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A Half Century of Mate Preferences: The Cultural Evolution of Values

The qualities people believe are important in selecting a marriage partner afford one domain for assessing human values. We examined the cultural evolution of these values over more than half a century. Building on existing data on mate preferences collected in 1939 (N = 628), 1956 (N = 120), 1967 (N = 566), and 1977 (N = 316), we collected data using the same instrument in 1984/ 1985 (N = 1,496) and in 1996 (N = 607) at geographically diverse locations. Several changes in values were documented across the 57-year span. Both sexes increased the importance they attach to physical attractiveness in a mate. Both sexes, but especially men, increased the importance they attach to mates with good financial prospects. Domestic skills in a partner plummeted in importance for men. Mutual attraction and love climbed in importance for both sexes. The sexes converged in the ordering of the importance of different mate qualities, showing maximum similarity in 1996. Discussion speculates about causes of the cultural evolution of values.

The 20th century has witnessed changes more radical and irretrievable than any previous century in the history of the human species. Cars became commonplace during the first half of the century, and computers became commonplace during the second half. Internet dating, virtual sex, and the specter of AIDS altered the landscape of human mating. Women have entered the work force at levels and scales unprecedented, perhaps changing forever the nature of the work environment. Heightened awareness of sexual harassment, date rape, wife battering, and dozens of more subtle forms of sexism have forced people to reevaluate assumptions about men and women. In the context of these cultural changes, a core question for social psychology is: Have human values—the things we consider to be important—changed and, if so, in what ways? Have we witnessed the cultural evolution of values?

Values in human mating offer one arena within which these questions can be posed, and several considerations suggest that it would be astonish-

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ing if mate preferences had remained impervious to cultural changes. One clear example pertains to the widespread use of birth control, and particularly oral contraceptives. Birth control reduces one important risk of sex—unwanted or untimely pregnancy. On this basis alone, we might predict that the importance of chastity in a potential partner might diminish, relative to the importance of other traits. On the other hand, the widespread fear of AIDS, emerging in the mid-to-late 1980s, should have the opposite effect of increasing the relative value people place on a chaste potential partner. Precisely how these conflicting forces affect the cultural evolution of values surrounding chastity is best resolved empirically.

A second change pertains to the influx of women into the work force, with the consequence of greater personal access to economic resources. It has been well documented that women more than men value economic resources in a long-term romantic partner, an apparent universal across cultures (Buss, 1989). According to the "structural powerlessness" hypothesis (Buss & Barnes, 1986), the importance women place on a man's economic resources should diminish as women gain greater personal access to such resources. The value women place on a potential mate's financial prospects, on this hypothesis, occurs because marriage has traditionally been the primary means by which women can secure access to resources. As women's personal access to resources increases as a result of their own labors, according to this hypothesis, the relative importance they attach to a mate's resources should diminish commensurably. Recent research conducted at a single time period with a single sample in the United States failed to support the structural powerlessness hypothesis (Buss, 1994; Wiederman & Allgeier, 1992), but a cross-cultural study, also conducted at a single time period, found some support for the hypothesis (Kasser & Sharma, 1999).

A third change pertains to the bombardment of images featuring physically attractive models and actors. In the 20th century in the United States, consumers moved from a reliance on radio to a pervasive use of television, movies, and, more recently, Internet images. Intense exposure to images of attractive models produces decrements in men's commitment to their regular partner (Kenrick & Gutierres, 1980; Kenrick, Neuberg, Zierk, & Krones, 1994). From an evolutionary psychological perspective, such images may "trick" our evolved mating mechanisms, deluding us into believing that we are surrounded by hundreds of attractive partners, as well as hundreds of potential intrasexual competitors. Might this bombardment of visual images elevate the value we place on physical attractiveness, relative to other traits?

The only research design that can address these issues is a cross-generational design. Only when we have the same measures of values, administered to comparable samples across generations, can we hope to gain a sensible assay of these changes. In a rare and unprecedented research opportunity, we discovered and exploited one such design. In the 1930s, an 18-item instrument was developed to assess the value placed on a wide variety of characteristics in a potential long-term mate or marriage partner. It was first administered to a college sample in 1939 (Hill, 1945). In succeeding decades, it was administered to college samples in 1956 (McGinnis, 1958), 1967 (Hudson & Henze, 1969), and 1977 (Hoyt & Hudson, 1981). In the mid-1980s, we resurrected this instrument and administered it to four different college populations, widely varying in geographic location within the United States ($N = 1,496$). Then again in 1996, we administered it to three different college populations ($N = 607$), two of which were included in the mid-1980s sample. In sum, we have six temporally spaced value assessments from 1939 to 1996, spanning more than half a century.

The research was designed to answer the following questions: (a) Which values in a mate, if any, have changed over this 57-year period? (b) Which values have remained constant, impervious to the other changes in society? (c) Have the sex differences, particularly in the relative value placed on economic resources, diminished over time as women gained greater personal access to economic resources? (d) Are there regional cultural differences within the same generation that might reflect differing degrees of cultural shifts?

STUDY 1: MATE PREFERENCES IN 1984/1985

Method

Participants. During 1984 and 1985, four convenience samples of undergraduates participated in this study from four different geographic regions of the United States: Harvard University in Cambridge ($n = 230$), the University of Texas at Austin ($n = 554$), the University of California at Berkeley ($n = 453$), and the University of Michigan at Ann Arbor ($n = 259$). The total sample consisted of 1,496 undergraduates, 642 men and

TABLE 1. DEMOGRAPHIC INFORMATION FOR THE 1984/1985 AND 1996 SAMPLES

Sample	Male Age				Female Age				Total Age			
	M	*SD*	*n*	% single	*M*	*SD*	*n*	% single	*M*	*SD*	*n*	% single
1984/1985												
Massachusetts	21.2	5.5	92	97.8	23.3	7.7	138	88.3	22.5	7.0	230	92.0
Texas	19.5	1.9	227	98.7	19.2	2.1	327	97.8	19.3	2.0	554	98.2
California	19.4	1.6	231	99.1	19.0	1.4	222	98.9	19.2	1.5	453	99.6
Michigan	20.0	1.6	92	98.9	20.1	1.5	167	99.4	20.0	1.6	259	99.2
Total	19.8	2.7	642	98.7	20.0	3.8	854	97.2	19.9	3.4	1496	97.8
1996												
Texas	19.2	3.9	136	98.5	18.6	1.3	190	99.5	18.9	2.7	326	99.1
Virginia	19.0	1.2	65	100	18.7	2.0	111	100	18.8	1.8	176	100
Michigan	20.6	2.2	25	100	20.8	3.0	80	96.3	20.8	2.8	105	97.1
Total	19.3	3.2	226	99.1	19.1	2.1	381	99.0	19.2	2.6	607	99.0

854 women. Table 1 provides all available demographic information for each sample and for the total sample. Participants voluntarily completed the mate preferences survey during introductory psychology classes and during separate group testing sessions for which they received course credit.

Mate Selection Survey. The survey used to assess mate selection criteria was developed by Hill (1945). In this survey, participants rate the importance of 18 mate characteristics: good cook and housekeeper, pleasing disposition, sociability, similar educational background, refinement and neatness, good financial prospect, chastity (no previous experience in sexual intercourse), dependable character, emotional stability and maturity, desire for home and children, favorable social status or rating, good looks, similar religious background, ambition and industriousness, similar political background, mutual attraction and love, good health, and education and intelligence. The 18 characteristics are rated on the following 4-point scale: 3 points = *indispensable,* 2 = *important,* 1 = *desirable, but not very important,* and 0 = *irrelevant or unimportant.*

This instrument contains several potential flaws. First, the 4-point rating scale may not permit as many discriminations as participants typically make in evaluating a potential mate. Second, many of the characteristics are conjunctions such as "education and intelligence" and "desire for home and children." It would be preferable to unconfound responses and to present each element separately for evaluation. Third, several of the items are ambiguously worded, such as "favorable social status or rating," the referent for which may be unclear. Despite these potential draw-

backs, it was judged essential to replicate the prior studies *exactly* to facilitate cross-generational comparisons.

Results

Tables 2 and 3 show the preference means, standard deviations, and rank orderings for the 18 characteristics for the four samples separately, and for men and women, respectively. A multivariate analysis of variance (MANOVA) on mean values for the 18 mate preferences by participant sex (male, female) and sample (Massachusetts, Texas, California, Michigan) revealed overall effects for both independent variables, $F(1, 18) = 62.52$ and $F(3, 54) = 6.64$, respectively (both $ps < .001$). To identify within-sex, between-sample differences, we conducted a one-way analysis of variance (ANOVA) on each of the 18 preference means by sample, for men and women separately. Significant ($p < .05$) main effects were followed by all possible post hoc comparisons. To control for increased Type I error rate, a Bonferroni correction for alpha inflation was employed. By the Bonferroni procedure, statistical significance was reduced from .05 to .008 (.05/6), two-tailed. Significant between-sample differences are identified in Tables 2 and 3 with superscript letters appended to the relevant mate characteristics.

Regional differences. Table 2 shows that men in the Texas sample, more than men in the other samples, valued a potential wife's cooking and housekeeping skills, financial prospects, and chastity. Additionally, men in the Texas sample reported greater preference than did men in at least two other samples for a wife who embodied refinement and neatness, social status, a similar religious background, and ambition and industrious-

TABLE 2. DESCRIPTIVE STATISTICS FOR PREFERENCES OF MALE COLLEGE STUDENTS IN 1984/1985, BY SAMPLE LOCATION

Characteristic	Massachusetts			Texas			California			Michigan			Average		
	M	SD	Rank	M	SD	Rank	M	SD	Rank	M	SD	Rank	M	SD	Rank
Good cook, housekeeper[a]	1.35	0.76	13	1.73*	0.77	12	1.38	0.71	13	1.33	0.70	13	1.45*	0.74	13
Pleasing disposition	2.64	0.55	3	2.58	0.57	2	2.47	0.62	4	2.43	0.65	4	2.53*	0.60	4
Sociability	2.04*	0.70	8	2.14*	0.61	9	2.06*	0.73	7	2.14	0.62	6	2.10*	0.67	7
Similar education background	1.76	0.75	11	1.58*	0.82	13	1.67*	0.80	12	1.67*	0.84	12	1.67*	0.80	12
Refinement, neatness[b]	1.88	0.72	10	2.10	0.69	10	1.80	0.76	10	1.70	0.72	11	1.87	0.72	10
Good financial prospect[c]	0.80*	0.82	17	1.28*	0.88	16	1.04*	0.89	15	0.95*	0.78	16	1.02*	0.84	16
Chastity[a]	0.55	0.83	18	1.13*	1.05	17	0.70*	0.88	17	0.81*	0.87	17	0.80*	0.91	18
Dependable character	2.62	0.55	4	2.56*	0.56	3	2.52*	0.65	3	2.58*	0.56	2	2.57*	0.58	3
Emotional stability, maturity	2.71	0.50	2	2.56*	0.55	3	2.56*	0.58	2	2.53*	0.54	3	2.59*	0.54	2
Desire for home, children	2.00	0.98	9	2.17*	0.88	8	2.04*	0.87	8	2.11	0.87	8	2.08*	0.90	9
Favorable social status[c,d]	0.85*	0.88	16	1.39*	0.87	15	1.10*	0.83	14	1.25	0.85	14	1.15*	0.86	14
Good looks	2.09*	0.74	7	2.18*	0.69	7	2.04*	0.66	8	2.09*	0.69	9	2.10*	0.70	7
Similar religious background[c,e]	0.99	1.05	14	1.49	1.06	14	0.75*	0.94	16	1.24	1.10	15	1.12*	1.04	15
Ambition, industriousness[c]	1.64*	0.81	12	1.98*	0.71	11	1.75*	0.81	11	1.93*	0.63	10	1.83*	0.74	11
Similar political background	0.95	0.93	15	0.85*	0.89	18	0.68*	0.79	18	0.77	0.81	18	0.81*	0.86	17
Mutual attraction, love	2.96	0.21	1	2.92	0.36	1	2.91	0.41	1	2.98	0.15	1	2.94*	0.28	1
Good health	2.10	0.70	6	2.22	0.68	6	2.16	0.66	6	2.13	0.68	7	2.15	0.68	6
Education, intelligence	2.42	0.60	5	2.24*	0.66	5	2.24*	0.69	5	2.15*	0.66	5	2.26*	0.65	5

Note: The following note applies to Tables 2 through 5. An asterisk indicates a within-sample sex difference in the mean preference, $p \leq .003$ (two-tailed), as per independent means t-tests with Bonferroni correction for alpha inflation. Sex differences in mean preferences across the four samples also are indicated with an asterisk and are shown in the column labeled "Average." Degrees of freedom for these tests are equal to 2 less than the sum total number of men and women in the relevant sample. Between-sample differences identified by superscript letters were detected by post hoc contrasts following one-way analysis of variance and are significant at $p \leq .008$ (two-tailed) after Bonferroni correction for alpha inflation. Degrees of freedom for these tests are equal to 2 less than the sum total number of participants in the two samples.

[a] Mean for Texas sample is significantly different from means for Massachusetts, California, and Michigan samples. [b] Mean for Texas sample is significantly different from means for California and Michigan samples. [c] Mean for Texas sample is significantly different from means for Massachusetts and California samples. [d] Mean for California sample is significantly different from means for Massachusetts and Michigan samples. [e] Mean for Michigan sample is significantly different from mean for Texas sample. [f] Mean for California sample is significantly different from mean for Michigan sample. [g] Mean for Massachusetts sample is significantly different from means for Texas, California, and Michigan samples.

TABLE 3. DESCRIPTIVE STATISTICS FOR PREFERENCES OF FEMALE COLLEGE STUDENTS IN 1984/1985, BY SAMPLE LOCATION

Characteristic	Massachusetts			Texas			California			Michigan			Average		
	M	SD	Rank	M	SD	Rank	M	SD	Rank	M	SD	Rank	M	SD	Rank
Good cook, housekeeper	1.12	0.69	15	1.24*	0.68	16	1.30	0.66	15	1.13	0.61	16	1.20*	0.66	15
Pleasing disposition[a]	2.77	0.52	3	2.69	0.47	4	2.62	0.57	4	2.62	0.51	4	2.68*	0.52	4
Sociability	2.34*	0.62	6	2.31*	0.60	8	2.34*	0.67	8	2.23	0.66	8	2.31*	0.64	8
Similar education background[b]	2.05	0.80	10	1.96*	0.80	12	2.19*	0.80	10	1.97*	0.73	10	2.04*	0.78	10
Refinement, neatness[c]	1.75	0.75	11	1.97	0.72	11	1.86	0.68	12	1.69	0.74	12	1.82	0.72	12
Good financial prospect[e,c]	1.59*	0.90	12	2.14*	0.79	10	2.02*	0.78	11	1.83*	0.74	11	1.98*	0.80	11
Chastity[d]	0.31	0.74	18	0.77*	0.96	18	0.40*	0.76	18	0.34*	0.69	18	0.46*	0.79	18
Dependable character	2.77	0.56	3	2.78*	0.48	3	2.74*	0.51	3	2.79*	0.56	3	2.77*	0.53	3
Emotional stability, maturity	2.80	0.47	2	2.82*	0.39	2	2.99*	0.09	1	2.82*	0.39	2	2.86*	0.34	2
Desire for home, children[c]	2.21	0.93	8	2.56*	0.71	5	2.40*	0.78	7	2.30	0.85	7	2.37*	0.82	7
Favorable social status[c,e]	1.23*	0.88	14	1.65*	0.81	15	1.64*	0.88	14	1.34	0.88	14	1.47*	0.86	14
Good looks[f]	1.47*	0.73	13	1.73*	0.68	13	1.68*	0.72	13	1.69*	0.60	12	1.64*	0.68	13
Similar religious background[d]	1.08	1.06	16	1.71	1.04	14	1.06*	1.07	16	1.34	1.11	14	1.30*	1.07	16
Ambition, industriousness[g]	2.29*	0.68	7	2.52*	0.60	7	2.41*	0.61	6	2.52*	0.56	6	2.44*	0.61	6
Similar political background[d]	0.87	0.91	17	1.16*	0.94	17	0.94*	0.92	17	0.86	0.87	17	0.96*	0.91	17
Mutual attraction, love	2.97	0.17	1	2.96	0.20	1	2.99	0.09	1	2.98	0.13	1	2.98*	0.15	1
Good health	2.07	0.71	9	2.21	0.63	9	2.20	0.59	9	2.12	0.59	9	2.15	0.63	9
Education, intelligence	2.60	0.56	5	2.53*	0.57	6	2.62*	0.52	4	2.53*	0.54	5	2.57*	0.55	5

Note: See note to Table 2.

[a]Mean for Massachusetts sample is significantly different from mean for California sample. [b]Mean for California sample is significantly different from means for Texas and Michigan samples. [c]Mean for Texas sample is significantly different from means for Massachusetts and Michigan samples. [d]Mean for Texas sample is significantly different from means for Massachusetts, California, and Michigan samples. [e]Mean for California sample is significantly different from means for Massachusetts and Michigan samples. [f]Mean for Massachusetts sample is significantly different from means for Texas, California, and Michigan samples. [g]Mean for Massachusetts sample is significantly different from means for Texas and Michigan samples. [h]Mean for California sample is significantly different from mean for Michigan sample. [i]Mean for Texas sample is significantly different from means for California and Michigan samples.

ness. Table 3 shows that the differentiation of the Texas sample from the other samples is not specific to the mate preferences reported by men. Women in the Texas sample, more than women in the other samples, valued refinement and neatness, good financial prospects, chastity, desire for home and children, social status, and similar religious and political backgrounds in a potential husband.

Sex differences. We followed the significant multivariate effect for participant sex with independent means t tests for sex differences in the 18 preferences, for each sample separately, and then for the four samples combined. The Bonferroni procedure was used to correct for increased Type I error rate. By the Bonferroni procedure, statistical significance was reduced from .05 to .003 (.05/18), two-tailed. The results are displayed in Tables 2 and 3. Significant sex differences are indicated by an asterisk appended to the relevant preference mean. Three of the 18 characteristics were differently valued by men and women across all four samples. Women, more than men, valued good financial prospects and ambition and industriousness in a potential spouse. Across all four samples, men, more than women, valued good looks in a potential spouse. Across three of four samples, men, more than women, valued chastity in a potential spouse. Also across three of four samples, women, more than men, valued sociability, similar educational background, dependable character, emotional stability and maturity, and education and intelligence in a potential spouse.

The rightmost column of Tables 2 and 3 displays descriptive statistics and ranks for each of the 18 characteristics, collapsed across all four samples. Only two of these characteristics are not differently valued (at $p < .003$, two-tailed) by men and women: good health and refinement/neatness. Women, more than men, valued a pleasing disposition; sociability; similar educational, religious, and political backgrounds; good financial prospects; dependable character; emotional stability and maturity; desire for home and children; social status; ambition and industriousness; mutual love and attraction; and education and intelligence in a potential mate. Men, more than women, valued cooking and housekeeping skills, chastity, and physical attractiveness in a potential mate.

Similarities across regions and sexes. Despite regional and sex differences, there was substantial similarity across regions and between the sexes.

We computed Spearman rank-order correlations among the four samples on the 18 preferences, aggregated across participants within a sample, for men and women separately. Additionally, we computed Spearman correlations between the aggregate preferences of men and women for each of the four samples. The cross-sample correlations ranged from .96 to .99 for men and from .97 to .99 for women. The cross-sex correlations ranged from .86 to .91 (the full set of correlations is available from the first author on request). The magnitudes of these correlations suggest great similarity in the relative valuation of the mate characteristics across samples and between sexes.

Discussion

Three conclusions can be drawn from this study. First, regions within the United States appear to differ in the values they place on a marriage partner, perhaps reflecting differences in the impact of various cultural changes in this century. The Texas sample, in particular, appears to differ from the other samples in placing a greater value on chastity, good financial prospects, social status, and a similar religious background. Second, several consistent sex differences were found that transcended sample. Men in all samples placed more importance on good looks, whereas women in all samples placed more importance on good financial prospects and ambition and industriousness. Third, despite a few significant differences between regions and sexes, there was tremendous similarity across regions and sex in the overall ordering of the values. Both sexes in all four samples, for example, rated mutual attraction and love as the most important value in selecting a marriage partner.

STUDY 2: MATE PREFERENCES IN 1996

Method

Participants. Three convenience samples of undergraduates participated in this study from three different geographic regions within the United States (we were unable to collect repeat data from Massachusetts and California): the University of Texas at Austin ($n = 326$); the College of William and Mary in Williamsburg, Virginia ($n = 176$); and the University of Michigan at Ann Arbor ($n = 105$). The total sample consisted of 607 undergraduates, 226 men and 381 women. Table 1 provides all available demographic information for

TABLE 4. DESCRIPTIVE STATISTICS FOR PREFERENCES OF MALE COLLEGE STUDENTS IN 1996, BY SAMPLE LOCATION

Characteristic	Texas			Virginia			Michigan			Average		
	M	*SD*	Rank	*M*	*SD*	Rank	*M*	*SD*	Rank	*M*	*SD*	Rank
Good cook, housekeeper*	1.51	0.74	13	1.25	0.64	13	1.20	0.71	15	1.40	0.72	14
Pleasing disposition	2.51	0.53	4	2.47*	0.59	4	2.48	0.59	4	2.49*	0.55	4
Sociability	2.24	0.70	7	2.00	0.68	9	2.16	0.55	7	2.16	0.69	7
Similar education background	1.75*	0.90	12	1.66*	0.78	12	1.96	0.79	10	1.75*	0.86	12
Refinement, neatness	1.82	0.72	11	1.72	0.86	11	1.56	0.77	12	1.76	0.77	11
Good financial prospect	1.51*	0.91	13	1.22*	0.86	14	1.44	0.82	13	1.42*	0.89	13
Chastity	1.29	1.04	16	1.15	0.99	15	0.84	0.85	17	1.20	1.01	16
Dependable character	2.70	0.53	2	2.75	0.47	2	2.68	0.48	3	2.72	0.51	2
Emotional stability, maturity	2.66	0.53	3	2.57*	0.59	3	2.72	0.46	2	2.64*	0.54	3
Desire for home, children	2.13*	0.93	9	2.14	0.95	6	1.88	1.01	11	2.10*	0.94	9
Favorable social status	1.25	0.91	17	1.11	0.97	16	1.12	0.83	16	1.20*	0.92	16
Good looks	2.14*	0.71	8	2.03*	0.61	8	2.24*	0.60	6	2.12*	0.67	8
Similar religious background*	1.43	1.15	14	1.02	1.05	17	1.36	1.08	14	1.31	1.13	15
Ambition, industriousness	1.97*	0.77	10	1.91*	0.76	10	2.12	0.67	9	1.97*	0.76	10
Similar political background	0.81	0.86	18	0.74	0.80	18	0.80	0.91	18	0.79	0.84	18
Mutual attraction, love	2.92	0.37	1	2.95	0.21	1	2.92	0.28	1	2.93	0.32	1
Good health	2.30	0.65	6	2.06	0.73	7	2.16	0.55	7	2.22	0.67	6
Education, intelligence	2.42*	0.63	5	2.34	0.57	5	2.44	0.65	5	2.40*	0.61	5

Note: See note to Table 2.
*Mean for Texas sample is significantly different from mean for Virginia sample.

each sample and for the total sample. Participants voluntarily completed a mate preferences survey during an introductory psychology class.

Mate Selection Survey. Participants completed the same survey used in Study 1.

Results

Tables 4 and 5 show the preference means, standard deviations, and rank orderings for the 18 characteristics for the three samples separately, and for men and women, respectively. A MAN-

TABLE 5. DESCRIPTIVE STATISTICS FOR PREFERENCES OF FEMALE COLLEGE STUDENTS IN 1996, BY SAMPLE LOCATION

Characteristic	Texas			Virginia			Michigan			Average		
	M	*SD*	Rank	*M*	*SD*	Rank	*M*	*SD*	Rank	*M*	*SD*	Rank
Good cook, housekeeper*	1.36	0.61	16	1.17	2.73	16	1.18	0.73	15	1.27	0.64	16
Pleasing disposition*	2.57	0.56	5	2.73*	0.50	4	2.71	0.48	4	2.64*	0.53	4
Sociability	2.31	0.57	8	2.24	0.59	8	2.34	0.57	8	2.29	0.58	8
Similar education background	2.11*	0.75	11	2.07*	0.71	10	2.18	0.73	9	2.11*	0.73	10
Refinement, neatness[b]	1.86	0.68	12	1.68	0.65	12	1.59	0.76	13	1.75	0.70	12
Good financial prospect*	2.15*	0.15	10	1.75*	0.72	11	1.95	0.73	11	1.99*	0.73	11
Chastity[c]	1.23	1.10	17	0.96	1.09	17	0.54	0.81	18	1.01	1.08	17
Dependable character	2.80	0.44	2	2.86	0.34	2	2.76	0.54	2	2.81	0.44	2
Emotional stability, maturity	2.66	0.53	2	2.84*	0.39	3	2.76	0.53	2	2.80*	0.40	3
Desire for home, children	2.48*	0.76	6	2.41	0.83	6	2.37	0.91	7	2.44*	0.81	6
Favorable social status	1.48	0.83	15	1.34	0.81	15	1.42	0.87	14	1.43*	0.83	15
Good looks	1.62*	0.72	13	1.58*	0.61	13	1.72*	0.66	12	1.63*	0.67	13
Similar religious background[b]	1.58	1.06	14	1.43	1.06	14	1.11	1.06	16	1.44	1.07	14
Ambition, industriousness	2.39*	0.66	7	2.35*	0.53	7	2.46	0.66	6	2.39*	0.62	7
Similar political background	0.90	0.89	18	0.95	0.87	18	0.80	0.81	17	0.89	0.87	18
Mutual attraction, love	2.95	0.28	1	3.00	0.00	1	2.95	0.22	1	2.97	0.22	1
Good health	2.25	0.68	9	2.08	0.66	9	2.13	0.56	10	2.18	0.65	9
Education, intelligence	2.61*	0.51	4	2.48	0.57	5	2.62	0.51	5	2.58*	0.53	5

Note: See note to Table 2.
*Mean for Texas sample is significantly different from mean for Virginia sample. [b]Mean for Texas sample is significantly different from mean for Michigan sample. [c]Mean for Michigan sample is significantly different from means for Texas and Virginia samples.

OVA on mean values for the 18 mate preferences by participant sex and sample (Texas, Virginia, Michigan) revealed overall effects for both independent variables, $F(1, 18) = 12.83$ and $F(2, 36) = 2.49$, respectively (both $ps < .001$). To identify within-sex, between-sample differences, we conducted a one-way ANOVA on each of the 18 preference means by sample, for men and women separately. Significant ($p < .05$) main effects were followed by all possible post hoc comparisons. To control for increased Type I error rate, a Bonferroni correction for alpha inflation was employed. By the Bonferroni procedure, statistical significance was reduced from .05 to .017 (.05/3), two-tailed. Significant between-sample differences are identified in Tables 4 and 5 with superscript letters appended to the relevant mate characteristics.

Regional differences. Table 4 shows that men in the Texas sample, more than men in the Virginia sample, valued cooking and housekeeping skills and a similar religious background in a potential wife. Table 5 shows that women in the Texas sample, more than women in the Virginia sample, valued cooking and housekeeping skills, pleasing disposition, and good financial prospects in a potential husband. Additionally, women in the Texas sample, more than women in the Michigan sample, valued refinement and neatness and similar religious background in a potential husband. Finally, women in the Michigan sample valued chastity less in a potential husband than did women in the Texas and Virginia samples.

Sex differences. We followed the significant multivariate effect for participant sex with independent means t tests for sex differences in the 18 preferences, for each sample separately and then for the three samples combined. The Bonferroni procedure was used to correct for increased Type I error rate. By the Bonferroni procedure, statistical significance was reduced from .05 to .003 (.05/18), two-tailed. The results are shown in Tables 4 and 5. Significant sex differences are indicated by an asterisk appended to the relevant preference mean. Men, more than women, valued good looks in a potential spouse across all three samples. For two of the three samples, women, more than men, valued similar educational background, good financial prospects, and ambition and industriousness in a potential spouse.

The rightmost column of Tables 4 and 5 displays descriptive statistics and ranks for each of the 18 characteristics, collapsed across all three samples. Women, more than men, valued a pleasing disposition, similar educational background, good financial prospects, emotional stability and maturity, desire for home and children, social status, ambition and industriousness, and education and intelligence in a potential mate. Men, more than women, valued physical attractiveness in a potential mate.

Similarities across regions and sexes. To gauge overall similarity in the ordering of values, we computed Spearman correlations among the three samples on the 18 preferences, aggregated across participants within a sample, for men and women separately. We also computed Spearman correlations between the aggregate preferences of men and women for each of the three samples. The cross-sample correlations ranged from .94 to .98 for men and from .98 to .99 for women. The cross-sex correlations ranged from .94 to .98 (the full set of correlations is available from the first author on request). As was documented for the 1984/1985 assessment period, the magnitudes of these correlations suggest high levels of similarity in the relative valuation of the 18 mate characteristics across samples and between sexes.

Discussion

Three general conclusions can be drawn from these data. First, as in Study 1, significant regional differences were discovered. In 1996, Texas continued to place a greater value than the other samples on a mate with a similar religious background. In a decade-later replication, Texans also continued to value chastity more than Michiganders. In fact, this regional difference increased slightly during the intervening decade, reflecting an increasing importance that Texans, particularly Texas women, place on chastity in a potential mate. Second, the greater importance that men attach to physical attractiveness continued in this decade. The greater importance that women attach to good financial prospects continued for two of the three samples, but failed to reach significance for the Michigan sample, perhaps reflecting a slight attenuation of the sex difference in this region. Third, despite these regional and sex differences, the samples of both sexes from all three regions showed a strikingly high degree of similarity in the overall valuation attached to these mate characteristics.

TABLE 6. RANK ORDERING OF MATE PREFERENCES ACROSS 6 DECADES, BY PARTICIPANT GENDER

Characteristic	Men						Women					
	1939	1956	1967	1977	1984/ 1985	1996	1939	1956	1967	1977	1984/ 1985	1996
Dependable character	1	1	1	3	3	2	2	1	2	3	3	2
Emotional stability, maturity	2	2	3	1	2	3	1	2	1	2	2	3
Pleasing disposition	3	4	4	4	4	4	4	5	4	4	4	4
Mutual attraction love	4	3	2	2	1	1	5	6	3	1	1	1
Good health	5	6	9	5	6	6	6	9	10	8	9	9
Desire for home, children	6	5	5	11	9	9	7	3	5	10	7	6
Refinement, neatness	7	8	7	10	10	11	8	7	8	12	12	12
Good cook, housekeeper	8	7	6	13	13	14	16	16	16	16	16	16
Ambition, industriousness	9	9	8	8	11	10	3	4	6	6	6	7
Chastity	10	13	15	17	17	16	10	15	15	18	18	17
Education, intelligence	11	11	10	7	5	5	9	14	7	5	5	5
Sociability	12	12	12	6	8	7	11	11	13	7	8	8
Similar religious background	13	14	13	14	12	12	14	10	11	13	15	14
Good looks	14	15	11	9	7	8	17	18	17	15	13	13
Similar education background	15	14	13	12	12	12	12	8	9	9	10	10
Favorable social status	16	16	16	15	14	17	15	13	14	14	14	15
Good financial prospect	17	17	18	16	16	13	13	12	12	11	11	11
Similar political background	18	18	17	18	18	18	18	17	18	17	17	18

Note. Ranks connected by dashed lines highlight a preference change of at least three ranks from the first to the sixth assessment periods. Underlined ranks highlight preferences for which there is at least a one rank gender difference, in the same direction, across all six assessment periods.

GENERATIONAL STABILITY AND CHANGE IN MATE SELECTION CRITERIA

Demographic Information for Samples from 1939, 1956, 1967, and 1977

The 1939 sample (Hill, 1945) included 346 male and 282 female undergraduates at the University of Wisconsin at Madison. No additional demographic information was provided. The 1956 sample (McGinnis, 1958) included 120 undergraduates (distribution by sex not specified) at the University of Wisconsin at Madison. No additional demographic information was provided. The 1967 sample (Hudson & Henze, 1969) included 337 male and 229 female undergraduates at one of four universities (distributions by university or by sex by university were not provided): Arizona State University at Tempe, University of Nebraska at Omaha, the State University of New York at Stony Brook, and the University of Alberta at Edmonton. Across the 1967 samples, the median age was 21.6 years for men and 20.4 years for women. Seventy-six percent of the men and 82% of the women were single. No additional demographic information was provided. The 1977 sample (Hoyt & Hudson, 1981) included 132 male and 184 female undergraduates at Arizona State University at Tempe. The median age was 21.0 years

for men and 20.2 years for women; 87% of the men and 88% of the women were single. No additional demographic information was provided.

Table 6 displays the ranks based on mean ratings for the 18 characteristics, separately by sex and by assessment year. Ranks connected by dashed lines highlight a preference change of at least three ranks from the first to the sixth assessment periods. Underlined ranks highlight preferences for which there is at least a one rank sex difference, in the same direction, across all six assessment periods. Because variances were not provided in earlier reports, statistical tests for generational differences could not be performed. Several clear trends, however, were apparent in these data.

Generational Shifts in Mate Selection Criteria

For both men and women, there appeared to be an overall increase from 1939 to 1996 in the valuation of mutual attraction and love, education and intelligence, sociability, and good looks. In contrast, there appeared to be a general decrease in the valuation of refinement, neatness, and chastity, for both men and women. In addition to the changes that occurred for both sexes, several generational shifts appeared to be unique to sex. For

men, there was an overall increase in valuation of similar educational background and good financial prospects and an overall decrease in valuation of good cook and housekeeper. For women, there was an overall decrease in valuation of ambition and industriousness.

Generational Continuities in Mate Selection Criteria

Despite the apparent generational shifts, several characteristics appeared to attain high levels of continuity in valuation across the six assessment periods. As shown in Table 6, dependable character, emotional stability and maturity, and pleasing disposition retained high levels of valuation for both sexes across the six assessment periods. Similar political background retained low levels of valuation for both sexes across the six assessment periods.

In addition to these cross-sex generational continuities, six major sex differences recurred in each assessment period. Across all six assessment periods, men placed a higher premium than did women on good health, good cook and housekeeper, and good looks. In contrast, women placed a higher premium than did men on ambition and industriousness, similar educational background, and good financial prospect.

Cross-generational continuity in relative valuation of the 18 characteristics is suggested by Spearman correlations calculated among the 6 decades of mate preferences. The average correlation among the male samples was .92, ranging from .76 to .98; the average correlation among the female samples was .94, ranging from .76 to .99 (the full set of correlations is available from the first author on request). The magnitudes of these correlations suggest substantial continuity in relative valuation of the 18 characteristics, for both men and women, across the 6 decades of assessment.

Notwithstanding the cross-generational sex differences, the average cross-sex correlation was .84, ranging from a low of .75 in 1956 to a high of .92 in 1996. Noteworthy was an apparent increase in similarity between the sexes in relative importance placed on the 18 characteristics. We assessed the statistical significance of the difference between each of the cross-sex correlations, using Fisher's r-to-z transformation. To control for increased Type I error, we reset alpha from .05 to .003 (.05/15) using the Bonferroni correction for alpha inflation. These analyses revealed that although the 1956 cross-sex correlation ($r = .75$) was not significantly smaller than the 1967 correlation ($r = .77$; $z = -0.47$, $p = .319$, one-tailed), it was significantly smaller than the 1977 ($r = .89$), 1984/1985 ($r = .87$), and 1996 correlations ($r = .92$; all $zs > |3.75|$; all $ps < .001$, one-tailed). Additionally, the 1984/1985 and 1977 correlations were significantly larger than the 1967 correlation (both $zs > |5.70|$; both $ps < .001$, one-tailed). Finally, the 1996 correlation was significantly larger than the 1984/1985 correlation ($z = -5.31$, $p < .001$, one-tailed) and marginally significantly larger than the 1977 correlation ($z = -2.40$, $p = .008$, one-tailed). Overall, the mate preferences of men and women became more similar over the last 5 decades of assessment.

GENERAL DISCUSSION AND CONCLUSIONS

The importance that people attach to specific characteristics in a mate provides one assay of values. In a rare research opportunity, we were able to assess the cultural evolution of these values in samples spanning more than half a century within America (including one Canadian sample in 1967), using six different time periods ranging from 1939 to 1996. By assessing four different regions in the mid-1980s and three different regions in 1996, we were able to evaluate whether different regions within the United States represent different "cultures" or whether they show enough similarity to be treated as a single culture. A few consistent regional differences did emerge at both time periods. The Texas sample, in particular, placed greater value on potential mates who show chastity and a similar religious background. These differences, however, were dwarfed by the overwhelming similarity in the value ordering of the mate characteristics at both time periods. The cross-regional Spearman correlations ranged from .96 to .99 in the mid-1980s, and from .94 to .99 in 1996. These findings suggest that it is reasonable to aggregate the data and consider the different samples to represent the same "culture" for the purpose of evaluating change over time.

This aggregation for the 1984/1985 and 1996 assessments raises an important limitation of the current study—the assumption that the earlier assessments of college samples taken in 1939, 1956, 1967, and 1977 were reasonably representative of the values of college students of those times. Because we cannot go back in time to assess other samples from former decades, we cannot directly test this assumption. The fact that the different

samples taken from widely varying geographic locations in the United States show strong similarity provides circumstantial support for the assumption. Nonetheless, the fact that we cannot test the assumption directly represents a limitation, albeit an unavoidable one, that must be considered when evaluating and interpreting the results. With this limitation in mind, we discuss the nature and implications of the most important findings.

Chastity

The value placed on chastity in a potential mate shows one of the most striking cultural changes over time. Among the 18 mate characteristics men desired, it emerged as the 10th most important in 1939, 13th in 1956, 15th in 1967, 17th in 1977, 17th in 1984/1985, and 16th in 1996. Analogous decrements for women occurred, moving from 10th in 1939 to 17th in 1996. Clearly, the cultural value attached to virginity has declined over the past 57 years. Although identifying a single causal factor among the multitude of possibilities may be impossible, it is not unreasonable to suppose that the increased dissemination of birth control devices and the concurrent sexual revolution of the 1960s contributed in some measure to this shift.

During the mid-to-late 1980s, awareness of the specter of AIDS increased dramatically. The premium placed on chastity in a mate provides one assay of the degree to which this awareness had an impact on values, at least in the mating domain. The current data show a slight increase in the importance that both sexes attach to chastity, moving from a mean rating of 0.80 to 1.20 for men and from 0.46 to 1.01 for women in 1984/1985 and 1996, respectively. In the two samples that are directly comparable from these assessments, the Texas sample showed the greatest increase in the importance attached to chastity; the Michigan sample showed an increase as well, but it was slight. Whether this slight trend continues in the new millennium remains a question for future empirical work.

Physical Attractiveness

Another large shift in values pertains to the importance attached to good looks. Both sexes show a steady climb. For men, it jumped from 14th in 1939 to 8th in 1996. For women, it jumped from 17th in 1939 to 13th in 1996. Both are large changes by any standard. Circumstantial evidence supports the notion that this shift in values is re-flected in actual behavior. The cosmetics, diet, and cosmetic surgery industries, for example, have reached $53 billion a year, and increasing numbers of men are apparently partaking of these appearance-enhancement efforts (Wolf, 1991). Again, it is impossible to identify with any certainty a single cause from among the bewildering array of possibilities, but it is not unreasonable to speculate that the surge in visual media—television, movies, Internet images, and virtual reality—have contributed to this shift. Future studies could profitably examine these shifts in other cultures as visual media become increasingly prominent in them.

Financial Resources

A third clear trend is the increasing importance of good financial prospects in a potential marriage partner. Both sexes show the trend, but men more strikingly than women. This variable ranked 17th for men in 1939, increased to 16th by 1977, and showed the largest jump in the past decade, reaching 13th in importance. In absolute terms, men rated this variable 1.02 in 1984/1985 and 1.42 in 1996, a significant mean increment. Women showed a smaller change, ranking good financial prospects 13th in 1939, 12th in 1956, and 11th in 1977, 1984/1985, and 1996. During the past decade, therefore, the sex difference in the importance attached to economic resources in a mate has diminished. Contrary to the expectations of the structural powerlessness hypothesis (Buss & Barnes, 1986), however, the change is not due to a decrement in the importance that women give it. Rather, it is due to the increasing importance that men attach to this characteristic. One may speculate that the increasing personal access that women have to economic resources, and perhaps the greater variance among women in their degree of personal access to resources, has triggered this shift in what men value in a partner.

Good Cook and Housekeeper

The sexes also have converged to some extent in the importance they attach to mates who are good cooks and housekeepers. As with the change in the value attached to financial resources, this shift is primarily driven by changes among men. Across the decades, men show a curvilinear relationship, ranking it eighth in 1939, seventh in 1956, and sixth in 1967, but then displaying a trend reversal with a ranking of 13th in 1977 and 1984/1985 and 14th in 1996. Women's ratings, in

contrast, show no change over time—domestic skills are 16th in importance at each of the six time periods. Thus, trends toward more equitable sharing of housework, with the emergence of occasional "house-dads," appear to have had no impact on women's valuation of domestic skills in a marriage partner. Perhaps the rise in hiring domestic help among career couples has contributed to the decline in the importance men give to domestic skills in a mate.

Mutual Attraction and Love

The final dramatic shift in values centers on the importance of mutual attraction and love. Although important across all decades, it was not considered primary in 1939 or 1956, achieving a rank of fourth and third for men in these decades and fifth and sixth for women. From 1967 on, however, mutual attraction and love steadily increase in importance for both sexes, reaching second for men in 1967 and first in the two most recent assessments. For women it reached third in 1967 before it landed at first in 1977, where it remains in the two most recent assessments. This shift suggests that, for samples of college students in North America, marriage may be evolving from a more institutional form to a more companionate form.

Precisely why this shift in values has occurred is unclear. One might be tempted to speculate that the decline of the extended family and delay of childbirth has created an increased importance of marriage as the primary source of social satisfaction. But this speculation does not square with the finding that mutual attraction and love achieve primary value nearly universally. Among 34 of the 37 cultures worldwide for which this factor has been examined, including cultures varying widely on the nature of family and number of children (Buss et al., 1990), both sexes rated it as one of the most important three factors among the 18 factors examined. The notable exceptions are Nigeria (both sexes placing it fourth), the Zulu tribe (men placing it 10th and women placing it 5th), and China (men placing it fourth and women placing it eighth). With increasing globalization, it will be interesting to see whether these few cultures that do not give it primary importance shift in their values.

Convergence Between the Sexes

Perhaps one of the most important findings from this study is the convergence between men and women in their mating values over the past 3 decades. Using Spearman's statistic to calculate overall similarity, the sexes show significantly greater similarity in 1977 and 1984/1985 than in 1967, and the convergence continues, showing more similarity in 1996 than in the previous decade of assessment. This change cannot be attributed solely or even primarily to changes in the values of women. If anything, men appear to have shifted more in their values to approach those of women, attaching greater importance, for example, to a mate's financial prospects and attaching less importance to a mate's domestic skills. The current convergence may reflect a broader trend toward a common standard by which both men and women are evaluated. Precisely why the mate preferences of men and women might be converging is a topic for future work.

Continuities Over the Generations

Despite the profound changes that have occurred over the generations, considerable continuity remains. First, several characteristics showed nearly identical levels of valuation across all six generations of assessment. Notably, dependable character, emotional stability, and pleasing disposition retained high levels of valuation at all time periods, and similar political background remained unimportant or irrelevant at all time periods.

Second, the overall ordering of the characteristics remained similar, showing Spearman correlations across the generations that ranged from a low of .76 (e.g., between 1939 and 1996 for men) to a high of .99 (between 1984/1985 and 1996 for women). The average cross-generational correlation was .93, suggesting considerable continuity in values.

Third, despite the real convergence between the sexes, several key sex differences remained strong for each of the six time periods. Most notably, men from 1939 to 1996 have placed greater importance than women on mates who are physically attractive, and women have placed greater importance than men on mates with good financial prospects—sex differences that appear to transcend cultures as well as generations (Buss, 1989). The stability of sex differences, in concert with the relative convergence between the sexes in mate preferences over the past half century, suggests the value of an interactionist approach that integrates "evolutionary" factors with "cultural" factors. A hallmark of modern evolutionary science is precisely this integration of evolutionary

psychology and cultural psychology (see, for example, Buss, 1999).

Conclusions

This article perforce has been heavy on empirical data and light on theory. The historical changes responsible for the cultural evolution of values are numerous, interrelated, impossible to duplicate within the laboratory, and inherently nonreplicable. Perhaps the data and speculations offered in this article will spark greater attention to the development of theories that can explain the cultural evolution of values. We have established with reasonable certainty, within the limitations noted above, the conclusion that values have indeed changed in important ways over time within the United States, and these changes must be interpreted within the context of moderately high levels of continuity.

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