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Race versus Social Class Differences in Sexual Behavior: A Follow-up Test of the *r/K* Dimension

J. PHILIPPE RUSHTON AND ANTHONY F. BOGAERT

University of Western Ontario

Following our earlier paper on race differences in sexual behavior (J. P. Rushton & A. F. Bogaert, 1987, *Journal of Research in Personality*, **21**, 529–551), we analyze additional data from the Institute for Sex Research which indicates that in terms of sexual restraint, college-educated whites > non-college-educated whites > college-educated blacks on measures such as speed of occurrence of premarital, marital, and extramarital sexual experiences, number of sexual partners, frequency of intercourse, speed and incidence of pregnancy, and rapidity of the menstrual cycle. As such, the data suggest that race may be a more powerful predictor of sexual behavior than educational level or social class. This ordering was predicted from a gene-based evolutionary theory of *r/K* reproductive strategies in which a trade-off occurs between gamete production and social behaviors such as intelligence, law-abidingness, and parental care. © 1988 Academic Press, Inc.

INTRODUCTION

Several psychologists have begun to examine the relation between personality and human reproductive behavior from a gene-based evolutionary perspective (Buss & Barnes, 1986; Eysenck, 1976; Kenrick & Trost, 1987; Rushton, 1985; Snyder, 1987; G. D. Wilson, 1981; Zuckerman, 1984). In this vein we reported a study of racial differences in sexual restraint such that Orientals > whites > blacks. Restraint was indexed in numerous ways, having in common a lowered allocation of bodily energy to sexual functioning. We found the same racial pattern occurred on gamete production (dizygotic birthing frequency per 1000: Mongoloids < 4; Caucasoids 8; Negroids > 16), intercourse frequencies (premarital, marital, extramarital), developmental precocity (age at first intercourse, age at first pregnancy, number of pregnancies), primary sexual characteristics (size of penis, vagina, testis, ovaries), secondary sexual char-

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acteristics (salient voice, muscularity, buttocks, breasts), and biologic control of behavior (periodicity of sexual response, predictability of life history from onset of puberty), as well as in androgen levels and sexual attitudes (Rushton & Bogaert, 1987).

The pattern of racial differences in sexual behavior had been predicted from an evolutionary theory of *r*/*K* reproductive strategies in which a trade-off that exists between egg production and parental care is postulated to underlie a suite of life history attributes (Rushton, 1985; following E. O. Wilson, 1975). At the *K* end of the continuum organisms produce very few offspring but invest a large amount of care in each. At the *r* end, organisms produce a large number of offspring but provide little or no parental care. As a species, humans are at the *K* end of the continuum, although some people are postulated to be more *K* than others (Rushton, 1985). The more *K* a person is, the more likely he or she is expected to come from an intact family, with more intensive parental care, with fewer and more widely spaced offspring, and with a lower incidence of multiple birthing and infant mortality. *K*s are expected to have a longer gestation period, a higher birthweight, a delayed sexual maturation, a lower sex drive, and a longer life. Moreover, the *K* person is inclined to be more intelligent, altruistic, law-abiding, and behaviorally restrained. Thus diverse organismic characteristics, not otherwise relatable, are presumed to covary along the *K* dimension.

Preliminary evidence for the expected covariation among the *K* attributes had been provided from analyses *within* the Caucasian population. Thus Rushton (1987a) had contrasted the characteristics of the mothers of dizygotic twins who, because they produce more than one egg at a time, can be considered to represent the *r* strategy, with the mothers of singletons representing the *K* strategy. As predicted, the former were found to have a lower age of menarche, a shorter menstrual cycle, a higher number of marriages, a higher rate of coitus, a greater fecundity, more wasted pregnancies, an earlier menopause, and an earlier mortality. In another domain, Ellis (1987) had contrasted the characteristics of those low in law-abidingness (criminals) with controls and found the former to have shorter gestation periods (more premature births), a more rapid development to sexual functioning, a greater copulatory rate outside of bonded relationships (or at least a preference for such), less stable bonding, lower parental investment in offspring (as evidenced by higher rates of child abandonment, neglect, and abuse), and a shorter life expectancy. Other studies too have observed that antisocial and other "problem" behaviors (alcohol and drug abuse) are linked to an early onset of sexual intercourse (Jessor, Costa, Jessor, & Donovan, 1983).

Other evidence providing theoretical support came from a review of the literature showing that many components of *K* have been found to

be partially heritable, including rate of multiple birthing and family size (Bulmer, 1970); rapidity of physical maturation, including age at puberty, menopause, and death (Bouchard, 1984; Hrubec, Floderus-Myrhed, de Faire, & Sarna, 1984; R. S. Wilson, 1983); the strength of the sex drive and its relation to age of first intercourse, frequency of intercourse, and total number of partners (Eysenck, 1976; Martin, Eaves, & Eysenck, 1977); and personality traits such as intelligence (Bouchard & McGue, 1981), law-abidingness (Mednick, Gabrielli & Hutchings, 1984), and altruism and aggression (Rushton, Fulker, Neale, Nias, & Eysenck, 1986).

Racial differences in r/K sexual strategies were predicted because human populations are known to differ in egg production: namely, lower socioeconomic > higher socioeconomic, and Negroids > Caucasoids > Mongoloids. While the monozygotic twinning rate is nearly constant at about $3\frac{1}{2}$ per thousand in all groups, dizygotic twinning (the r strategy) is greater among lower than among upper social-class women in both European and African samples (Golding, 1986; Nylander, 1981), and as mentioned, the rate per 1000 among Mongoloids is 4, among Caucasoids 8, and among Negroids, 16, with some African populations having rates as high as 57 per thousand (Bulmer, 1970). Populations adopting an r strategy approach to egg production would be expected to allocate a larger percentage of bodily resources to other aspects of their sexual lives, including speed of sexual maturation, strength of sex drive, and amount of body devoted to sexual display (buttocks, breasts, etc.). In the event, our predictions were confirmed.

The pattern of racial differences we observed to occur in sexual behavior has also been found to exist on numerous other indices of K. Across ages, samples, countries, and time periods, measures made of health (infant mortality, illness, longevity), intelligence (cranial capacity, brain weight, test scores), maturation rate (age to hold head erect, age to walk alone, age of death), social organization (marital stability, mental disorder, law-abidingness), and temperament (activity level, anxiety, sociability), all suggest that, on average, Mongoloids are more K than Caucasoids, who, in turn, are more K than Negroids (Rushton, in press).

Socioeconomic status (SES) differences have also been observed on many of the r/K characteristics, including rate of dizygotic twinning, family size, intelligence, law-abidingness, health, longevity, and sexuality (Hirschi & Hindelang, 1977; Jensen, 1985; Rushton, 1987b; Weinrich, 1977; Zajonc, Marcus, & Marcus, 1979). With respect to health and longevity, these are linked to K through the necessity for prolonged parental and grandparental care (Rushton, 1987b). A recent review of the mortality rates in Britain found that while everyone was living longer the professional classes had gained more years than semiskilled and unskilled workers (Black, 1980). In 1930, people in the lowest social class

had a 23% higher chance of dying at every age than people in the highest social class. By 1970, this excess risk had grown to 61%. A decade later, it had jumped to 150%. The increasing correlation of health and social class presents a paradox, for a National Health System had long existed in Britain to minimize inequalities in health-related services. It is explainable from the gene-based perspective being presented here, however, if it is appreciated that removing environmental barriers to health often increases the variance accounted for by genetic factors (Scriver, 1984), just as, in a parallel way, increasing equality of educational opportunity can lead to an increase in the heritability of educational attainment (Heath et al., 1985).

With respect to sexual behaviors, social class differences were reviewed by Weinrich (1977) who analyzed over 20 studies from the world literature from an r/K perspective and concluded that the lower the SES, the earlier the age of first coitus, the greater the likelihood of premarital coitus and coitus with prostitutes, the shorter the time before engaging in extramarital affairs, and the less stable the marriage bond. Weinrich (1977) also scaled acts of sexuality in terms of how much they maintained the marriage bond over and above directly leading to conception. In this scaling, noncoital acts such as fellatio, cunnilingus, petting, and affection were seen as least directly reproductive, followed by coitus during menstruation and in the female-above position, followed by coitus in the familiar "missionary" position. The higher the SES, the more likely the individual was to engage in activities beyond those of direct reproductive potential.

A smaller number of studies reviewed by Weinrich (1977) compared different races' sexual patterns, finding results very similar to those reviewed by us (Rushton & Bogaert, 1987). The question then arises as to whether socioeconomic status or race has the most power to predict sexual behavior. In most studies, social class and race are confounded and many commentators explain racial differences in behavior as socioeconomic in origin rather than biological (Lewontin, Rose, & Kamin, 1984). In Weinrich's (1977) analyses of sexual behavior, he found that income was more important than either race or class.

In other studies, race has been found to have effects independent of class. Thus Kessler and Neighbors (1986), using cross-validation on eight different surveys encompassing more than 20,000 respondents, demonstrated an interaction between race and class on illness (psychological disorders) such that the true effect of race was suppressed and the true effect of social class was magnified in models that failed to take the interaction into consideration. Studies carried out on measures of IQ (Jensen, 1985), crime (J. Q. Wilson & Herrnstein, 1985), and dizygotic

twinning (Rushton, 1987a) also suggest that racial differences have effects beyond those of social class.

In the present study, we contrast social class differences with those of race on sexual behavior. In our earlier report, we had compared college-educated blacks with college-educated whites on 41 behavioral items related to sexual behavior and/or the r/K dimension taken from Gebhard and Johnson's (1979) update of the Kinsey data. The black sample, consisting of university students from 1938 to 1963, were atypical of blacks in the religiously devout and high socioeconomic status direction (see Gebhard & Johnson, 1979, Tables 3–6, 9, 295). We now reexamine these data and include comparisons with a white *non*-college-educated group. (No non-college-educated blacks were available, unfortunately.) If race effects are independent of education, then the sexual behavior of college-educated whites will be closer to that of non-college-educated whites than it will be to college-educated blacks. On the basis of the preceding review of race versus class differences in other r/K attributes, this is what we predict will occur.

METHOD

As mentioned, the basis for our analyses is the Kinsey data. In 1979 Gebhard and Johnson published a volume updating the earlier work (Gebhard, Pomeroy, Martin, & Christenson, 1958; Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953), outlining the sampling and selection procedures and presenting nearly 600 tables of percentages for a range of sexual practices and morphological data by race, sex, socioeconomic status, sexual orientation, etc. From these data we used the same 41 items we had previously employed to compare black–white differences among the college-educated (Rushton & Bogaert, 1987). We also used the same cutoff point, i.e., the place where 50% of the black respondents had fallen. For example, with respect to the first item, if 10% of the black sample's fathers had been under age 20 when the respondent was born, 20% had been between the ages of 20 and 26, and 35% had been between the ages of 26 and 30, the 50th percentile would be found in the category of age 26–30. It was then possible to calculate the percentage of the white non-college-educated respondents falling in this category to see if it differed from the black percentage. Where feasible, we collapsed across males and females, thus providing the most reliable number of data points from which to test the theory. We turned the percentages into proportions based on the number who had answered the question and calculated a z test for the significance of differences between proportions (McClave & Dietrich, 1985, pp. 370–374).

It is worth noting that the proportions of females in the black and white groups were not entirely equivalent. For example, considering the item concerning year of birth (Gebhard & Johnson, 1979, Table 2) for which fairly complete data were available, males comprised 52% of the 9023 white college students responding, 44% of the 399 black college students, and 43% of the 1794 non-college whites. That females comprised a significantly higher percentage of black than of white college students ($X^2 = 9.2$), however, would have biased the results against significance in the earlier study because females typically are more K-like in their behavior than males (Symons, 1979). Because the black sample was more female, this would have made the black scores more K-like on some of the variables. Yet black–white differences were nonetheless found. Although we did not report it in the final version of our earlier paper, most of the racial differences were replicated across sex.

RESULTS

Table 1 presents the items and the table numbers from Gebhard and Johnson (1979), the proportions for the college-educated respondents reported by Rushton and Bogaert (1987), and those now calculated for the non-college-educated, along with the tests of significance. The hypotheses that, in sexual behavior, particularly restraint, the white college-educated sample > white non-college-educated > black college-educated was found to occur on 24/41 occasions (Items 19, 31, 70, 72, 74, 90, 91, 100, 135, 199, 218, 227, 228, 239, 268, 297, 301, 322, 323, 326, 329, 348, 351, 367), with the majority being statistically significant. The probability of taking three items at a time and getting this ordering on 24/41 occasions is itself greater than chance on a test of direct probabilities ($p < .001$). When the comparisons are made pairwise, the black college-educated sample is found to be less similar to college-educated whites than are whites without a college education on 31/41 occasions (Items 19, 20, 28, 29, 69, 70, 71, 74, 90, 91, 100, 135, 183, 199, 218, 227, 228, 239, 268, 291, 297, 322, 323, 324, 326, 342, 348, 351, 355, 367, 374). These results directly imply that race is more important than social class in determining sexual behavior. Social class does, however, have effects: Comparing the white college-educated sample with the white non-college-educated sample showed statistically significant differences favoring the college-educated in restraint, *K*, or associated variables on 23/41 occasions (Items 19, 30, 31, 90, 91, 99, 100, 135, 183, 199, 218, 227, 228, 239, 268, 297, 301, 308, 322, 323, 326, 329, 367). Results not in accord with expectation were also observed (28, 29, 30, 53, 99, 291, 308).

DISCUSSION

We found on a variety of *r*/*K* reproductive attributes that in terms of *K*, college-educated whites > non-college-educated whites > college-educated blacks. This ordering was found for such variables as length of menstrual cycle and flow and number of children in the family (31, 90, 91—the *r* strategy is to produce a greater number of eggs or offspring per unit of time); size of penis and angle of erection, and number of sexual partners and frequency of coitus (69, 70, 71, 72, 73, 239, 326, 351, 367—the *r* strategy is to make a greater energetic investment in direct sexuality); age of onset of sexual events such as the breaking of the hymen, petting, intercourse, and pregnancy (19, 20, 100, 135, 199, 218, 268, 297—the *r* strategy is to be quicker); and having permissive sexual attitudes (227, 228—permissive attitudes facilitate *r* behavior).

Anomalous results also occurred. Thus the non-college-educated came from parents who lived longest (28, 29—longevity being *K*), left home earliest (30—the *r* strategy involves early dispersal from home base),

TABLE 1

RACE AND SOCIOECONOMIC STATUS DIFFERENCES IN SEXUAL BEHAVIOR (BASED ON DATA FROM GEBHARD & JOHNSON, 1979)

Table number	Item	Sample size and proportion: Black college	White non-college	White college
19	Genetic father's age at respondent's birth: — "26–30 and under"	$\frac{189}{313} = .60^{a}$	$\frac{677}{1471} = .46^{b}$	$\frac{3385}{7872} = .43^{c}$
20	Genetic mother's age at respondent's birth: — "26–30 and under"	$\frac{275}{348} = .79^{a}$	$\frac{1026}{1532} = .67^{b}$	$\frac{5415}{8082} = .67^{b}$
28	Respondent's age at genetic father's death: — "18 and under"	$\frac{65}{123} = .53^{a}$	$\frac{243}{695} = .35^{b}$	$\frac{966}{2300} = .42^{c}$
29	Respondent's age at genetic mother's death: — "19 and under"	$\frac{49}{93} = .53^{a}$	$\frac{175}{472} = .37^{b}$	$\frac{663}{1441} = .46^{a}$
30	Age respondent left parental home: — "21 years or under"	$\frac{104}{186} = .56^{a}$	$\frac{639}{1048} = .61^{a}$	$\frac{1767}{3606} = .49^{b}$
31	Number of siblings: — "2 and under"	$\frac{215}{399} = .54^{a}$	$\frac{977}{1777} = .55^{a}$	$\frac{6423}{9047} = .71^{b}$
53	Age at puberty (aggregate measure): — "13 years and under"	$\frac{292}{400} = .73^{a}$	$\frac{1238}{1794} = .69^{a}$	$\frac{6970}{9052} = .77^{b}$
69	Estimated length of erect penis: — "Less than or equal to 6.50 inches"	$\frac{105}{161} = .65^{a}$	$\frac{403}{791} = .82^{b}$	$\frac{3059}{3777} = .81^{b}$
70	Measured length of erect penis: — "Less than or equal to 6.25 inches"	$\frac{30}{59} = .51^{a}$	$\frac{86}{143} = .60^{a,b}$	$\frac{1497}{2376} = .63^{b}$
71	Measured length of flaccid penis: — "Less than or equal to 4.50 inches"	$\frac{40}{59} = .68^{a}$	$\frac{126}{142} = .89^{b}$	$\frac{2117}{2379} = .89^{b}$
72	Measured circumference of flaccid penis: — "Less than or equal to 4.00 inches"	$\frac{41}{59} = .70^{a}$	$\frac{104}{137} = .76^{a,b}$	$\frac{1825}{2310} = .79^{b}$

TABLE 1—*Continued*

Table number	Item	Sample size and proportion: Black college	White non-college	White college
74	Angle of penile erection: — "Penis almost vertical or down from vertical as much as . . . 85°"	$\frac{102}{164} = .62^{a}$	$\frac{450}{585} = .77^{b}$	$\frac{3473}{4396} = .79^{b}$
90	Average length of menstrual cycle: — "28 days or less"	$\frac{129}{155} = .83^{a}$	$\frac{428}{595} = .72^{b}$	$\frac{1983}{2916} = .68^{c}$
91	Average length of menstrual flow: — "4 days or under"	$\frac{80}{148} = .54^{a}$	$\frac{230}{574} = .40^{b}$	$\frac{1044}{2983} = .35^{c}$
99	Periodicity of female sexual response: — "No periodicity"	$\frac{36}{173} = .21^{a,b}$	$\frac{153}{767} = .20^{b}$	$\frac{710}{2839} = .25^{a}$
100	Age hymen broken: — "18 years or under"	$\frac{67}{126} = .53^{a}$	$\frac{175}{546} = .32^{b}$	$\frac{414}{1594} = .26^{c}$
135	Incidence of prepubertal heterosexual techniques: — "Coitus"	$\frac{116}{400} = .29^{a}$	$\frac{215}{1789} = .12^{b}$	$\frac{814}{9045} = .09^{c}$
183	Reason for worry about masturbation: — "Moral (guilt, shame)"	$\frac{13}{41} = .32^{a,b}$	$\frac{56}{206} = .27^{b}$	$\frac{390}{1027} = .38^{a}$
199	Age of first premarital petting: — "15 years and under"	$\frac{241}{388} = .62^{a}$	$\frac{931}{1663} = .56^{b}$	$\frac{3929}{8731} = .45^{c}$
218	Age first postpubertal coitus: — "17 years and under"	$\frac{171}{335} = .51^{a}$	$\frac{514}{1286} = .40^{b}$	$\frac{1186}{5651} = .21^{c}$
227	Intention to have premarital coitus: — "No intention"	$\frac{81}{368} = .22^{a}$	$\frac{654}{1487} = .44^{b}$	$\frac{3509}{7311} = .48^{c}$
228	Moral restraint on premarital coitus: — "Much"	$\frac{195}{397} = .49^{a}$	$\frac{993}{1655} = .60^{b}$	$\frac{5926}{8845} = .67^{c}$

239	Number of premarital coital companions: — "5 partners or fewer"	$\frac{169}{307} = .55^{a}$	$\frac{550}{786} = .70^{b}$	$\frac{3068}{4202} = .73^{c}$
268	Incidence and type of nonmarital pregnancy: — "Never"	$\frac{102}{310} = .68^{a}$	$\frac{665}{864} = .77^{b}$	$\frac{3938}{4633} = .85^{c}$
291	Duration of first marriage: —"Under 5 years"	$\frac{93}{176} = .53^{a}$	$\frac{326}{1053} = .31^{b}$	$\frac{1446}{3443} = .42^{c}$
297	Time elapsed between marriage and first marital coitus in first marriage: — "One day or less"	$\frac{53}{67} = .79^{a}$	$\frac{428}{620} = .69^{b}$	$\frac{1108}{1705} = .65^{c}$
301	Time before first birth in first marriage: — "9–11 months"	$\frac{14}{62} = .23^{a}$	$\frac{86}{574} = .15^{a}$	$\frac{218}{1815} = .12^{b}$
308	Clarity of contraceptive data for first marriage: — "Clearly none used in this marriage"	$\frac{25}{176} = .14^{a}$	$\frac{147}{1051} = .14^{a}$	$\frac{172}{3432} = .05^{b}$
322	Frequency of cunnilingus in foreplay in first marriage: — "None"	$\frac{139}{174} = .80^{a}$	$\frac{636}{1043} = .61^{b}$	$\frac{1576}{3426} = .46^{c}$
323	Frequency of fellatio in foreplay in first marriage: — "None"	$\frac{146}{174} = .84^{a}$	$\frac{679}{1044} = .65^{b}$	$\frac{1710}{3420} = .50^{c}$
324	Time between intromission and ejaculation in coitus in first marriage: — "<6 minutes"	$\frac{89}{158} = .56^{a}$	$\frac{675}{951} = .71^{b}$	$\frac{2057}{3164} = .65^{c}$
326	Frequency (mean) per week of marital coitus in first marriage: — "Age 21–25"	3.83	3.32	3.11
327	Maximum frequency of marital coitus in first marriage: — "7 per/week or less"	$\frac{110}{167} = .66^{a,b}$	$\frac{616}{934} = .66^{a}$	$\frac{2043}{3349} = .61^{b}$

TABLE 1—*Continued*

Table number	Item	Sample size and proportion: Black college	White non-college	White college
329	Frequency of positions in coitus in first marriage: female above, male supine: — "Much"	$\frac{16}{172} = .09^{a}$	$\frac{134}{1033} = .13^{a}$	$\frac{546}{3415} = .16^{b}$
340	Average number of wife's orgasms per act of coitus in first marriage: — ">1"	$\frac{23}{173} = .13^{a}$	$\frac{92}{1026} = .09^{a,b}$	$\frac{304}{3376} = .09^{b}$
342	Incidence of extramarital sexual activity in first marriage: — "None"	$\frac{31}{175} = .17^{a}$	$\frac{390}{1053} = .37^{b}$	$\frac{1047}{3439} = .30^{c}$
348	Year of first marriage in which first extra marital coitus occurred: — "Within first 2 years"	$\frac{40}{78} = .51^{a}$	$\frac{112}{448} = .25^{b}$	$\frac{199}{867} = .23^{b}$
351	Number of extramarital companions during first marriage: — "Zero"	$\frac{93}{173} = .54^{a}$	$\frac{763}{1045} = .73^{b}$	$\frac{2573}{3431} = .75^{b}$
355	Expectation of future extramarital coitus: — "Will not have"	$\frac{50}{131} = .38^{a}$	$\frac{445}{695} = .64^{b}$	$\frac{1751}{2779} = .63^{b}$
367	Incidence of sexual contact with prostitutes: — "Never"	$\frac{96}{177} = .54^{a}$	$\frac{506}{766} = .66^{b}$	$\frac{3285}{4693} = .70^{c}$
374	Incidence of fellatio with prostitutes: — "Never"	$\frac{44}{70} = .63^{a}$	$\frac{116}{228} = .51^{b}$	$\frac{605}{1164} = .52^{b}$

Note. Within each item those proportions having different superscripts are significantly different ($p < .05$).

entered puberty latest (53—signaling *K*), maintained their marriages longest (291—suggesting *K*), and were equal to college-educated blacks in periodicity of the female sexual response and nonuse of contraceptives (99, 308—implying *r*). With 3/5 variables in one direction and 2/5 in the other, these latter results seem to be due to chance fluctuation. Overall, therefore, and with the pairwise comparisons in support, the evidence suggests that race is a stronger determinant of sexual behavior than is social class. As such, the results are consistent with the predictions derived from the *r*/*K* theory of gene-based reproductive strategies.

Alternative explanations can account for some portion of the results. Purely cultural transmission theories predict that, due to uncertainty that offspring will survive to reproductive maturity, individuals from environments in which the control of resources is unpredictable are, in effect, socialized to opportunistically produce as many children as possible while engaging in a greater degree of sexual behavior (Weinrich, 1977). Black males, for example, learn early that assertive sexuality and sexual prowess are means of gaining status as well as gratification (Johnson, 1978; Staples, 1978). Such explanations, however, do not order the data on the physical variables such as duration of the menstrual cycle, dizygotic twinning rate, or penis size, nor the evidence that many of the variables have been shown to be heritable. For example, the heritability of racial differences in gamete production has been assessed by examining racially mixed marriages. The data show that twinning rate is largely determined by the race of the mother, independent of the race of the father, as observed in Mongoloid–Caucasoid crossings in Hawaii and Caucasoid–Negroid crosses in Brazil (Bulmer, 1970). In any case, there is no need to take a unidirectional view of causality, for purely cultural and purely genetic theories of transmission may be giving way to those based on gene–culture coevolution in which epigenetic rules are hypothesized to guide individuals to learn those patterns of behavior maximally compatible with their genotypes (Lumsden & Wilson, 1981; Rushton, 1988; Rushton, Littlefield, & Lumsden, 1986; Scarr & McCartney, 1983).

The evidence presented here thus joins the extensive data set already assembled indicating that a single pervasive dimension—*K*—underlies a variegated complex of human life history characteristics resulting from a trade-off between egg production and other adaptive behavior such as parental care and social organization (Rushton, 1985). Essentially, genotypes reproductively compete either by allocating energy to sexual behavior directly and increasing the number of offspring produced or by diverting energy to traits which enhance social organization, thereby increasing the number of offspring maturing to adulthood. Freud (1930/1962) had also predicted a positive correlation between restrained sexuality and the production of culture, based on the psychodynamics of repression

and sublimation. The *r/K* perspective predicts the relationship in terms of correlated traits.

As noted at the end of our earlier paper, some might take offense to our approach to group differences in the sensitive area of sexual behavior and particularly to our linking them to genetically based evolutionary processes. In addition to the points we made in the earlier article, it may be useful to remember that even if genetic processes do operate on some of the variables, this does not deny the importance of environmental influences. Distal genetic effects are *necessarily* mediated by proximate neuroendocrine and psychosocial mechanisms which can have independent effects on phenotypic behavior. Moreover, while the heritabilities of many traits within Caucasian populations are currently estimated to approximate 50%, and assuming that this figure can be generalized to black samples, this does leave 50% to be accounted for by nongenetic factors. Interestingly, it now appears as though most environmental effects, at least among Caucasian groups, are operating at the microenvironmental within-family level, rather than the more usually considered between-family level (Plomin & Daniels, 1987). This is one of the most important discoveries yet made using behavioral genetic techniques and its full significance is yet to be realized, presenting a major challenge to identify their nature.

As we also discussed in our earlier paper, explaining group differences may provide a catalyst for understanding individual differences, for the former constitute an aggregate of the latter. As such, any true score variance attributable to category membership will cumulate, whereas unique and idiosyncratic variance will not (Rushton, Brainerd, & Pressley, 1983). An example of such aggregate effects is provided by Symons' (1979) analysis of male/female differences in sexual behavior in which he examined the cultural norms generated by homosexuals. When the necessities to compromise required by the presence of the opposite sex are removed, males and females are freer to construct those behavior patterns most compatible with their genotypes. Thus homosexual male culture is typically *r*-like and promiscuous, often involving large numbers of sexual partners in a detached manner and emphasizing youthful attractiveness. Female homosexual culture, on the other hand, is more typically *K*-like, emphasizing stable, long-term monogamous relationships with a supportive set of social norms. It would seem that the study of personality and sexuality belongs in a broader theoretical perspective than has been considered to date.

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