993). The composite indices were dominance ($\alpha = 0.82$), status ($\alpha = 0.92$), intelligence ($\alpha = 0.63$), agreeableness ($\alpha = 0.88$), physical attractiveness ($\alpha = 0.80$), family orientation ($\alpha = 0.63$), extraversion ($\alpha = 0.62$), and overall (an average of all 24 characteristics; $\alpha = 0.92$).

**Procedure**

In this within-subjects design, for each of the six locations, participants were instructed to imagine themselves in the location, and using the Mate Preference Questionnaire (MPQ), were asked to rate the minimum criteria necessary for selecting a partner for a one-night stand. There were two locales per each level of perceived one-night stand (ONS) as follows: two locations with a high percent interested in a ONS (a bar, a fraternity party); two moderate percent locales (a classroom, a café); and two low percent locales...
(a library, a church). The order in which the participants were asked to imagine themselves in various locations was randomized to minimize order effects. Participants finished the study by estimating the percent of members of the opposite sex for each of the specific locations who desired a one-night stand.

**Results**

The first stage of the analysis was to conduct a $2 \times 8 \times 3$ (sex: low, medium, and high percent interested in a ONS) multivariate analysis of variance (MANOVA). To investigate further the relationship between location and sex, separate $2 \times 3$ (location) ANOVAs were conducted for each trait. Next, a separate series of analyses was conducted to determine the degree to which women, compared with men, varied more in their selectivity across locations.

**Selectivity by location**

*Manipulation check.* Participants rated each of the six locations by the percent of members of the opposite sex who were interested in a one-night stand. The six locations were combined to form a three-level factor for location: church and library combined to form the low percent interested in a ONS locale ($M = 21.13, SD = 18.24$), class and café combined to form the moderate percent locale ($M = 35.50, SD = 23.66$), and bar and fraternity party combined to form the high percent locale ($M = 68.24, SD = 25.99$). The Spearman-Brown corrected reliabilities for the locations were: 0.82 for high percent locale, 0.71 for moderate percent locale, 0.79 for low percent locale. The resulting three-level factor was subjected to a repeated measures ANOVA to assess differences with respect to the percent interested in a ONS. The main effect for location was significant, $F(2, 120) = 182.62$, $p < 0.05$. Contrasts with a Bonferroni alpha correction revealed that the high locales were higher in perceived interest in a ONS than the moderate locales, $F(1, 60) = 274.33$, $p < 0.05$; the moderate and low locations also differed, $F(1, 60) = 20.37$, $p < 0.05$.

*Omnibus analyses.* The repeated measures MANOVA for mate preferences by location and sex produced a significant location $\times$ sex interaction, $F(2, 122) = 3.54$, $p < 0.05$. Consistent with predictions, as seen in Table I (for means, view the “overall” column), as the percent of those perceived to be interested in a ONS increased, women’s selectivity increased whereas men’s selectivity decreased (i.e., as the percent interested in a ONS increased, men reported lower minimum preferences for a ONS, whereas women reported higher minimum preferences). There was also a main effect for participant’s sex, $F(1, 61) = 12.98$, $p < 0.05$, but no main effect for location, $F(2, 122) = 2.35$, $p = 0.09$. The main effect for sex indicated that, overall, women expressed higher preferences (i.e., higher minimum standards) than did men.
Analysis for specific characteristics

To evaluate each trait specifically, eight separate 2 (sex) × 3 (location) ANOVAs were conducted. Table I presents the means for each trait for location and sex as well as the F value for the location × sex interaction.

Overall composite. An analysis of the aggregate variable suggested a main effect for sex, $F(1, 70) = 14.30$, $p < 0.05$, which was moderated by the location × sex interaction, $F(2, 140) = 6.41$, $p < 0.05$. In line with predictions, as the perception of others’ interest in a ONS increased, women’s overall selectivity increased whereas men’s overall selectivity decreased.

Dominance. For dominance, there was a significant location × sex interaction, $F(2, 140) = 3.12$, $p < 0.05$. Consistent with the hypotheses, men’s selectivity for dominance decreased whereas women’s selectivity increased as the perception of other’s interest in a ONS increased.

Status. For status, there was a main effect for sex, $F(1, 70) = 12.83$, $p < 0.05$, which was moderated by a location × sex interaction, $F(2, 140) = 8.13$, $p < 0.05$. As the perception of others interested in a ONS increased, male selectivity for status decreased whereas female selectivity increased.
Attractiveness. For attractiveness, there was only a main effect for sex, $F(1, 70) = 6.80, p < 0.05$. The main effect for sex suggested that women ($M = 85.60, SD = 2.70$) were more selective for attractiveness than men ($M = 71.87, SD = 3.57$).

Family orientation. An evaluation of the family orientation trait noted only a marginal main effect for sex, $F(1, 70) = 2.88, p = 0.09$, and marginal effect for location, $F(2, 140) = 2.44, p = 0.09$. The marginal main effect for sex suggested that women ($M = 25.75, SD = 3.03$) were more selective for family orientation than men ($M = 17.90, SD = 4.00$). The location main effect suggested that both men and women were less selective for family orientation as the percent of those perceived to be interested in a ONS increased.

Agreeable. For agreeableness, there was a main effect for sex, $F(1, 70) = 13.94, p < 0.05$, which was moderated by the location $\times$ sex interaction, $F(2, 140) = 3.96, p < 0.05$. The interaction suggested that men became less selective as the perception of other’s interest in a ONS increased, whereas women’s selectivity increased.

Extraversion. Evaluation of the extraversion trait noted a main effect for sex, $F(1, 70) = 16.19, p < 0.05$. The main effect for sex suggested that women ($M = 70.32, SD = 2.69$) were more selective for extraversion than men ($M = 53.21, SD = 3.55$).

Intellect. For intellect, there was a main effect for sex, $F(1, 70) = 16.28, p < 0.05$, as well as a main effect for location, $F(2, 140) = 6.94, p < 0.05$. The main effect for sex suggested that women ($M = 63.54, SD = 3.29$) were more selective for intelligence than men ($M = 44.56, SD = 4.34$). The main effect for location suggested that both men and women were less selective for intelligence in high percent locales ($M = 50.49, SD = 3.08$) compared to low ($M = 55.67, SD = 2.68$) or moderate percent locales ($M = 55.98, SD = 2.76$).

Relative variability analysis

To estimate whether women were more variable across different locations than men, the variance component for location was estimated two ways: first, a common variance component for all participants was estimated; then the location variance component was estimated separately for men and women. The model that ignored sex was formally nested within the model that distinguished between the sexes, thus a likelihood ratio test of the null hypothesis that the variance component was the same for both sexes could be conducted. The statistical difference between men and
women was assessed by comparing the relative fit of the models using the likelihood-ratio Chi square statistic. Because the model that does not account for sex was one parameter larger than the nested model, the test statistic had one degree of freedom, in which a significant $\chi^2$ statistic provided support for the idea that there was a sex difference in across-location variability (J. Vevea, personal communication, November 30, 2002).

Due to the listwise deletion of missing data during the estimation of the variance components, 11 participants were eliminated from this analysis. Each dimension was subjected individually to the above analysis and women were more variable than men for two dimensions. As noted in Table III, women were more variable than men for dominance, $\chi^2(1, n=61) = 9.36$, $p < 0.05$, and physical attractiveness, $\chi^2(1, n=61) = 9.82$, $p < 0.05$.

**Discussion**

Several findings provided support for the hypotheses: first, three of the seven specific traits and the overall composite measure demonstrated the hypothesized location $\times$ sex interaction. Both men and women decreased their selectivity in locations supportive of their reproductive goals and increased their selectivity in those that were not. Second, traits central to the assessment of mate quality differed across locations: in locations perceived as unable to support reproductive goals, women became more selective for intelligence, attractiveness, status, and dominance. Third, for two of the seven specific assessments (dominance and attractiveness), women varied across locations more than men did.

Both Study 1 and Kenrick et al. (1993) demonstrate how different mating strategies impact mate preferences. However, whereas Kenrick and colleagues demonstrated changes in mate preferences due to a relationship type’s ability to support reproductive goals, Study 1 demonstrated changes in mate preferences produced by a location’s perceived ability to support reproductive goals, such that selectivity increased or decreased with the perception of the supportiveness of the location.

**Study 2**

Study 2 was conducted to (a) provide support for the external validity for the findings of Study 1, and (b) to address a failure to note an increase in male preferences for physical attractiveness. The failure to find this effect may not have been detected due to the lack of salience of the location manipulation. The manipulation of the percent of people interested in an ONS was strengthened in Study 2 by visiting different locations. Assessing a participant’s responses while in a location, compared with having participants imagine themselves in different locations, is a more powerful manipulation of the salience of the situational cues (Borgida & Howard-Pitney, 1983).
In Study 2, male and female participants were approached in six locations proximal to a major university. Since a key argument of this article is that the location influences individuals’ preferences, an effort was made to ensure that only college students were both the participants as well as the other individuals who occupied the various locations.

The hypotheses for Study 2 were identical to those of Study 1: first, as the perception of the percent interested in a ONS increased, female selectivity should increase whereas male selectivity should decrease. The second hypothesis proposed that women would demonstrate more across-location variability than men.

Method

Participants

Three hundred thirty-three participants completed this study in one of six locations, each within a short walking distance of a respected Southern university. Because data collection occurred between 10:00 pm and 11:30 pm, the classroom (moderate) and the church (low) were unavailable. As a result, experimenters instead visited a gymnasium (moderate) and a supermarket (low). Participants were approached in one of six locations: the main university library (n = 55), the main university gymnasium (n = 46), a local café (n = 54), a local bar (n = 55), a local off-campus fraternity party (n = 44), and a local supermarket (n = 46). All of the participants were approached between 10:00 pm and 11:30 pm on a series of successive Thursday nights in September and October. The specific time and locations were selected in the effort to secure an equal number of collegiate men and women during assessment. The participants ranged in age from 18 to 26 years (M = 20.78 years, SD = 2.75). The sample was 78% Caucasian, 9.6% Asian, 5.7% Black, and 6.0% other. Data for 33 participants (<10% of total sample) were excluded due to incomplete data, lack of willingness to participate in the study, or knowledge of the hypotheses of the study.

Procedure

Participants were approached by either a male or a female experimenter (both of average attractiveness) in one of six locations: a bar or fraternity party (high percent locations), a gym or café (moderate percent locations), or a library or supermarket (low percent locations). Participants were asked for a moment of their time to complete a short questionnaire. Only one person from any group of persons was asked to participate. Participants who completed the questionnaire did so on a clipboard, separated from close others. Participants were selected at random with the restrictions that the potential participant had not recently arrived, was not intoxicated, or was not otherwise incapacitated. Each participant first completed the Mate Preference Questionnaire (MPQ)
then was asked a single question to assess the participant’s perception of others in a particular location. (“What percent of men/women in here are interested in a one-night stand?”) Participants were thanked for their time, debriefed, then excused.

Results

Since we were interested in the influence of sex and location on selectivity, the first stage of the analysis was to conduct a 2 (sex) × 8 (trait) × 3 (location: low, moderate, and high percent locales) multivariate analysis of variance (MANOVA). To further probe the relationship between location and sex, separate 2 (sex) × 3 (location) ANOVAs were conducted for each trait. A separate series of analyses to determine the degree to which women, compared with men, varied in their selectivity across locations was then conducted.

Reliability of composite traits

The 24 characteristics were combined to form seven composite indices (Kenrick et al., 1993). The seven composite indices were dominance (α = 0.74), status (α = 0.84), intelligence (α = 0.63), agreeableness (α = 0.66), physical attractiveness (α = 0.68), family orientation (α = 0.69), extraversion (α = 0.61), and an overall composite (an average of all 24 characteristics, α = 0.89).

Selectivity by location

Manipulation check. An assessment of the manipulation check items was conducted first to ensure that the locations differed in terms of the perceived percent interested in a ONS. As with Study 1, the six locations were combined to form a three-level factor: fraternity party and bar combined to form the high ONS percent locale (M = 47.74, SD = 28.64), gym and café combined to form the moderate ONS percent locale (M = 40.30, SD = 28.04), and library and supermarket combined to form the low ONS percent locale (M = 32.41, SD = 27.97). The Spearman-Brown corrected reliabilities for the locations were: 0.76 for high percent locale, 0.70 for moderate percent locale, 0.73 for low percent locale. The resulting three-level factor was subjected to a one-way ANOVA to assess differences relative to the perceived percent interested in a ONS.

There was a significant main effect for location, F(2, 294) = 7.32, p < 0.05. Contrasts with a Bonferroni alpha correction revealed that the high locations were perceived as containing more people interested in a ONS than the moderate locations, t(199) = 1.89, p < 0.05; the low and moderate locations also differed in the expected direction, t(198) = 2.06, p < 0.05.
Table II. Mean values for each characteristic by perceived percent interested in a ONS: Study 2.

<table>
<thead>
<tr>
<th>Percent interested in a ONS</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>Location × Sex F(2, 294)</th>
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<tbody>
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<tr>
<td>Overall</td>
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<tr>
<td>Men</td>
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<td>46.43\textsuperscript{a}</td>
<td>6.11*</td>
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<td>57.74\textsuperscript{b}</td>
<td>66.02\textsuperscript{c}</td>
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<tr>
<td>Men</td>
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<tr>
<td>Men</td>
<td>59.69\textsuperscript{a}</td>
<td>54.09\textsuperscript{a}</td>
<td>53.57\textsuperscript{a}</td>
<td>4.77*</td>
</tr>
<tr>
<td>Women</td>
<td>67.06\textsuperscript{a}</td>
<td>68.58\textsuperscript{b}</td>
<td>75.51\textsuperscript{c}</td>
<td></td>
</tr>
<tr>
<td>Intellect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>54.74\textsuperscript{a}</td>
<td>50.07\textsuperscript{ab}</td>
<td>44.81\textsuperscript{b}</td>
<td>3.74*</td>
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<tr>
<td>Women</td>
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<td>63.66\textsuperscript{a}</td>
<td>69.21\textsuperscript{a}</td>
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</tbody>
</table>

Note: Means with different subscripts within row are significantly different from one another (p<0.05). ONS = One-night stand. *p<0.05.

**Omnibus analyses.** We were interested in demonstrating that men and women were influenced differently by the environment; specifically that as the perceived percent interested in a ONS increased, women’s selectivity should increase whereas men’s selectivity should decrease. The 2×2 MANOVA for mate preferences provided a significant location × sex interaction, $F(2, 287) = 1.98$, $p < 0.05$. An investigation into the pattern of means provided support for the predictions: as with Study 1, as the perceived percent interested in a ONS increased, women were more selective whereas men became less selective (for means, view the “overall” column in Table II). There was also a significant main effect for participant’s sex, $F(1, 287) = 10.62$, $p < 0.05$, but no effect for location, $F(2, 287) = 1.32$, $p = 0.15$. The main effect for sex indicated that, overall, women were more selective than men.

**Analysis for specific characteristics**

To evaluate each trait specifically, eight separate 2 (sex) × 3 (location) ANOVAs were conducted. Table II presents the means for each trait by location and sex as well as providing the $F$-value for the location × sex interaction.
Overall composite. An analysis of the aggregate variable noted a main effect for sex, $F(1, 294) = 56.48$, $p < 0.05$, which was moderated by the location $\times$ sex interaction, $F(2, 293) = 6.11$, $p < 0.05$. The interaction suggests that whereas male selectivity decreased as the perceived percent interested in a ONS increased, female selectivity increased.

Dominance. For dominance, there was a significant main effect for gender, $F(1, 294) = 5.09$, $p < 0.05$, as well as for location, $F(2, 293) = 3.64$, $p < 0.05$. The main effect for gender suggested that women preferred dominance more than men did. The main effect for location suggested that as the perceived percent interested in a ONS increased, so did selectivity for dominance.

Status. For status, there was a main effect for sex, $F(1, 294) = 54.70$, $p < 0.05$, a main effect for location, $F(1, 294) = 3.06$, $p < 0.05$, as well as a location $\times$ sex interaction, $F(2, 140) = 3.91$, $p < 0.05$. The interaction suggests that as the perceived percent interested in a ONS increased, female selectivity increased whereas male preferences decreased.

Attractiveness. For attractiveness, the location $\times$ sex interaction was significant, $F(2, 293) = 8.32$, $p < 0.05$: as the perceived percent interested in a ONS increased, male selectivity for attractiveness decreased whereas female selectivity increased.

Family orientation. An evaluation of the family orientation trait suggested a main effect for sex, $F(1, 294) = 25.92$, $p < 0.05$. The main effect for sex noted that women expressed higher preferences for family orientation than men did.

Agreeable. For the agreeable trait, there was a main effect for sex, $F(1, 293) = 35.16$, $p < 0.05$, which was moderated by the location $\times$ sex interaction, $F(2, 293) = 5.23$, $p < 0.05$. The interaction suggests that female selectivity for agreeableness increased as the percent of people interested in a ONS increased, whereas men became less selective.

Extraversion. Evaluation of the extraversion trait observed a significant location $\times$ sex interaction, $F(2, 293) = 5.23$, $p < 0.05$. The interaction suggested that as the perceived percent interested in a ONS increased, female selectivity increased whereas male selectivity decreased.
Intellect. For intellect, there was a main effect for sex, $F(1, 294) = 39.94$, $p < 0.05$. Moreover, the location $\times$ sex interaction was significant, $F(2, 293) = 3.74$, $p < 0.05$. The interaction suggested that as the perceived percent interested in a ONS increased, female selectivity increased whereas male selectivity decreased.

Relative variability analysis

Each dimension was subjected individually to the same relative variability analysis as presented in Study 1. Women were more variable than men for two dimensions: family orientation, $\chi^2(1, n = 299) = 6.98$, $p < 0.05$, and extraversion, $\chi^2(1, n = 299) = 8.61$, $p < 0.05$. A complete list of the Chi-square results is presented in Table III.

Discussion

The primary aim of Study 2 was to (a) strengthen and replicate the findings of Study 1, and (b) generalize the findings of Study 1 into the field. As expected, the results of Study 2 were consistent and stronger than those of Study 1. Assessing minimum preferences in each location resulted in significant changes in women for four of the seven traits and changes for five traits for men.

Moreover, consistent with Study 1, women’s across-location variability tended to be greater than men’s. Interestingly, the traits for which women varied more than men in Study 2 were different from those of Study 1. In Study 1, two traits relevant to the evaluation of men varied, dominance and physical attractiveness, whereas in Study 2, extraversion and family orientation were more variable. One explanation for the failure to replicate may be due to the increased variability displayed by men in Study 2. Increased male variability may have obfuscated the relatively greater variability expressed by women across studies. Despite a lack of overwhelming evidence for female erotic plasticity, it is important to note that, across both studies,

<table>
<thead>
<tr>
<th>Trait</th>
<th>Study 1</th>
<th>Study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>1.23</td>
<td>1.58</td>
</tr>
<tr>
<td>Dominance</td>
<td>9.36*</td>
<td>0.59</td>
</tr>
<tr>
<td>Status</td>
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<td>0.98</td>
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<td>0.01</td>
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<td>Family orientation</td>
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<tr>
<td>Agreeableness</td>
<td>1.93</td>
<td>2.54</td>
</tr>
<tr>
<td>Extraversion</td>
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<td>8.61*</td>
</tr>
<tr>
<td>Intellect</td>
<td>1.48</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Note: *$p < 0.05$. 

Table III. Chi-square statistic for across-location variability between men and women: Studies 1 and 2.
for the combined 16 traits, women were more variable than men for four traits, whereas men were never more variable than women.

**General discussion**

The goals of this research were to (a) expand understanding of individuals’ responses to situations either supportive or non-supportive of their reproductive goals, and (b) evaluate how men and women are influenced differently by the environment. To this end, Studies 1 and 2 both provided clear evidence that individuals change evaluation criteria based on the location. Although the effects of Study 2 were stronger than Study 1, in both studies men and women changed their selectivity to match the location’s ability to support reproductive goals. Moreover, these changes in mate preference build directly on the research of Kenrick and colleagues (1993). Whereas Kenrick and colleagues demonstrated that mate preferences differ as a function of the reproductive goals suggested by different relationship types, this research demonstrates that locations imply various abilities to support different reproductive goals.

Moreover, demonstrating the powerful role of the situation to impact mate preferences builds upon a burgeoning line of research that demonstrates the power of specific situational cues to influence evaluations of individuals; for example, research has found that situational cues influence: the perceptions of the aggressiveness of individuals (Carlson, Marcus-Newhall, & Miller, 1990), affluence (Cherulnik & Bayless, 1986), alcohol consumption (Connors & Sobell, 1986), and evaluations of others’ aloneness (Berkman, 1994).

Studies 1 and 2 demonstrated that women changed their selectivity level more across locations than men. Although this is consistent with past research on erotic plasticity (Adams & Turner, 1985; Ard, 1977; Harrison et al., 1974; for a review, see Baumeister, 2000), an important conclusion drawn from this finding is that sexual responsiveness is both more rapid and more sensitive to the location than previously described. Although the length of time that each participant had been in each location was not assessed, it seems reasonable to suggest that the fluctuations in selectivity occurred over a short period of time (as low as a few minutes). Although there is a large literature demonstrating increased erotic plasticity in women over large periods of time (e.g., months, seasonal changes, relationship type; Thiessen, 1994), this finding lends support to the rapid responsiveness of female sexual responsiveness.

One potential limitation of these studies is that they did not also assess how the location influenced both short-term mate preferences and long-term mate preferences. However, as elucidated by Kenrick et al. (1993), the impact of supportive situations on gender differences for long-term mate preferences is similar to the differences for short-term mate preferences, but smaller. In other words, when considering a long-term mating strategy (e.g., marriage) in various locations, because the amount of parental investment is not as disparate between men and women, the difference between male and female preferences is much smaller than the
differences found in short-term mating strategies (where there is a large disparity in the minimum investment). Despite the fact that long-term preferences were not assessed in these studies, the observed changes for short-term mating preferences speak strongly of the role the location plays on mate preferences and selectivity.

**Considering different explanations**

Although it has been argued that changes in the perceived ability of others to support the individual’s reproductive goals were responsible for the observed changes in selectivity, alternative explanations may be proffered. In the following section, two such explanations are discussed. Each explanation is discussed, followed by predictions that each would suggest.

**Evaluate location.** The first explanation is that within each location, women are more likely to evaluate the environment and determine those traits that predict men who are high on the dominance hierarchy. Because different traits predict a man who is dominant in different environments (e.g., a bulky man may be defined as high in status on the football field but such bulkiness would not predict higher status in the classroom), it makes sense that a woman’s selectivity is required to change in order to maximize her mate selections (Kenrick, Hinton, Atkins, Haupt, & Skinner, 1998). Alternatively, a man’s preferences would not fluctuate as much as a woman’s because a man’s preference for physical attractiveness always predicts the most fertile healthy woman (Daly & Wilson, 1983). If this were operating, additional, more specific hypotheses would be proffered. In a library, intelligence should be critical to the evaluation of men; in a gym, dominance and physical attractiveness should be preferred by women; and in a café, extraversion should be preferred more by women. Inspection of means failed to support this hypothesis. Within the low ONS locations, intelligence was not preferred more in the library \((M = 59.37, SD = 21.40)\) than in the supermarket \((M = 66.88, SD = 23.10)\) by women, and neither dominance, physical attractiveness, nor extraversion were preferred more or less in a gym than in the café.\(^3\) The pattern of results failed to support this alternative explanation, in that selectivity tended to increase or decrease regardless of specific cues to location-specific status.

**Selection bias.** The pattern of selectivity may have been due to different types of people frequenting the different locations (and participating in Study 2). A stereotype that women who visit bars or fraternity parties are “easy” and women who study in the library until 11 pm are “nerdy and prudish” suggests that different types of women visited these different locales and were responsible for the results. According to the stereotype, women should respond consistently with their characters: women in bars should be less selective whereas women in the library should be more selective. The findings
of Studies 1 and 2 are inconsistent with such a stereotype: women in the high
ONS percent locales were more selective than women in the low ONS percent
locales. With respect to men’s data, Study 2 found male preferences that were
consistent with the male stereotype: “sleazy” men who were not selective
went to bars and fraternity parties, whereas “polite and considerate”
men were to be found in the classrooms and libraries.

However, the findings from Study 1 used a sample of participants not
dependent on a specific location and found comparable results: men, after
imagining themselves in different environments, become less selective in
high percent ONS locales whereas women become more selective in high
percent ONS locales. The results of Study 1, in combination with the
counter-stereotype findings of Study 2 (for women), are inconsistent with a
“selection bias” limitation.

Conclusion

Although alternative explanations may be suggested to account for the
findings garnered from a field study, the evidence gathered from Study 2
combined with Study 1 is compelling for two clear phenomena: first,
individuals change their selectivity based on the degree to which repro-
ductive goals can be supported within a location; and second, locations influ-
ence more powerfully women’s evaluation of men than men’s evaluation of
women.

In real-world locations, much like those assessed in Studies 1 and 2,
motives are often attributed to the occupants of the location. And as this
research suggests, these motives may be driven by situational cues, which
then impact the evaluation of the individuals within the location. Thus,
it should be of no surprise that, in a bar or nightclub, men can be assumed
to be “sleazy” or “out for some play” due to their mere presence and
women can opine simply, “There just aren’t any good men around here”.

Notes

[1] To test the hypothesis that the sex of the experimenter may have
interacted with sex of the participant and the location to account for the
findings of Study 2 (e.g., women may be more likely to express high
preferences to a male experimenter in a bar compared with a library),
a 2 (sex of participant) × 2 (sex of experimenter) × 3 (location) × 8
(trait) MANOVA was conducted. The included factor did not
influence, solely or interactively, any other independent variable.

[2] A MANCOVA analysis with alcohol consumption as the covariate
produced identical results.

[3] An additional 2 (location: library versus supermarket) × 2 (sex) ANOVA
with intelligence as the dependent variable and a 2 (location: gym
versus café) × 2 (sex) × 3 (trait: extraversion, physical attractiveness,
dominance) MANOVA failed to support this alternative hypothesis.
The intelligence ANOVA failed to detect an interaction between sex
and location, $F(1, 102) = 0.04$, $p = 0.84$, whereas the extraversion MANOVA failed to detect the critical location $\times$ sex interaction, $F(3, 97) = 1.37$, $p = 0.25$.

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References


