Trade-offs in Low-Income Women's Mate Preferences

Within-Sex Differences in Reproductive Strategy

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A sample of 460 low-income women completed a mate preference questionnaire and surveys that assessed family background, life history, conscientiousness, sexual motives, self-ratings (e.g., looks), and current circumstances (e.g., income). A cluster analysis revealed two groups of women: women who reported a strong preference for looks and money in a short-term mate and commitment in a long-term mate, and women who reported smaller differences across mating context. Group differences were found in reported educational levels, family background, sexual development, number of children, and motives for having sex. Implications for understanding individual differences in women's mate-preference trade-offs are discussed.

KEY WORDS: Individual differences; Long-term mates; Reproductive strategies; Short-term mates; Women's mate choices

For mammals, sex differences in potential reproductive rate and obligatory post partum suckling have resulted in the evolution of a strong female bias toward parental effort and a strong male bias toward mating effort (Clutton-Brock and Vincent 1991; Trivers 1972). The same general pattern is found for humans (Bereczkei and Csanaky 1996; Borgerhoff Mulder 2000; Buss 1989; Buss and Schmitt 1993; Buss et al. 1992; Clark and Hatfield 1989; Daly et al. 1982; Darwin 1871; Geary 1998; Lancaster 1994; Symons 1979), but our species is unusual in that many men invest heavily in parenting (Geary 2000) and many women invest heavily in mating effort, including extramarital and other forms of multiple mating relationships (Bellis and Baker 1990; Cerda-Flores et al. 1999; Essock-Vitale and

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McGuire 1988). The layering of paternal investment and women's mating effort on the general mammalian pattern leads to a prediction of substantive within-sex variation in the across-context and across-relationship expression of reproductive behavior in men and women (Bellis and Baker 1990; Gangestad and Buss 1993; Geary et al. 1995; Penton-Voak et al. 1999, 2003).

In comparison to the study of sex differences, however, there is much less empirical research on within-sex differences on reproductive motives and behaviors (but see Miller et al. 2002), and especially in non-college samples (but see Waynforth 1998). To address this gap, we focused on the preference trade-offs that low-income women make when choosing potential long-term and short-term mates; on determining if there are within-sex differences in the pattern of these trade-offs; and on determining if any such differences are correlated with family background, life history development, personality, or current circumstances.

MATE CHOICE TRADE-OFFS

In many contexts, women seem to prefer (Whissell 1996), and may be better off in such contexts compared to other reproductive options (Buss 1989; Geary 1998; Symons 1979), a monogamous relationship with a physically attractive, high status, and wealthy man who invests all of his attention and resources in her and her children. However, men with these traits are in short supply, and those that do exist often have reproductive preferences that differ from those of most women, including a desire for multiple mating partners. When such men desire a monogamous relationship, female competition over these men will be intense. The resultant pattern is that most women must make trade-offs when choosing a prospective mate (Buss and Schmitt 1993; Gangestad and Simpson 2000; Li et al. 2002; Waynforth 2001). Li et al. (2002) conceptualized reproductive traits in terms of necessities and luxuries when trade-offs are made, and demonstrated that men considered physical attractiveness a necessity, whereas women considered status and potential to provide material resources as necessities. As a group, women preferred attractive to less-attractive long-term mates, but they were willing to trade off a mate's attractiveness for his status and resources; for women, physical attractiveness in a mate is preferred but is a luxury (see also Kenrick et al. 2001; Waynforth 2001).

One way to reduce the costs associated with mate-choice trade-offs is to obtain different resources from different men simultaneously, or consecutively through serial relationships (Gangestad and Simpson 1990, 2000; Flinn 1988; Geary, Vigil, and Byrd-Craven 2004; Thornhill and Gangestad 1999). Despite the potential costs of abandonment or retaliation (Daly and Wilson 1988), some women do indeed maintain simultaneous relationships that appear to enable them to secure necessities from a long-term social partner and luxuries from a short-term mate (Bellis and Baker 1990). The physical attractiveness of a prospective short-term mate is of theoretical interest because it may be a phenotypic indicator of physical health and may thus confer health benefits to offspring (Gangestad and Simpson 2000;

Shackelford and Larsen 1997; Waynforth 1998), although research on the relation between physical attractiveness and men's health is mixed (Geary 2005; Weeden and Sabini 2005). In any case, it appears that when women do seek an extra-pair or short-term mate, they often weight physical attractiveness more heavily than when seeking a long-term social partner (Gangestad and Thornhill 1998; Gangestad et al. 2002; Penton-Voak et al. 1999; Thornhill and Gangestad 1999). In addition, under some circumstances (e.g., having many dependents and low material resources) women may engage in a short-term sexual relationship explicitly for monetary gain, but such a strategy appears to be the exception (Brewer et al. 2000).

INDIVIDUAL DIFFERENCES IN WOMEN'S MATE CHOICES

In addition to mean trends, there are intrapersonal (e.g., sexual motives), interpersonal (e.g., relative attractiveness), and contextual (e.g., available mates) influences on women's mate-choice preferences and behaviors (Bateson 1987; Belsky et al. 1991; Buss and Schmidt 1993; Campbell 2002; Gangestad and Simpson 2000; Geary 1998; Hill and Hurtado 1996; Lancaster 1994; Penton-Voak et al. 2003; Vigil and Geary 2006). Because these influences will combine in different ways for different women, within-sex differences in women's reproductive behavior will emerge and should do so in predictable ways. Some women engage in short-term sexual relationships when they perceive the potential for the development of a longer-term relationship (Surbey and Conohan 2000), suggesting that these women sometimes use sexuality as a means to initiate a relationship with a potential marriage partner. For these women, there are few predicted differences between preferred traits in long-term and short-term mates (Buss and Schmidt 1993). In other contexts and perhaps for other women, the goals for short-term and long-term sexual relationships may differ (Gangestad and Simpson 2000). As noted, some women may prefer stability, commitment, and investment of resources from a long-term mate and implicitly prefer physical attractiveness in a short-term mate. For such women, large differences are predicted for preferred traits of long-term and short-term mates (Gangestad and Simpson 1990).

Individual characteristics that may result in within-sex differences in women's mate preferences include (but are obviously not limited to) attractiveness (Penton-Voak et al. 2003), personality (Gangestad and Simpson 1990), and sociosexual belief system. For instance, Little, Burt, Penton-Voak, and Perrett (2001) found that women who rated themselves as attractive showed a stronger preference for symmetry, masculinity, and thus attractiveness in men's faces. Regarding the "big-five" dimensions of personality (Introversion-Extraversion, Agreeableness, Conscientiousness or Dependability, Emotional Stability, and Intellect; Goldberg 1992), conscientiousness would seem to be the most strongly related to impulsivity, which in turn is correlated with women's sexual behavior (e.g., Gangestad and Simpson 1990). Shackelford and Buss (2000) found that men assess the likelihood of their partner seeking an extra-pair relationship based in part on their partner's conscientious-

ness, and on the overall quality of the relationship. If these men are correct in their assessment, then women with high conscientiousness scores should indicate a preference for traits associated with a long-term mating strategy, such as commitment, and show little difference between preferred characteristics of a long-term and short-term mate.

Women also differ in their explicit motives for engaging in sex. Cooper, Shapiro, and Powers (1998) found the two most common motives for women are intimacy and sexual enhancement; other, but less common motives are coping, self-enhancement, and mate retention. People with strong intimacy motives tend to maintain exclusive, long-term relationships, whereas those with strong sexual enhancement motives tend to engage in frequent, nonexclusive sexual behavior. The authors concluded that their intimacy motives scale assesses the extent to which one has sex to feel close to one's partner or to strengthen an emotional bond (MacDonald 1992), and their sexual enhancement motives scale assesses a strong, positive emotional and physical response to sex. In terms of women's mate preferences, strength of the intimacy motive should be positively correlated with preference for traits such as commitment, and desire for a relationship with an investing, long-term partner. In contrast, strength of the sexual enhancement motive and the mate retention motive should be positively correlated with preference for traits such as physical attractiveness, and associated with short-term sexual relationships.

Lastly, the costs and benefits of long—and short-term mating strategies in different social and economic situations may contribute to within-sex differences in women's mate-choice preferences and behaviors (Chisholm 1993; Wilson and Daly 1997). In contexts in which there are many potential long-term mates with a likelihood of high status and high earnings over their life span, as on college campuses, women may emphasize different traits in potential mates and may differ in the extent to which they pursue long-term and short-term mates, in comparison to women situated in less-affluent contexts (Lancaster 1994; Waynforth 2001). Lancaster, for instance, found that women in low-income communities were better off—in terms of their health and that of their children—with a series of shorter-term relationships than with a long-term monogamous relationship with a low-income man. In other words, given the population of potential mates, college women's mate choices may differ from the choices made by women in less-affluent circumstances. Unfortunately, most of the research on mate choices has been conducted with college samples and thus less is known about women's preferences when the pool of mates with high socioeconomic status (SES) is much smaller than on college campuses.

CURRENT STUDY

Our primary goal was to examine low-income women's mate choice preferences and trade-offs comparing potential long-term with short-term mates and to explore whether different patterns of mate-choice preferences and trade-offs emerged within this population. With respect to the latter, we explored whether family background,

current circumstances (e.g., income), and individual differences variables—specifically, sexual motives and conscientiousness—predicted women's mate-choice preferences in this population. In all, the study provided unique information on the mate preference trade-offs of women in low-resource environments.

Participants

The current study is based on a larger assessment of mating strategies in a sample of women from communities in two U.S. regions: several rural and suburban mid-Missouri towns (n = 418), and the Southwestern city of Albuquerque, NM, and surrounding towns (n = 205). In MO and NM, women were recruited from various community locations, such as city libraries, recreational parks, and participants' private residences (door-to-door). Prospective participants who appeared to be between 18 and 50 years of age were asked to complete a survey on "women's relationships." The women were assured of confidentiality and received $5 for their participation; they were instructed not to put their name anywhere on the survey, and to place it in a large envelope with other surveys when finished. Participants took between 10 and 30 minutes to complete the survey and upon completion were paid and debriefed.

The final sample was the 460 participants who completed the mate preference section of the survey according to our instructions (ages 18–56 years, mean = 26.7 years; s.d. = 8.4). Most of the women who did not correctly complete this section (25% of the total sample population) miscalculated the point system such that their distribution of mate-preference points did not total the requested 100 (see below); the low educational level of our target population likely contributed to these errors. Of the 460 women who completed the survey, the racial composition was heterogeneous: 40% white, 26% African American, 22% Latin American, 5% Native American, 4% Asian American, and the remainder were of mixed race or did not respond to this item. Annual income was measured with a categorical scale ($0–$5,000 per year, $5,001–$10,000 per year, etc.); our participants reported a modal annual income between $0 and $5,000, and 51% of the women reported current receipt of government financial assistance (e.g., food stamps, Medicare). The average education level was 12.6 years (s.d. = 2.3) and ranged from 4th grade to advanced graduate degree.

Measures

The study used a self-report survey designed to assess personal and familial demographic and socioeconomic backgrounds, sexual history, personality, motives for having sexual intercourse, self-rated traits, and mate preference criteria (see Vigil et al. 2005).

Family Background assessed aspects of parental socioeconomic status, parental investment, family dynamics (e.g., parental and parent-child conflicts), and encour-

agement of college attendance. To reduce the number of variables and to increase reliability, four summary indexes were used to represent family background. The first was the sum of mother's and father's educational level ($\alpha = .73$). Parental wealth was indexed by the sum of whether or not their parents ever bought a new car, owned their own home, and were ever on government financial assistance ($\alpha = .62$). The third index represented parental investment as defined by number of siblings (reverse coded, 0–13), whether or not their parents encouraged college attendance, whether or not their father was a co-caretaker, and amount of time spent with their father (measured on a 5-point scale; $\alpha = .59$). The final index represented intra-familial conflict and was the sum of the degree to which participants argued with their parents, and parents with each other (measured on a 5-pont scale; $\alpha = .64$).

Current Status and Life History included marital status, number of marriages, current income, educational level and degrees earned, and whether or not participants were on (or had a history of) government financial assistance. The life history variables included age at menarche, first sexual intercourse, and first childbirth, and number of pregnancies and children.

Conscientiousness. The conscientiousness or dependability dimension of personality was assessed using the 10 corresponding items from Goldberg's (1992) bipolar rating scale. For each item, the participants rated themselves on a nine-point scale in terms of two relatively opposite traits, such as disorganized-organized. The overall score was the mean across items ($\alpha = .87$).

Sexual Motives. For the present study, we selected the 11 items from the Motives for Sex Measure (Cooper et al. 1998) that best assessed four key sexual motives: Self-enhancement was the mean of six items related to self-assessed mate value (e.g., I have sex "to prove my attractiveness to myself"; $\alpha = .80$); Intimacy was the mean of two items (e.g., "to show love for partner"; $\alpha = .79$); Mate retention was the mean of two items (e.g., "so partner doesn't leave"; $\alpha = .83$); and Sexual enhancement consisted of one item (i.e., "because it feels good"). Questions were scored on a five-point ordinal scale ranging from 0 (never/almost never) to 4 (always/almost always).

Self-ratings. The participants were asked to rate themselves on a scale ranging from 1 (low) to 5 (high) for looks, kindness, intelligence, and talent as a teenager.

Mate Preferences. Following Li et al. (2002), participants were asked to distribute 100 points across six traits of potential long-term and short-term mates: looks, money, status, commitment, intelligence, and kindness. The participants were first asked to "think of people with whom you would *like* to have a **long**-term relationship (example: marriage)." They were told they had 100 points to "spend" on this person and they should allocate these points across the six traits so that the total across the traits was 100. The procedure was then repeated for a short-term mate: "Now think of people with whom you would like to have a **short**-term relationship (example: 2 weeks)."

RESULTS

In the first section, we examine preference trade-offs for long-term and short-term mates. In the second section, we use preference trade-offs and cluster analyses to empirically define groups of women who differ in the extent to which their preferences vary across long-term and short-term mates, and then we examine correlates of these clusters.

Mate Preference Trade-offs

Mean values and correlations among participants' long-term and short-term mate preferences are presented in Table 1. A repeated measures ANOVA using mate preference context (long-term vs. short-term) and trait (looks, money, status, commitment, intelligence, and kindness) as within-group factors revealed a significant main effect for trait, $F_{5,2295} = 90.81, p < .01$, and a significant context × trait interaction, $F_{5,2295} = 134.21, p < .01$; a main effect for context could not be calculated because the overall effect was by definition the same across contexts (i.e., 100).

Long-term Mate Preferences. Mean differences across traits were assessed by pairwise dependent *t*-tests with a Bonferonni correction for multiple comparisons ($\alpha = .003$). As shown in the second column of Table 1, commitment was the most preferred characteristic in a long-term mate, followed by kindness and then intelligence and looks; the means for the two latter variables did not differ significantly ($p > .10$). Of the 15 correlations among the long-term traits, 12 were significant, and 11 of those were negative, indicating participants were making preference trade-offs, as instructed. Commitment is the only trait with significant negative correlations with all other traits (r values = −19 to −41, p values < .01), suggesting the women used this as the anchor for long-term mate preference trade-offs.

Short-term Mate Preferences. As shown in second column of Table 1, looks was the most preferred characteristic in a short-term mate, followed by money and kindness; the means for the two latter variables did not differ significantly ($p > .10$). As with long-term mates, most of the correlations among the short-term traits were negative, again suggesting trade-offs. Only looks and money showed consistently significant negative correlations with the other traits, but they were not significantly correlated with each other. The pattern suggests the women used them as independent anchors for trade-offs with other traits, or that some women preferentially weighted looks and other women preferentially weighted money (see below).

Long-term versus short-term mate preferences. As a follow-up to the significant context × trait interaction, dependent *t*-tests revealed across-context differences for each trait except status; looks and money were rated more highly in a short-term mate, whereas commitment and intelligence were rated more highly in a long-term mate. On the basis of effect size (mean difference / mean standard deviation; Cohen 1988), the difference across context was largest for commitment ($d =$

Table 1. Means and Correlations within and among Long-Term and Short-Term Mate Preference Criteria

			Long-term						Short-term				
	mean	s.d.	1	2	3	4	5	6	7	8	9	10	11
LONG-TERM													
1. Looks	15.93[c]	12.52											
2. Money	12.97[d]	11.67	**.17**[c]										
3. Status	6.30[e]	7.00	−.02	.08									
4. Commitment	26.74[a]	17.79	**−.41**[c]	**−.35**[c]	**−.19**[c]								
5. Intelligence	17.25[c]	11.73	**−.19**[c]	**−.30**[c]	**−.12**[a]	**−.32**[c]							
6. Kindness	20.80[b]	13.73	**−.35**[c]	**−.34**[c]	**−.21**[c]	**−.25**[c]	.05						
SHORT-TERM													
7. Looks	27.58[a]	19.39	**.31**[c]	−.02	−.06	−.04	−.05	**−.14**[b]					
8. Money	22.43[b]	19.78	.03	**.34**[c]	−.07	.01	**−.16**[c]	**−.15**[b]	−.07				
9. Status	6.01[e]	8.40	−.06	−.07	**.26**[c]	.00	.03	−.04	**−.17**[c]	**−.18**[c]			
10. Commitment	9.80[d]	14.10	−.08	.02	.04	**.11**[a]	−.06	−.05	**−.47**[c]	**−.25**[c]	.04		
11. Intelligence	14.06[c]	13.86	−.09	**−.19**[c]	.01	.01	**.29**[c]	−.02	**−.31**[c]	**−.43**[c]	−.01	−.01	
12. Kindness	20.12[b]	16.07	**−.23**[c]	**−.22**[c]	−.03	−.06	.05	**.44**[c]	**−.35**[c]	**−.46**[c]	**−.12**[a]	−.01	.06

Superscripts indicate significant mean differences ($p < .001$) within mate-preference contexts; underlined mean values indicate significant across-context differences ($p < .001$). Correlation coefficients in bold are significant. [a] $p < .05$; [b] $p < .01$; [c] $p < .001$.

1.06), moderate for looks ($d = -0.73$) and money ($d = -0.60$), and small for intelligence ($d = 0.25$).

Correlations across the long- and short-term contexts are also shown in Table 1. The finding that each characteristic was significantly correlated with itself across contexts (r values ranged from .11 to .44, p values < .05) indicates individual differences in the pattern of women's mate choice preferences, independent of context.

Mate Preferences, Sexual Motives, Conscientiousness, and Self-Ratings. Correlations between the long-term and short-term mate-preference variables and the four sex-motives variables, the conscientiousness score, and the four self-ratings were computed, with an alpha of .005 to control for the large number of correlations. Most of the correlations were not significant and were small in magnitude. A strong self-enhancement motive for sex was significantly associated with lower allocation to a long-term mate's intelligence ($r = -.14$). A strong mate retention motive for sex was significantly associated with higher allocation to long-term ($r = .14$) and short-term ($r = .14$) mates' money, and lower allocation to a long-term mate's intelligence ($r = -.15$). High conscientiousness scores were significantly associated with lower allocation to long-term ($r = -.15$) and short-term ($r = -.14$) mates' looks, and higher allocation to long-term ($r = .14$) and short-term ($r = .13$, $p = .013$) mates' intelligence. Correlations of theoretical interest that did not reach the alpha level included a positive relation between intimacy as a motive for sex and allocation to commitment in a long-term mate ($r = .11$, $p = .017$), and a positive relation between sexual enhancement as a motive for sex and allocation to looks in a short-term mate ($r = .12$, $p = .015$).

Finally, higher self-rated looks as a teenager was associated with higher allocation to looks in a long-term ($r = .15$) and short-term ($r = .13$, $p = .006$) mate, and higher self-rated intelligence was associate with higher allocation to intelligence in a long-term mate ($r = .19$). Only one other correlation reached the .005 alpha level: higher self-rated kindness was associated with lower allocation to looks in a short-term mate ($r = -.21$).

Conditional Mating Strategies

To assess if there were subgroups of women who differed in the pattern of long-term and short-term mate preferences, a K-means cluster analysis was used to create nonoverlapping groups that maximized within-cluster homogeneity. Clusters were constructed using the six mate-preference traits from each context (long-term and short-term; 12 variables total). On the basis of cluster size and associated F-tests, initial analyses indicated that a two-cluster solution ($n = 167$ and 293) provided the best statistical fit for the data. Preliminary examination of Table 2 suggests one of the groups showed substantial variation in mate preference criteria across the long- and short-term contexts, whereas the second group showed significantly less across-context variation. To confirm this observation, an across-context difference score (squared difference) was computed for each trait and for each individual,

and then correlations were examined between this value and group membership (dummy coded; 1 = first group, 0 = second group). Significant correlations (p values < .0001) indicated group differences in the magnitude of across-context mate-preference allocations for looks (r = .25), money (r = .40), and commitment (r = .18), but not (p values > .50) for status (r = –.02), intelligence (r = –.01) or kindness (r = .03). In other words, women in the first group show much larger differences than women in the second group in terms of their allocations for looks, money, and commitment across long-term and short-term mates. In keeping with these patterns, the two groups are hereafter referred to as "bistrategic" and "monostrategic," respectively.

A mixed ANOVA with cluster group as a between-subjects factor and context and trait as within-subjects factors confirmed substantive between-cluster differences; there were significant (p values < .01) effects for group, $F_{1,458}$ = 408.24, and trait, $F_{5,2290}$ = 120.93, as well as significant (p values < .01) interactions for trait by group, $F_{5,2290}$ = 114.08, trait by context, $F_{5,2290}$ = 177.65, and group by trait by context, $F_{5,2290}$ = 50.18. The specifics of the three-way interaction are explored in the following sections.

Between-Group Differences. Mean scores for the long-term and short-term mate-preference traits are shown for the bistrategic and monostrategic groups in Table 2. With the exception of status and commitment in a long-term mate, all other group differences are significant. In particular, women in the bistrategic group emphasized looks (d = .30) and money (d = .72) in a long-term mate more than women in the monostrategic group, whereas women in the monostrategic group emphasized intelligence (d = –.49) and kindness (d = –.64) more than the women in the bistrategic group. These differences were larger for a short-term mate: d values were .67, 1.98, –1.25, and –1.33 for looks, money, intelligence, and kindness, respectively. In addition, the women in the monostrategic group placed a greater emphasis, though still low in comparison to the other traits, on status (d = –.44) and commitment (d = –.59) in a short-term mate than did the women in the bistrategic group.

Within-Group Differences. Women in the bistrategic group showed significant (α = .008) differences in their preferences for long-term and short-term mates for all six mate-preference traits, but the differences were especially large for looks (d = –.96), money (d = –1.32), intelligence (d = .87), and commitment (d = 1.55); the differences for kindness (d = .55) and status (d = .28) were moderate to small. In contrast, the only substantive differences for women in the monostrategic group were for looks (d = –.61) and commitment (d = .84).

Within-Group Correlations. Within-group correlations between the mate-preference allocations and scores on the sexual motives and conscientiousness variables revealed four significant correlations (α = .01) for each group. For the bistrategic group, a high need for intimacy as a motive for sex was associated with lower allocation to a long-term mate's money (r = –.20) and status (r = –.25); high sexual enhancement scores were associated with higher allocation to a long-term

Table 2. A Two-Cluster Mate Preferences Solution

Group	Looks		Money		Status		Commitment		Intelligence		Kindness	
	mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.
LONG-TERM MATE PREFERENCES												
Group 1 (Bistrategic)	18.40^{b*}	14.62	18.18^{b*}	14.98	5.75^{c*}	7.20	28.49^{a*}	20.14	13.70^{b*}	11.62	15.48^{b*}	12.69
Group 2 (Mono-Strategic)	14.53^{c*}	10.92	10.00^{d*}	7.89	6.61^{e}	6.87	25.74^{a*}	16.26	19.27^{b}	11.33	23.84^{a*}	13.39
SHORT-TERM MATE PREFERENCES												
Group 1 (Bistrategic)	35.69^{a}	21.32	40.87^{a}	19.36	3.81^{c}	6.87	5.02^{c}	10.08	5.36^{c}	7.65	9.25^{b}	10.07
Group 2 (Mono-Strategic)	22.96^{ab}	16.54	11.92^{c}	9.83	7.26^{d}	8.93	12.53^{c}	15.30	19.02^{b}	14.17	26.32^{a}	15.57

Underscored values indicate a significant group difference ($p < .01$) within mate-preference context; superscripts indicate significant mean differences within group and within mate-preference contexts ($p < .003$), and * indicates a significant within-group difference across mate-preference contexts ($p < .008$). Bonferonni corrections were made for all contrasts ($\alpha = .01$). $^{a}p < .05$; $^{b}p < .01$; $^{c}p < .001$.

mate's commitment (r = .21); and high conscientiousness scores were associated with lower allocation to a long-term mate's looks (r = –.21). For the monostrategic group, high self-enhancement as a motive for sex was associated with higher allocation to a long-term mate's looks (r = .16) and money (r = .16), and lower allocation to a long-term mate's intelligence (r = –.20), and higher scores for mate retention as a motive for sex were associated with higher allocation to a long-term mate's money (r = .16). None of the correlations reached the alpha level for short-term mate preferences for either group.

Within-group correlations between the self-ratings and mate-preference allocations revealed only two effects for the women in the bistrategic group (α = .003); higher self-rated kindness was related to lower allocation to looks in a short-term mate (r = –.25) and higher self-rated talent was related to higher allocation to status in a short-term mate (r = .23). In contrast, a much more consistent pattern emerged for the women in the monostrategic group: Higher self-rated looks was associated with higher allocation to looks (r = .18) and money (r = .17, p < .004) and a lower allocation to commitment (r = –.18) in a long-term mate. Higher self-rated intelligence was associated with higher allocation to intelligence (r = .26) and lower allocation to commitment (r = –.18, p < .005) in a long-term mate; the same pattern was found for a short-term mate, for intelligence (r = .16, p = .005) and commitment (r = –.18). The only other substantive correlation for this group was between self-rated talent and allocation to intelligence (r = .18) in a long-term mate.

Correlates of Group Status. To explore potential differences in the background and current status of the women in two groups, the dummy coded group variable was correlated with variables that represent family background, current status and life history, self-ratings, conscientiousness, and sexual motives. Significant correlates of group membership are shown in the first set of columns of Table 3. The women in the bistrategic group tended to be less educated, more likely to be dependent on government assistance, have more children, and reported less parental involvement as children and poorly educated parents. They reported beginning sexual relationships at a younger age and tended to use sex for mate retention.

Follow-up Analyses. In a series of exploratory analyses, a potentially important pattern emerged: For short-term mates, there was a strong trade-off in the allocation for looks versus money in the bistrategic group (r = –.61, p < .01), and a much weaker trade-off in the monostrategic group (r = –.21, p < .01). On the basis of the strength of the trade-off for the bistrategic group, a follow-up cluster analysis was run using only these women and only the short-term mate-preference variables; again, a two-cluster solution (n = 119 and 48) provided the best statistical fit for the data. Across groups there were only two significant effects (p values < .01). Women in the first group allocated substantially more to money (mean = 49.20) than women in the second group (mean = 20.21; d = 2.21), whereas women in the second group allocated substantially more to looks (mean = 55.42) than women in the first group (mean = 27.74; d = 1.59). The two groups did not differ in their assessment of any of the mate-preference traits in a long-term partner (p values >

Table 3. Correlates of Cluster Groups

Bistrategic (coded 1) vs. Monostrategic (coded 0)	*r*	Bistrategic: Money (coded 1) vs. Looks (coded 0)	*r*
Parental education	−.15	Age	.16
Parental investment	−.12	Use of government assistance	.17
Use of government assistance	.15	Number of children	.17
Years of education	−.15	Conscientiousness score	−.19
Age at first sexual intercourse	−.13	Age at menarche	−.16
Number of lifetime pregnancies	.18		
Number of children	.16		
Self-rated kindness	−.15		
Mate-retention as a motive for sex	.12		

The first set of columns show personal and background correlates of bistrategic (coded 1) versus monostrategic (coded 0) group membership. The second set of columns show correlates of being in the bistrategic subgroup that emphasized money (coded 1) versus the subgroup group (coded 0) that emphasized looks in a short-term mate.
Correlations have p values < .05.

.10). Current and background correlates of subgroup membership are shown in the second set of columns in Table 3. Women who allocated more to a short-term mate's money tended to be older, more dependent on government assistance, have more children, and experienced menarche at a younger age. They also had lower conscientiousness scores.

DISCUSSION

We examined mate-preference trade-offs in a sample of women that was more ethnically, educationally, and economically diverse than the college samples typically assessed in this type of study. We sought to determine if women's mate preferences and trade-offs were consistent with evolutionary theory and with previous studies (Bereczkei and Csanaky 1996; Buss 1989; Buss and Schmitt 1993; Gangestad and Simpson 2000; Gangestad et al. 2002; Li et al. 2002; McGraw 2002; Waynforth 2001; Waynforth and Dunbar 1995) and to conduct an exploratory analysis of the mate preferences of women living in contexts with few options to secure a long-term reproductive relationship with a relatively high-status and potentially high-income man. Consistent with studies of college women (Waynforth 2001) and predicted strategic variation in women's mate choices (Buss and Schmitt 1993; Gangestad and Simpson 2000), the women in our sample emphasized commitment in a long-term mate and attractiveness in a short-term mate. The heavy weighting on the physical attractiveness of a short-term mate supports the prediction that women may focus on traits that signal physical health in this type of mating relationship (Gangestad and Thornhill 1998; Gangestad et al. 2002; Penton-Voak et al. 1999; Shackelford and Larsen 1997; Thornhill and Gangestad 1999).

We also explored variation in women's mate choices and potential correlates of this variation. At the broadest level, our cluster analyses revealed two groups of women, those who have similar mate preference criteria across long-term and short-term mating contexts (monostrategic group) and women whose preferences diverged sharply across contexts (bistrategic group). The preference patterns of the women in the monostrategic group suggest many of these women may view short-term relationships as a means to assess the potential of these men as long-term mates (Surbey and Conohan 2000), whereas women in the bistrategic group appeared to view long-term and short-term relationships as providing different types of resources. As with women in the monostrategic group, women the bistrategic group placed a heavy emphasis on commitment and kindness in a relationship with a long-term mate. A subgroup of women in the bistrategic group placed a heavy emphasis on the physical attractiveness of a short-term sexual partner, as found by Li et al. (2002), whereas another subgroup of these women focused more on the presumably *immediate* or short-term financial gains to be obtained with a short-term mate. Whether such subgroups will emerge in more affluent samples remains to be seen.

With regard to background characteristics and in comparison to women in the monostrategic group, women in the bistrategic group, and especially those who focused on a short-term mate's money, were more poorly educated, more likely to require government financial assistance, and had more children (see also Townsend and Roberts 1993). One possibility is that because of their financial state and the economic responsibility of having more dependents, these women may at times seek out short-term relationships largely for monetary gain. Women in this group also tended to be less conscientious, which may have contributed to their current circumstances and pattern of mate preferences. This is because low conscientiousness tends to be associated with lower stability in employment settings (Schmidt and Hunter 2004), relationships (Gangestad and Simpson 1990), and lower perceived value as a long-term mate (Shackelford and Buss 2000). In any case, high conscientiousness was associated with lower allocation to a short-term mate's looks and higher allocation to a long-term mate's intelligence; high endorsement of intimacy as a motive for sex was associated with preference for commitment in a long-term mate, whereas high endorsement of sexual enhancement was associated with preference for an attractive short-term mate. The finding that women who rated themselves as attractive or intelligent preferred attractive or intelligent mates, respectively, provides some evidence for assortative mate preferences, and use of valued personal traits to secure higher-quality long-term and short-term mates (Little et al. 2001), but this pattern was found only among women in the monostrategic group.

Inconsistent with expectations (Buss 1989; Geary 1998) and previous research (e.g., Li et al. 2002) was the finding that many of the women in our sample allocated more to money in a short-term than in a long-term mating relationship and allocated little to status in either context. One possibility is that few high status men are available as potential mates for most of these women and thus their responses to

our mate-choice items may have been influenced, in part, by their discounting of status owing to their having little experience or expectations regarding potential relationships with such men. It is also possible that our use of the term "money" rather than "yearly income" influenced their choices, for example by giving the perception of monetary gifts rather than continual provisioning potential (Li et al. 2002). Because nearly a quarter of the respondents failed to correctly complete the point-allocation segment of the survey, it is certainly possible that for at least some of the participants, the items used to assess their long- and short-term preferences were either equivocally interpreted, ambiguously defined, or perhaps ineffective descriptors of typical mate preferences or expectations based on the experiences of women in a low-income sample.

In closing, the current study provided a unique opportunity to examine mate-preference trade-offs in a cross-section of low-income women. Our results are generally consistent with those found with college samples, samples of more affluent adults (e.g., wanting an attractive short-term mate; Li et al. 2002), and evolutionary theory, but at the same time important differences emerged. For the women in our study, a long-term mate's status was not as important as has been found in the more affluent samples, perhaps because few potential mates with high status are available. Another difference with previous studies was the finding that a significant subset of the women assessed in our study appeared to view short-term mating relationships as a means to secure money, not "good genes" (as presumably indicated by physical attractiveness). These patterns support arguments that contextual and individual differences (e.g., conscientiousness) need to be considered along with evolved biases to fully understand the dynamics of human mate preferences and choices (Gangestad and Simpson 2000; Geary 1998; Geary et al. 1995). Our study also speaks to the importance of focusing on within-sex differences in the expression of traits that have traditionally been the focus of between-sex research.

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