

Unions between blacks and whites: England and the US compared

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Abstract

In this article, US and UK census data are used to compare the propensity for matches between blacks and native born whites in England and the US. Blacks are disaggregated into three ethnic groups: Black Caribbeans, Residual Blacks and, in the US, African Americans. The first group receives the most theoretical attention. Both raw percentages and parameters that control for several covariates – such as age, education and city of residence – are examined. The results indicate that, with or without controls and irrespective of ethnicity, blacks in Britain are significantly more likely to have a native born white partner than their US counterparts. These findings accord with assimilation theory, but the article's conclusion suggests that, in both countries, the assimilation of people of African descent operates differently from the assimilation of whites.

Keywords: Black Caribbeans; interracial; intermarriage; exogamy; cross-national.

During the latter half of the twentieth century, record numbers of Asian, African and Latin American immigrants settled in Europe, North America and Australasia. Not surprisingly, some long-time residents of these regions have expressed concern that their non-white immigrants will never 'assimilate'. Yet, a century ago, similar misgivings were expressed when large numbers of white immigrants were establishing homes within and without Europe. Their descendants eventually blended into their host societies. Now residents of Eurocentric receiving countries are asking: is this scenario likely to be repeated, or are the phenotypical distinctions associated with non-European backgrounds so great that future generations of non-whites are unlikely to blend in? Similarly, social scientists are asking: will the barriers to assimilation prove equally insurmountable everywhere or will some Eurocentric nations prove more hospitable to non-white assimilation than others?

One way of answering these questions is to study intermarriage. 'A high rate of intermarriage signals that individuals of putatively different

ethnic backgrounds no longer perceive social and cultural differences significant enough to create a barrier to a long term union' (Alba 1995, p. 13). Moreover, the likelihood is strong that the offspring of exogamous unions experience a further dilution in ethnic affiliation, perceiving their identity as socially constructed and situationally malleable (Waters 1990).

With respect to cross-national differences in intermarriage between blacks and whites, arguably 'the litmus test' of intergroup tolerance, recent figures show that partnerships between Black Caribbeans and whites in Britain are more common than partnerships between blacks and whites in the US (Berrington 1994, 1996; Modood *et al.* 1997). However, most US blacks are African American, not Black Caribbean. Whether or not unions between Black Caribbeans and whites in Britain are more common than unions between Black Caribbeans and whites in the US has never been explored.

We take up this question below. In seeking an answer, we attempt not only to quantify the cross-national difference but also to explain it. If US-UK disparities in the rate of Black Caribbean-white partnerships obtain, they may be due to cross-national differences in the characteristics of the participants, cross-national differences in the characteristics of the two societies or both. We concede that social context, especially the nature of race relations in the two societies, excites our curiosity more than the characteristics of the participants. As a result, following the presentation of some descriptive statistics, we employ a multi-variate strategy to calculate the rates of interracial partnership in the two nations after controlling for as many characteristics of the participants as our data allow.

To preview our results, the outcome of both these exercises is the same. With or without controls, the propensity for unions between Black Caribbeans and native whites is significantly higher in Britain than in the US. In our concluding section, we discuss the implications of this finding for race relations in the two societies.

Theory

Theoreticians emphasize three factors as central to the propensity for exogamy: attitudes, opportunity and exchange (Lieberson and Waters 1988). Attitudes encompass both group members' views towards endogamy in general and towards exogamy with a particular outgroup. Outgroups, in turn, are perceived as arranged in a hierarchy reflecting their desirability as mates. These generalizations about attitudes, however, are subject to qualifications. For instance, dominant groups and minority groups may rank outsiders differently (Spickard 1989). Finally, attitudes are malleable. Factors such as youth, education, and urban residence heighten tolerance towards intermarriage, as have historical events like the Civil Rights Movement.

A second critical determinant is opportunity or the chance that men and women of different backgrounds will become acquainted. Opportunity is primarily a structural phenomenon, driven by such factors as sex ratios, group size, and segregation. *Ceteris paribus*, large groups will be more endogamous than small groups because large groups have more compatriots to choose from (Blau *et al.* 1982). Similarly, highly segregated groups will be more endogamous than less segregated groups because the former have little chance to interact with outsiders. Moreover, group size and segregation are not independent. Members of large groups can construct segregated lives more easily than members of small groups because large groups have the numbers to dominate neighbourhoods, schools, workplaces and the like. Again, certain individual traits increase opportunity; for instance, education.

A third factor associated with intermarriage is status hypergamy. A disproportionate number of intermarriages involve pairings between minority males and white females. This disjuncture is most typical of black-white intermarriage, but has also been noted in other pairings (Schoen 1995). The most plausible account, the 'exchange' explanation, was first formulated by Robert Merton (1941). Building on the general observation that men exchange their breadwinning capacity for the reproductive and nurturing capacities of women, he hypothesized that intermarrying husbands use their economic potential to compensate for their minority status. Since men's average earnings are superior to women's, in the typical intermarriage, a minority male with relatively good earnings prospects pairs with a dominant group female of more modest circumstances.

Of course, the operation of exchange presupposes favourable attitudes and opportunity for contact. In this sense, exchange is more a catalyst than a precondition for interracial attraction. Still, all three factors are associated with the propensity for inter-marriage. Furthermore, in both the US and the UK, some of these factors are changing in ways compatible with an increase in marriages between blacks and whites. That is, in recent decades, sentiments about black-white marriage have become more favourable and both residential and occupational segregation have declined (Jowell *et al.* 1992; Farley 1996; Peach 1996a; Modood *et al.* 1997). Furthermore, if the analysis is extended to include cohabiting couples (as in this article), then an even higher rate of interracial union can be expected because, compared to intraracial couples, interracial couples are more likely to cohabit. Cohabitation, of course, is also on the rise on both sides of the Atlantic (Bumpass and Sweet 1989).

Of the three factors listed above, attitudes are the most theoretically intriguing, especially in the context of a cross-national comparison. The literature suggests that the intermarriage rate obtained after the introduction of controls for demographic factors, opportunity and exchange can be interpreted as an indicator of attitudes towards interracial unions.

If the 'net rate' of interracial partnership is significantly higher in country A than in country B, then blacks and whites in country A have a more favourable attitude towards such unions than do blacks and whites in country B. This, at least, is the assumption that motivates the analysis below.

Black Caribbeans in the US

Black Caribbeans, the great majority from the British West Indies, began arriving in the US soon after the turn of the last century. Between 1900 and 1924, when immigration restrictions barred their entry, slightly more than 100,000 Black Caribbeans entered the US (Reid 1939). Between 1925 and 1965, the number of immigrants from the West Indies dropped to a trickle, as did curiosity about them (Kasinitz 1992). With the passage of the liberal 1965 Hart-Celler Act, however, numbers and interest picked up. By 1990 about 4 per cent of black adults, 0.5 per cent of the US population age sixteen or over, were either born in the British West Indies or acknowledged some British West Indian ancestry (Kalmijn 1996).

While there are no studies either of Black Caribbean attitudes towards white partners or of white attitudes towards Black Caribbean partners, the proportion of US whites expressing tolerance for black-white intermarriage has steadily increased (Jaynes and Williams 1989). As for blacks, in the 1997 Gallup poll, 77 per cent of them expressed approval of interracial marriage compared to 61 per cent of non-Hispanic whites (Patterson 1997).

In Model and Fisher (2001), we compared the propensity for marriage or cohabitation between Black Caribbean Americans and native born white Americans with the propensity for marriage or cohabitation between African Americans and native born white Americans. Disaggregating by generation and gender, we found that, for most subgroups, unions between Black Caribbeans and native whites were more common than unions between African Americans and native whites. However, when we added controls for the characteristics of the participants, unions between Black Caribbeans and native whites were usually *not more likely* than unions between African Americans and native whites. There were exceptions, however. These involved later generation Black Caribbean females, who were significantly *more likely* to have native white partners than their African American counterparts. At the same time, for all subgroups, black male-white female pairs were more common than black female-white male pairs.

The discovery that, compared to African Americans, exogamy was significantly higher only among later generation Black Caribbean women was a surprise. Most Black Caribbean Americans feel that whites prefer them to African Americans. But the main characteristic that white

Americans use to distinguish the two groups of blacks is speech. As an interviewee told ethnographer Faye Arnold, white Americans are charmed by '... hearing that rich English accent coming from a black face' (Arnold 1996, p.18). As a result, we had hypothesized that, compared to African Americans, exogamy would be significantly higher among foreign born Black Caribbeans, especially those who arrived in their teen years. We chose teen arrivals because they were too old to lose their distinctive accent but too young to have arrived with a partner.

This expectation proved incorrect, however. Evidently, among blacks, as among whites, people prefer to enter into partnerships with individuals who share their nativity (Pagnini and Morgan 1990). Thus, we found a higher rate of unions with native born whites for the accentless Black Caribbeans than for the accented.

In order to explain why later generation Black Caribbean females are more exogamous than African American females, we turn to another ethnographic finding. According to Mary Waters, 'the comfort factor' explains why Black Caribbeans have more cordial relations with whites than African Americans do. By this phrase, Waters (1999) means that Black Caribbeans are less angry at whites, that they don't feel that American society 'owes' them something, that they don't come across as having a 'chip on their shoulders'. If this assessment is accurate, then relationships between Black Caribbeans and whites may proceed more cordially than relationships between African Americans and whites, even in the absence of a British West Indian accent. Recall, however, that Black Caribbeans had higher rates of interracial partnership only when they were later generation females. Interestingly, parts of Waters' perspective are consonant with such a gender interaction. In particular, her research indicates that Black Caribbean male adolescents are more likely to express anger at whites and white institutions than are Black Caribbean female teens. Such differences could translate into more white partners among later generation Black Caribbean females than among African American females.

In sum, our analysis suggests that attitudes towards partnerships between native whites and native born Black Caribbeans are more favourable than attitudes toward partnerships between native whites and foreign born Black Caribbeans. Similarly, attitudes are more favourable when the man is black and the woman is white than the converse. However, these gender interactions are weaker for Black Caribbean-white unions than for African American-white unions. Finally, given the cross-national focus of the present article, we stress that these variations by ethnicity, generation and gender, while statistically significant, are small in magnitude. Our most important finding is that, irrespective of the characteristics of the participants, black-white unions in America are rare.

Black Caribbeans in the UK

The context of Britain's Black Caribbean immigration differs substantially from the context in 'the States'. Although small numbers of Africans lived in London at the time of Queen Elizabeth I, a visible black community emerged only after World War II (Tizard and Phoenix 1993). Black Caribbean immigration was a consequence of Island poverty and postwar labour demand, particularly for workers in the low-paying jobs that natives no longer wanted or needed to fill. Males and females came in about equal numbers (Peach 1996b); they planned to make their fortunes and then return home.

By the early sixties, anti-immigration sentiment was sufficiently widespread that Parliament passed the first of several pieces of restrictive legislation, the fruits of which slowly reduced non-white entry (Mason 1995). After 1971, births, not immigration, sustained the British Caribbean population. According to the 1991 UK Census, Britain housed 499,964 Black Caribbeans and 178,401 'Black Others', a group composed primarily of persons with some Caribbean heritage (Dale and Holdsworth 1997). Together, these two groups comprise about 1.5 per cent of the population of England.

These remarks suggest that the percentage of the British population that is Black Caribbean is three times the percentage of the American population that is Black Caribbean. Theoretically, these numbers imply greater Caribbean endogamy in Britain. At the same time, the percentage of the British population that is white is also larger (94.4 per cent) than the percentage of the American population that is non-Hispanic white (75.7 per cent). These numbers imply greater black-white exogamy in Britain. In short, if group size alone determines mate choice, Black Caribbeans in Britain should effect both more black-black unions and more black-white unions than their American counterparts.

But geography mediates the effect of numbers. And, although slightly over half of Black Caribbeans in Britain live in the greater London area, they experience far less residential segregation than their American counterparts. Indeed, Peach (1996a) finds black-white segregation levels are falling more rapidly in Britain than in the US. Thus, whites are not only a greater proportion of the British than of the American population, but Black Caribbeans have a greater chance of associating with whites than do their counterparts in the US.

Furthermore, British attitudes towards black-white unions are more favourable than American. On several similarly worded Gallup polls, about 20 per cent more Americans than Britons disapproved of such relationships (Tizard and Phoenix 1993). British Caribbean blacks also communicate stronger support for interracial marriage than African Americans do. In 1994, only 12 per cent reported that they would 'mind a little or a lot' if a white were to marry a close relative (Modood *et al.*

1997). The analogous figure for African Americans is 23 per cent (Patterson 1997).

In short, a cross-national comparison of the factors that facilitate unions between whites and Caribbean Blacks leads us to hypothesize that such relationships will be more common in Britain than in the US. Group size contributes to this expectation; yet, we anticipate that controlling for group size, as well as for other measurable factors, will not eliminate the higher prevalence of such unions in Britain.

Data and methods

Our cases come from the 1990 US Census (5 percent Public Use Microdata Samples) and the 1991 UK Census, Household Sample (1 percent Sample of Anonymised Records). The first step in creating both data sets was to identify the partnered population. We then matched partners, both married and cohabiting, whether or not one was the householder. Persons under sixteen, same sex pairs and those without partners were excluded. Cohabiting couples were easy to identify in Britain because the UK Census questionnaire inquired about this kind of union. The US Census did not, forcing us to rely on the code 'unmarried partner of household head' to identify cohabiting pairs. This strategy doubtless underestimates the US cohabiting population. The data have a few other shortcomings. They are cross-sectional; they provide no information about previous unions; in Britain they offer no information on immigrants' date of arrival and they measure education poorly. Finally, our results generalize only to the partnered population; however, as Pullum and Peri (1999) have shown, this restriction does not distort those results.

The large size of the PUMs motivated us to sample, but first we had to define the groups of interest. The whites in this study self-described as white, non-Hispanic and native born. Although an analysis of the partnership patterns of foreign born non-Hispanic whites is theoretically of interest, there are not enough foreign born whites in the British data to produce reliable results.¹ Following Kalmijn (1996) persons black on race, born in the US, non-Hispanic, and reporting no ancestry other than black, African or American were defined as African American. Black Caribbeans were black on race, non-Hispanic and either born in one of thirty-nine British West Indian countries or were native born and reported at least one British West Indian ancestor. Persons black on race but classified neither as African American nor as Black Caribbean were labelled Residual Black. The largest subgroups within the foreign born Residual Black category were Haitian (27 per cent), African (23 per cent) and Hispanic (30 per cent), while the largest subgroups within the native born were Hispanic (15 per cent) and Native American (15 per cent).² Individuals who were neither black on race nor non-Hispanic white were classified as Other. Following the

development of these definitions, we sampled 1 in 7 endogamous African American pairs, 1 in 100 endogamous non-Hispanic White pairs and 1 in 10 endogamous Other pairs. All other combinations were included in their entirety.

Before moving on, it is necessary to point out that qualitative research suggests native born Black Caribbeans of lower socio-economic status may be more likely to identify as African American than as West Indian (Waters 1999). Since Black Caribbeans of higher socio-economic status are probably more exogamous with whites than Black Caribbeans of lower socio-economic status, this bias in reporting could inflate estimates of out-marriage among native born Black Caribbeans. The results of Model and Fisher (2001) assuage concerns on this point, however. We found that Black Caribbeans who arrived in the US as children enter into interracial unions at about the same rate as native born Black Caribbeans. Thus, even though we do not use date of arrival in this study – because the British census does not inquire about it – we are reasonably confident that we do not overestimate out-marriage among native born Black Caribbeans.

For the British side of the study, we restricted the analysis to England, where 99 per cent of Black Caribbeans reside (Peach 1996b). Again we included all couples save those of the same sex and those in which one party was under age sixteen. Native white couples were so numerous that we sampled them at 6 per cent. All others were included in toto. In developing definitions of group membership, we drew upon birth place and the following ethnic responses to the 1991 UK Census questionnaire: White, Black Caribbean, Black African and Black Other. The most problematic of these is Black Other. Persons choosing this option were encouraged to 'please describe' in an open-ended way (Bulmer 1996). A third of persons coded as Black Other self-described as Black British; 14 per cent self-described as Black/White, the remainder used a plethora of terms to describe themselves. Dale and Holdsworth (1997) traced individuals from the 1991 Census to the 1971 Census and found that 79 per cent of the 1991 Black British were coded Black Caribbean in 1971, a time when the Black Other category did not exist.

In response to these complexities, we developed the following group definitions. First, in order to maximize comparability with US census definitions, we defined the foreign born Black Caribbean category as all those born in the Commonwealth Caribbean who identified either as Black Caribbean or as Black Other. Second, our native born Black Caribbean category encompasses all those born in the UK who identified as Black Caribbean. Third, we created a foreign born Residual Black category consisting of all foreigners born outside the Commonwealth Caribbean who identified with any black ethnic group. Eighty-five per cent listed Africa as their birthplace. Fourth, we created a native born Residual Black category consisting of all native borns who identified as

Black Other (66 per cent) or Black African (34 per cent). We would have preferred to retain the distinction between these two identities because persons identifying as Black Other are probably more assimilated than those identifying as Black African. Unfortunately, the numbers in both groups were too small to justify separating them. Finally, all persons who did not fit into the above mentioned categories were relegated to an Other category.

Because group size is a major determinant of the propensity for inter-group partnership, we use log linear analysis – a technique that implicitly controls for group size. The technique also supports a measure of gender asymmetry; that is, of the difference between the rate of white male-black female unions and the rate of black male-white female unions (Smits *et al.* 1998). As mentioned previously, in African American-white pairings, such an asymmetry has long been observed. Before investigating this possibility, however, we introduce controls for five determinants of interracial partnership: age, education, hypergamy, cohabitation and place of residence. All these are dichotomized because our sample does not contain enough interracial unions to support division into a very large number of categories. For the same reason, we employ only the man's age and education instead of the age and education of each partner. Below we briefly justify our choice of control variables and their coding schemes.

To begin with age, since the passage of time is associated with tolerance for exogamy, younger people are expected to exhibit higher rates (Patterson 1997). Moreover, in the US, the mean age for both generations of Caribbean blacks is mid-thirties; in England, the mean for foreign born Caribbean blacks is mid-forties, for the native born, mid-twenties. To control for these differences, we dichotomized age at thirty-two years. Educational attainment is also an influence, partly because educational institutions provide opportunities for otherwise segregated groups to intermingle and partly because higher education promotes universalistic attitudes (Kalmijn 1998). In the US, education is divided at the median, those with more than a high school diploma and those with the diploma or less. In Britain, those with post-secondary educational qualifications are distinguished from those with none. This categorization probably underestimates the contribution of education to intermarriage in Britain because fewer British than American Caribbeans have post-secondary schooling. Next is the variable that identifies hypergamous couples, that is, couples in which the man's education is greater than the woman's. In creating this measure, we used the full range of available values on education in each country. All couples in which the male's code was higher than the female's were defined as hypergamous. Then, we have a dummy variable distinguishing cohabiting from married couples. Research in Britain shows that black-white couples are more likely to cohabit than intraracial couples (Berrington 1996). Moreover,

in the US, '... inclusion of both cohabitation and marriage as union types reduces by nearly one-half the race difference in the proportion of women forming a union by age 25' (Manning and Smock 1995, pp. 509–10). Finally, we include a dummy variable identifying residents of New York or London, in each nation the metropolis with the largest number of Caribbean blacks. Residence in these two cities should foster Black Caribbean endogamy.³

These five covariates are used in two ways. First, we control for differences in the distribution of the subgroups on the covariates. For instance, the mean schooling of African Americans is lower than that of native born Black Caribbeans. Our estimates need to adjust for this difference. Second, we construct interactions between each covariate and each type of interracial union. This step is needed because, to continue the example, in addition to making African Americans and native born Black Caribbeans statistically the same on schooling, we expect that persons with more education will be more receptive to interracial partnership than persons with less education.

We estimate a series of hierarchical log linear, quasi-symmetry models (Bishop *et al.* 1974). The parameter of theoretical interest in these models is the exogamy preference coefficient, which is the logarithm of the odds that two individuals choose an exogamous union to the odds that these same individuals choose an endogamous union (Pullum and Peri 1999). For ease of interpretation, these log-odds are transformed into exogamy rates per 1000 endogamous unions. This is done by multiplying the antilog of the exogamy preference coefficient by 1000. For further methodological details, see the appendix.

Four models are estimated. The first controls only for the subgroup marginals; the second adds the covariates; the third adds both the bivariate associations among the covariates and the bivariate associations between the covariates and men's and women's subgroup; the fourth adds both the interactions of the covariates with the exogamy preference coefficients and the gender asymmetry parameters.

Results

For the US, the basic cross classification of women and men by partner's race/ethnicity and nativity appears as Table 1a. The diagonal cells contain wholly endogamous persons; that is, those whose partners share their race/ethnicity and nativity. Percentaging the diagonals (not shown) indicates that native whites have the highest endogamy rate (96 per cent for women, 95 per cent for men), followed closely by African Americans (95 per cent for women, 92 per cent for men). Controlling for ethnicity and nativity, women are more endogamous than men and, as expected, all the black foreign borns are more endogamous than their native born compatriots. For instance, among Black Caribbean women, 20 per cent

of the native born and 73 per cent of the foreign born are endogamous. Controlling for ethnicity and nativity reveals large differences in sex ratios. While there are 99 native born white *partnered* women per 100 such men, this ratio falls to 0.96 for African Americans, 0.90 for foreign born Black Caribbeans, and 0.82 for native born Black Caribbeans. Yet, according to the 1990 U.S. Census, the sex ratio for the entire population of black adults is 1.23 (U.S. Bureau of the Census 1995). In other words, black females are far less likely to report a union than are their white sisters.

Table 1b presents the analogous English cross-classification. Note that the number of black cases in the native subgroups is small. Within genders, there are fewer than a hundred native born Residual Blacks even though this category conflates Black Africans and Black Others. These small numbers reflect England's small population, the smaller sampling fraction associated with the SARs, and the modest size of the native born non-white British population. Percentaging the diagonals reveals native whites are again most endogamous (96 per cent for men and for women), and, as in the US, endogamy is high within all the black foreign born categories but low within the white. An intriguing trend is that, within nativity and gender categories, all Black Caribbeans in Britain are more endogamous than their American counterparts. For example, among Black Caribbean women, 45 per cent of the native born and 83 per cent of the foreign born are endogamous. Attention to British sex ratios again reveals a surfeit of black females, though less so than in the US. One reason is that the sex ratio for black adults, as captured in the UK 1991 census, is 1.13 (Ballard and Kalra 1994). In 1991, there were 99.7 *partnered* native born white men per 100 such women. The ratio drops to 0.84 for foreign born Black Caribbeans and rises to 0.87 for native born Black Caribbeans.

While log linear analysis relies on raw counts like those in Table 1, a more meaningful way of presenting the numbers appears in Table 2, which gives the percentage of partnered black individuals reporting a native white partner by ethnicity, nativity, gender and nation. The table supports several intriguing comparisons. Turning first to the motive for this study, interracial unions, note that the British rates are consistently higher than American, other things the same. For example, 24 per cent of native born Black Caribbean women in Britain have native white partners versus 8.58 per cent of native born Black Caribbean women in the US. Second, the percentage of black men with white partners is always higher than the percentage of black women with white partners. Still there are differences by ethnicity, nativity and nation. For instance, the ratio (not shown) obtained by dividing the number of black male-white female pairs by the number of black female-white male pairs within the same ethnicity, nativity and national category is highest for African Americans (3.52). Moreover, for most ethnic-nativity-nation

Table 1a. *Unions in the United States by Race, Ethnicity, Nativity and Gender*

	Men								Women							
	NB White	FB Black Caribbean	NB Black Caribbean	FB Residual Black	NB Residual Black	NB Residual Black	African Americans	Total	NB White	FB Black Caribbean	NB Black Caribbean	FB Residual Black	NB Residual Black	NB Residual Black	African Americans	Total
NB White	2,177,800	103	47	200	446	1,753	2,288,128	2,177,800	103	47	200	446	1,753	55,379	2,288,128	
FB Black Caribbean	183	3,666	85	302	73	1,117	5,593	183	3,666	85	302	73	1,117	123	5,593	
NB Black Caribbean	80	65	111	22	67	263	670	80	65	111	22	67	263	49	670	
FB Residual Black	320	313	29	4,568	216	1,445	7,447	320	313	29	4,568	216	1,445	480	7,447	
NB Residual Black	997	54	55	145	2,400	1,564	5,647	997	54	55	145	2,400	1,564	366	5,647	
African Americans	6,174	704	195	966	1,756	146,608	159,602	6,174	704	195	966	1,756	146,608	2,491	159,602	
Others	88,695	146	26	369	229	968	358,749	88,695	146	26	369	229	968	220,044	358,749	
Total	2,274,249	5,051	548	6,572	5,187	153,718	2,825,836	2,274,249	5,051	548	6,572	5,187	153,718	278,932	2,825,836	

Table 1b. *Unions in England by Race, Ethnicity, Nativity and Gender*

	Men						Women						Total
	NB White	FB Black Caribbean	NB Black Caribbean	FB Residual Black	NB Residual Black	Others	NB White	FB Black Caribbean	NB Black Caribbean	FB Residual Black	NB Residual Black	Others	
Native Born White	101,010	42	42	45	38	3,802	101,010	42	42	45	38	3,802	104,979
FB Black Caribbean	114	447	42	3	5	31	114	447	42	3	5	31	642
NB Black Caribbean	81	23	80	1	5	12	81	23	80	1	5	12	202
FB Residual Black	49	9	2	199	21	22	49	9	2	199	21	22	302
NB Residual Black	42	6	2	11	24	6	42	6	2	11	24	6	91
Others	5,430	14	7	15	6	5,486	5,430	14	7	15	6	5,486	8,901
Total	104,669	541	175	274	99	9,359	104,669	541	175	274	99	9,359	115,117

categories, the gender imbalance is greater in the US than in England. Third, in six out of eight comparisons, Residual Blacks are more likely to have native white partners than are Black Caribbeans. Finally, with the exception of African Americans, native born blacks are more likely to have native white partners than are foreign born blacks. Note though that, among both men and women, African Americans are far less likely to have a native born white partner than are either native born Black Caribbeans or native born Residual Blacks.

Some of these patterns fit the expectations outlined earlier quite well; for instance, that native born-native born pairs are more common than foreign born-native born pairs or that black male-white female pairs are more common than white male-black female pairs. The ethnic differences – that is, the relatively high rate for Residual Blacks and the relatively low rate for African Americans – are more difficult to explain. In both countries, Residual Blacks are a 'catch-all category'; thus, their demographic composition may be affecting the results in ways that are not easy to discern. The most plausible explanation for their more exogamous behaviour is that they contain a larger proportion of persons with a 'multicultural' identity; for instance, in England, persons identifying as 'Black British', in the US, persons identifying as both 'black' and 'Hispanic'. The social distance between ethnically heterogeneous blacks and native whites is likely to be smaller than the social distance between ethnically homogenous blacks and native whites.

The substantially lower rate of African American-native white couples relative to native born Black Caribbean-native white couples is consonant with Waters' (1999) hypothesis that a 'comfort factor' operates between Black Caribbeans and whites but not between African Americans and whites. However, before endorsing this interpretation, it is

Table 2. *Percent and number of partnered blacks with native white partners by ethnicity, nativity and nation*

Ethnicity/Nativity	Men		Women	
	US	England	US	England
Foreign Born Black Caribbeans	3.27% (183)	17.76% (114)	2.04% (103)	7.76% (42)
Native Born Black Caribbeans	11.94% (80)	40.10% (81)	8.58% (47)	24.00% (42)
Foreign Born Residual Blacks	4.30 (320)	16.2% (49)	3.04% (200)	16.4% (45)
Native Born Residual Blacks	17.7% (997)	46.2% (42)	8.60% (446)	38.4% (38)
African Americans	3.87% (6174)	na	1.14% (1753)	na

necessary to determine whether the pattern remains stable after the introduction of controls.

Table 3 presents the results of the model fitting exercise separately by nation. A negative BIC statistic implies an adequate model; the higher the pseudo R^2 , the better the fit. These statistics convey progressive improvement as marginals, covariates, associations among covariates, and finally interactions of covariates with exogamy preference and the asymmetry parameters are added. In both countries, Model III provides the first acceptable fit. Model IV offers a modest gain. There were no significant gender asymmetries in the British data; thus, the final model for that country does not include any. In the US case, one asymmetry coefficient was significant and thus retained; it applies to unions between African Americans and native whites.

Table 4 contains the exogamy preference coefficients by ethnicity, nativity and nation estimated by Model IV. Each coefficient should be interpreted as the number of unions between the two groups of interest for every 1000 endogamous unions in a sample composed of these two groups. For instance, the first entry says that there are 4.21 unions between foreign born Black Caribbeans and native born white Americans for every 1000 endogamous unions found in a sample of foreign

Table 3. *Fit Statistics of Models of Interracial Partnership for the US and England*

Model	Log Likelihood	Likelihood Ratio Chi-Square	BIC	Pseudo R^2
United States				
I	-9363.9	18236.9 (df = 28)	17894.0	.983
II	-40501.7	7468.15 (df = 1485)	56494.9	.945
III	-8574.1	10825.0 (df = 1405)	-6380.6	.988
IV	-7489.2	8655.1 (df = 1377)	-8207.6	.990
England				
I	-138.4	21.6 (df = 21)	-186.8	.9998
II	-6498.1	11330.3 (df = 437)	6993.2	.898
III	-1768.0	1870.1 (df = 369)	-1792.1	.972
IV	-1725.2	1784.5 (df = 349)	-1679.2	.973

born Black Caribbeans and native born white Americans. The English counterpart to the above coefficient is 24.55, a substantially higher figure. The last column reports the Wald statistic associated with the American-English difference. In this case, it is 15.93 and highly significant, as indicated by the number in parentheses under the statistic (0.000).

Indeed, for every ethnicity, nativity category, the English coefficient is greater than its American counterpart. The differences are substantial; in the smallest case, the English rate is about 2.5 times the American (native born Residual Blacks), in the largest case, the English rate is 5.8 times the American (foreign born Black Caribbeans). Thus, the introduction of controls in no way diminishes the validity of our hypothesis that exogamy is more common in England than in the US.

Several other trends in the table are worth remarking upon. For instance, the greater attraction within nativity categories noted without controls (e.g. Table 2) surfaces again here. All foreign-native pairings have lower coefficients than their corresponding native-native pairings. One reason for this is the greater social distance between the foreign born and the native born (Pagnini and Morgan 1990). Another is that a substantial portion of the foreign born arrive already partnered, thus they do not fully participate in a post-migration marriage market (Hwang and Saenz 1990). Disaggregating immigrants by date of arrival, a strategy that only the US data allow, indicates that the younger the age of arrival, the greater the Black Caribbean exogamy rate (Model and Fisher 2001). Note that the tendency in Table 2 for Residual Blacks to

Table 4. *Exogamy Preference Coefficients from Model 4 of Interracial Partnership in the US and England¹*

Unions Between Native Born Whites and	US	England	Wald Test
FB Black Caribbeans	4.21 (0.51)	24.55 (5.07)	15.93 (0.000)
NB Black Caribbeans	10.17 (1.46)	46.85 (8.64)	17.52 (0.000)
FB Residual Blacks	4.46 (0.58)	20.62 (3.29)	23.39 (0.000)
NB Residual Blacks	16.51 (1.60)	40.73 (8.97)	7.07 (0.008)
African American Men and Native Born White Women	14.92 (1.53)	na	na
African American Women and Native Born White Men	8.55 (1.00)	na	na

¹All coefficients significant at the .05 level, two tailed test. Standard error of coefficients and p value of Wald test in parentheses. Gender asymmetries are insignificant for Black Caribbeans and Residual Blacks in both countries.

be more exogamous than Black Caribbeans no longer holds in Table 4. For example, the exogamy preference coefficients in England for native born Black Caribbeans (46.85) and native born Residual Blacks (40.73) are statistically indistinguishable from each other.⁴ Evidently, the main cause of the differences in the exogamy rates of the two groups of blacks is the characteristics of the participants, an issue we turn to shortly.

Before doing so, however, the gender asymmetry patterns deserve attention. Note first that there are no asymmetries in England and that the single significant asymmetry in the US obtains for African Americans. This finding means that, controlling for the characteristics of the participants, there is no gender imbalance for either country in unions between Black Caribbeans and native born whites or unions between Black Others and native born Whites. Astute readers will remember that hypergamy is one of the controls; thus, controlling for this factor – and especially controlling for its interaction with exogamy – might be the reason that gender asymmetries are insignificant. As will become clear when we move to a discussion of Table 5, nearly all the interactions between hypergamy and exogamy are insignificant. This means that, *ceteris paribus*, black-white couples are not more likely to be hypergamous than intra-racial couples, a finding recently also reported by Qian (1999).

Another potentially useful approach is to contrast the US results in Table 4 with those in Model and Fisher (2001). Using a slightly different model, we found significant asymmetries for both African American-white pairs and Black Caribbean-white pairs. Both were in the expected direction; that is, more unions between black males and white females than the converse, but the African American coefficient was larger in magnitude than the Black Caribbean.⁵ This pattern meshes with the descriptive statistics obtained in both the previous and the present analysis (Table 2). The fact that the present results only partially replicate the previous ones suggests that asymmetries are sensitive to model specification and should be interpreted with caution. Further evidence for this claim comes from our attempts to interact the asymmetries with some of the covariates. This line of inquiry looked fruitful, but the data do not contain enough cases for the approach to yield reliable estimates. Fortunately, in the present instance, the theoretical focus is on cross-national differences in exogamy rates, not on gender asymmetry. Thus, rather than labour this methodological point further, we leave it for other scholars to elucidate.

There remains one set of results of potential interest: the effects of the characteristics of the participants on their propensity for interracial partnership. This information appears in Table 5, which contains the interactions between the covariates and exogamy preference for each ethnicity/nativity group by country. In interpreting these numbers, 1.000 is essentially 'no effect', a number larger than one means that the

Table 5. Interactions of Covariates with Exogamy Preference Coefficients from Model 4

Unions Between Native Born Whites and	Male's Age	Male's Education	Hypergamy	Cohabits	New York or London
United States					
FB Black Caribbeans	0.660 (0.052)	1.127 (0.109)	0.915 ^{ns} (0.081)	1.627 (0.177)	1.265 (0.102)
NB Black Caribbeans	0.878 ^{ns} (0.072)	1.296 (0.092)	0.886 ^{ns} (0.067)	1.623 (0.160)	1.144 ^{ns} (0.106)
FB Residual Blacks	0.758 (0.059)	1.689 (0.128)	0.888 ^{ns} (0.066)	1.259 (0.138)	1.228 (0.110)
NB Residual Blacks	0.827 (0.045)	1.139 (0.062)	0.923 ^{ns} (0.048)	1.588 (0.101)	1.114 ^{ns} (0.091)
African Americans	0.814 (0.044)	1.124 (0.049)	0.997 ^{ns} (0.049)	1.772 (0.103)	1.136 (0.070)
England					
FB Black Caribbeans	0.864 ^{ns} (0.117)	1.023 ^{ns} (0.254)	1.144 ^{ns} (0.306)	1.433 (0.174)	1.191 ^{ns} (0.144)
NB Black Caribbeans	0.707 (0.086)	0.716 ^{ns} (0.233)	1.654 ^{ns} (0.564)	1.387 (0.158)	1.245 (0.161)
FB Residual Blacks	0.687 (0.074)	1.576 (0.223)	0.509 (0.084)	1.124 ^{ns} (0.144)	1.402 (0.156)
NB Residual Blacks	0.747 (0.115)	0.511 (0.112)	1.435 ^{ns} (0.350)	1.433 (0.174)	1.143 ^{ns} (0.204)

^{ns} Coefficient is not significant at the .05 level, one tailed test.

exogamy coefficient increases as the covariate increases; a number smaller than one means that the exogamy coefficient decreases as the covariate increases.

To begin with the man's age, all values are less than one, indicating that younger people are more likely to be exogamous than older people. This effect is not significant for two of the nine ethnic/nativity groups. Men with more education have a higher propensity for exogamy, but this finding too is insignificant for two groups. As mentioned above, hypergamy – defined as men who have more education than their partners – is insignificant for all groups except foreign born Residual Blacks in England. Interestingly, this effect is smaller than one, which means that hypergamy depresses the likelihood that these blacks have white partners. Cohabitation, on the other hand, is significantly positive in eight of the nine contrasts. Finally, residence in New York or London is significant about half the time. All numbers are larger than one, which means that the odds of a black-white union are higher for residents of these cities than for those residing elsewhere.

Most of these findings mesh with the theoretical predictions outlined earlier. The two exceptions are hypergamy and residence in each nation's largest city. Hypergamy may be in retreat because women are less economically dependent on men than they once were. As for residence in a global city, we hypothesized that the large pool of blacks in New York and London would enhance racially endogamous unions. But these cities also house a plethora of other groups, and they are extremely cosmopolitan cities. This combination is probably responsible for the effects in the last column of Table 5.

Discussion

The main purpose of this study was to examine unions between blacks and whites in England and the US, controlling for ethnicity and nativity. A review of the literature led us to expect more unions between Black Caribbeans and whites in England than in America and that expectation was supported. Britain offers a more hospitable environment for black-white relationships whether the judgement is based on raw percentages or multi-variate analysis. To illustrate using the partnership potentially most relevant for assimilation theory, there are 10.10 native born white-native born Black Caribbean couples in the US for every 1000 endogamous native born whites and native born Black Caribbeans; there are 46.85 such couples in England.

Before interpreting these findings, a caveat is in order. A key factor for which we cannot adequately control is residential segregation. To be sure, adding dummies for London or New York controls for the effect of residing in a major area of black concentration. But Black Caribbean New Yorkers are substantially more residentially segregated from

whites than are Black Caribbean Londoners (Peach 1996a, 1999; Crowder 1999). As Nancy Foner explains, London's Caribbean blacks interact with whites every day, whereas 'New York's Jamaicans live out much of their lives apart from the presence of whites' (Foner 1998, p. 51). Thus, England's Black Caribbeans have more opportunity to develop relationships with whites than their US counterparts do. Of course, the residential difference is part and parcel of a far more consequential uncontrolled cross-national difference: the presence of African Americans. Again, controlling for the size of each nation's white population captures some of this effect. But African Americans do not merely reduce the proportion of whites in the US population, they also constitute a more socially accepted pool of mates for black ethnics. We know this because, in both countries, when blacks out-marry, they are far less likely to choose white partners than black partners of a different ethnicity. Thus, the nation with more black ethnicities, i.e. the US, should report fewer unions between Black Caribbeans and native born whites.

All the same, we suspect that the exogamy preference coefficients for Black Caribbean-native white unions would be higher in England than the US even if we could control for all unmeasured cross-national differences. The magnitude of the gap between the US and English results is simply too large to disappear with additional controls.

We close with some implications of our results for the assimilation of persons of African descent. We begin with the question: are black-white unions sufficiently common to promote the disappearance of group boundaries? To answer this question we need to return to actual rates of intermarriage, not rates imputed after controlling for the characteristics of the participants. According to Alba and Nee, exogamy rates of 50 per cent or more are 'rather high' and rates of over 75 per cent are 'extremely high' (Alba and Nee 1997, pp. 89–90). Applying this standard to the figures in Table 2, even native born Black Caribbeans in Britain are not yet experiencing boundary decline, though they are certainly far closer than their US counterparts. As for the US, Alba and Nee would rate as 'rather low' even the relatively favourable figures reported by Besharov and Sullivan (1996), who find that 9.5 per cent of black men marrying in the year 1990 had white brides.

At the same time, our data indicate that black-white unions are on the rise. It is not difficult to imagine that soon as many as half of native born Black Caribbean males in Britain will have white partners. Thus, it is appropriate to ask whether or not a further increase in black-white unions can be expected to contribute to the erosion of the colour line. Unfortunately, as Gordon (1964) pointed out, intermarriage is only one dimension of assimilation. To determine if intermarriage promotes the ultimate disappearance of salient group boundaries requires a consideration of the identities open to the offspring. If the offspring of mixed

race unions have a range of ethnic options; for instance, to take on the identity of either parent or to take on a separate biracial identity, then their parents' union has facilitated the demise of ethnic boundaries. But if the offspring of mixed race partnerships have little say in the matter; if the dominant society automatically assigns them the heritage of the parent who belongs to the more stigmatized group, then mixed race unions do not facilitate the erosion of ethnic boundaries.

We suspect that the latter description applies both to the US and the UK, though the meaning of having a parent of African origin is not the same in the two societies. With respect to the US, research reveals that Americans, black and white, still honour the one drop rule (Waters 1991). According to this convention, '... a black is any person with *any* known African black ancestry ...' (Davis 1991, p. 5 italics in the original), which means that, 'For all persons of any known black lineage ... assimilation is blocked and is not promoted by miscegenation' (Davis 1991, p. 14). To be sure, in the post Civil Rights era, Americans with one white and one black parent increasingly identify as 'mixed race' or 'biracial' (Root 1996). But the more telling social fact is not how mixed race people view themselves but how the larger society views them. And as yet, there is simply no evidence that Americans, black or white, classify the offspring of one black parent and one white parent as anything but black (Byng 1999).

The British racial and ethnic hierarchy is different. In Anne Wilson's words 'To be "black" in Britain means to be "non-white". Whether a person is Asian or West Indian, Negroid or Caucasian, light or dark-skinned is irrelevant to the distinction between white and non-white; everyone acknowledges this to be meaningful and significant' (Wilson 1987, p. 30). Evidence for this conclusion comes from a broad array of research, from surveys to field experiments, which show that the British public ranks South Asians and Black Caribbeans quite similarly (Jowell *et al.* 1992; Brown and Gay 1994). This assessment has its roots in colonialism but the efforts of British minorities to mount a political strategy of unity may also have blurred British whites' perceptions of the differences among non-whites.

In recent years, this political unity has begun to unravel. Increasing discrimination against Muslims has encouraged this group to emphasize its uniqueness. Partly as a result, the term 'black' has begun to carry a narrower sub-Saharan African connotation. But these developments do not dilute the fact that, from the point of view of the dominant group, the intractable boundary in Britain is between persons of non-European and European origin, not of African and European origin. The British may disagree about how to classify a few groups, Jews or Chinese for instance, but the '... Caucasian British are sure that they are 'white' and equally sure that people of Indian or African extraction are not'. Thus, persons of mixed parentage in Britain, 'unless they are extremely light

and Caucasian in appearance . . . will be viewed as a member of the non-white group' (Wilson 1987, p. 36).

In sum, the US and the UK share social norms that assure the perpetuation of a stigmatized subordinate group, even though the characteristics associated with membership in that group are not the same. In both Eurocentric societies, the operation of these norms prevents intermarriage from loosening group boundaries. Perhaps, as Alba and Nee (1997) suggest, further increases in the proportion of unions between whites and persons of African descent will lead to a successful challenge of these norms. If numbers are the engine of social change, our findings imply that Britain will turn hospitable to assimilation sooner than the United States. If numbers are immaterial, then the phenotypical distinctions associated with some non-European backgrounds will continue to impede assimilation no matter how popular intermarriage becomes.

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Notes

1. A preliminary analysis of US census data indicates that foreign born whites enter into unions with foreign born Black Caribbeans at about the same rate as do native born whites, whereas foreign born whites enter into unions with native born Black Caribbeans less often than do native born whites. Results available from the authors on request.
2. These categories reflect codes for birthplace, ancestry and Hispanicity and can therefore overlap.
3. Since the couples we study are already together, any co-temporaneous measure of 'opportunity' for social interaction is flawed. Ideally, the residential location predating the partnership should be used. Better still would be measures of segregation, but these are not available in the 5 per cent PUMs.
4. A table containing the results of significance tests for differences among coefficients within each country is available from the authors on request.
5. Note that the substantive implications of the results here and in Model and Fisher (2001) are essentially the same. The present analysis shows that native born Black Caribbean women and native born white men have a higher exogamy preference (10.17) than African American women and native born white men (8.55), but that native born Black Caribbean men and native born white women have a lower exogamy preference (10.17) than African American men and native born white women (14.91). With slightly different numbers, the same pattern emerges in Model and Fisher (2001).

References

- ALBA, RICHARD 1995 'Assimilation's quiet tide', *The Public Interest*, vol. 119, pp. 1-18
- ALBA, RICHARD and NEE, VICTOR 1997 'Rethinking assimilation for a new era of immigration', *International Migration Review*, vol. 31, pp. 826-74
- ARNOLD, FAYE 1996 'Los Angeles West Indian Immigrant Women: 'Claimin' De Not

- Black, De Jus' Tillin' De Bitter Harvest', paper presented at the annual meeting of the American Sociological Association, New York
- BALLARD, ROGER and KALRA, VIRINDER SINGH 1994 *The Ethnic Dimensions of the 1991 Census: A Preliminary Report*, Department of Religions, The University of Manchester
- BERRINGTON, ANN 1994 'Marriage and family formation among the white and ethnic minority populations in Britain', *Ethnic and Racial Studies*, vol. 17, no. 3, pp. 515-45
- 1996 'Marriage patterns and inter-ethnic unions', in David Coleman and John Salt (eds), *Ethnicity in the 1991 Census: Volume One*, London: HMSO, pp. 178-208
- BESHAROV, DOUGLAS J. and SULLIVAN, TIMOTHY S. 1996 'One flesh: America is experiencing an unprecedented increase in black-white intermarriage', *The New Democrat*, July/August, pp. 19-21
- BISHOP, YVONNE M. M., FIENBERG, STEPHEN E. and HOLLAND, PAUL W. 1974 *Discrete Multivariate Analysis*, Cambridge, MA: MIT Press
- BLAU, PETER M., BLUM, TERRY C. and SCHWARTZ, JOSEPH E. 1982 'Heterogeneity and Intermarriage', *American Sociological Review*, vol. 47, pp. 45-62
- BROWN, COLIN and GAY, PETER 1994 'Racial discrimination 17 years after the act', in Paul Burstein (ed.), *Equal Employment Opportunity*, New York: Aldine de Gruyter, pp. 315-28
- BULMER, MARTIN 1996 'The ethnic group question in the 1991 Census of Population', in D. Coleman and J. Salt (eds), *Ethnicity in the 1991 Census, Volume One: Demographic Characteristics of the Ethnic Minority Population*, London: HMSO, pp. 33-62
- BYNG, MICHELLE D. 1999 'Review of *From Black to Biracial: Transforming Racial Identity Among Americans* by Kathleen Odell Korgen', *American Journal of Sociology*, vol. 104, pp. 1867-69
- BUMPASS, LARRY L. and SWEET, JAMES A. 1989 'National estimates of cohabitation', *Demography*, vol. 26, no. 4, pp. 615-25
- CROWDER KYLE D. 1999 'Residential segregation of West Indians in the New York/ New Jersey Metropolitan Area: the roles of race and ethnicity', *International Migration Review*, vol. 33, pp. 79-113
- DALE, ANGELA and HOLDSWORTH, CLARE 1997 'Issues in the analysis of ethnicity in the 1991 British Census: evidence from microdata', *Ethnic and Racial Studies*, vol. 20, no. 1, pp. 160-81
- DAVIS, F. JAMES. 1991 *Who Is Black? One Nation's Definition*, University Park, PA: The Pennsylvania State University Press
- FARLEY, REYNOLDS 1996 *The New American Reality*, New York: Russell Sage
- FONER, NANCY 1998 'Towards a comparative perspective on Caribbean immigration', in M. Chamberlain (ed.), *Caribbean Migration*, London: Routledge, pp. 47-60
- GORDON, MILTON 1964 *Assimilation in American Life*, New York: Oxford University Press
- HWANG, SEAN-SHONG and SAENZ, ROGELIO 1990 'The problem posed by immigrants married abroad on intermarriage research: the case of Asian Americans', *International Migration Review*, vol. 24, no. 3, pp. 563-76
- JAYNES, GERALD D. and WILLIAMS, ROBIN M., Jr. (eds) 1989 *Blacks and American Society*, Washington: National Academy Press
- JOWELL, ROGER, BROOK, LINDSAY, PRIOR, GILLIAN and TAYLOR, BRIDGET 1992 *British Social Attitudes: the Ninth Report*, Aldershot: Dartmouth
- KALMIJN, MATTHIJS 1996 'The socioeconomic assimilation of Caribbean American Blacks', *Social Forces*, vol. 74, no. 3, pp. 911-30
- 1998 'Intermarriage and homogamy: causes, patterns and trends', in Karen S. Cook and John Hagan (eds), *Annual Review of Sociology*, vol. 24, Palo Alto: Annual Reviews Inc., pp. 395-421
- KASINITZ, PHILIP 1992 *Caribbean New York*, Ithaca: Cornell University Press
- LIEBERSON, STANLEY and WATERS, MARY C. 1988 *From Many Strands*, New York: Russell Sage

- MANNING, WENDY D. and SMOCK, PAMELA J. 1995 'Why marry? Race and the transition to marriage among cohabitators', *Demography*, vol. 32, no. 4, pp. 509–19
- MASON, DAVID 1995 *Race and Ethnicity in Modern Britain*, Oxford: Oxford University Press
- MERTON, ROBERT 1941 'Intermarriage and social structure: fact and theory', *Psychiatry*, vol. 4, pp. 361–74
- MODEL, SUZANNE and FISHER, GENE 2001 'Black-White unions: West Indians and African Americans compared', *Demography*, vol. 38, no. 2, pp. 177–85
- MODOOD, TARIQ, BERTHOUD, RICHARD, LAKEY, JANE, NAZROO, JAMES, SMITH, PATTEN, VIRDEE, SATNAM and BEISHON, SHARON 1997 *Ethnic Minorities in Britain: Diversity and Disadvantage*, London: The Policy Studies Institute
- PAGNINI, DEANNA L. and MORGAN, S. PHILIP 1990 'Intermarriage and social distance among U.S. Immigrants at the Turn of the Century', *American Journal of Sociology*, vol. 96, no. 2, pp. 405–32
- PATTERSON, ORLANDO 1997 *The Ordeal of Integration*, Washington: Civitas
- PEACH CERI. 1996a 'Does Britain have ghettos?' *Transactions of the Institute of British Geographers*, N.S. vol. 21, pp. 216–35
- 1996b 'Black-Caribbeans: class, gender and geography', in Ceri Peach (ed.), *Ethnicity in the 1991 Census, Volume Two: the Ethnic Minority Population of Great Britain*, London: HMSO, pp. 25–43
- 1999 'London and New York: contrasts in the British and American models of segregation', *International Journal of Population Geography*, vol. 5, pp. 319–51
- PULLUM, THOMAS W. and PERI, ANDRES 1999 'A multivariate analysis of homogamy in Montevideo, Uruguay', *Population Studies*, vol. 53, no. 3, pp. 361–77
- QIAN, ZHENCHAO 1999 'Who intermarries? Education, nativity, region and interracial marriage, 1980 and 1990', *Journal of Comparative Family Studies*, vol. 30, pp. 579–97
- REID, IRA D. 1939 *The Negro Immigrant*, New York: AMS Press
- ROOT, MARIA P. P. (ed.) 1996 *The Multiracial Experience*, Thousand Oaks, CA: Sage
- SCHOEN, ROBERT 1995 'The widening gap between black and white marriage rates: context and implications', in M. Belinda Tucker and Claudia Mitchell-Kernan (eds), *The Decline in Marriage Among African Americans*, New York: Russell Sage, pp. 103–16
- SMITS, JEROEN, WOUT ULTEE and JAN LAMMERS 1998 'Educational homogamy in 65 countries: an explanation of differences in openness using country-level explanatory variables', *American Sociological Review*, vol. 63, no. 2, pp. 264–85
- SPICKARD, PAUL R. 1989 *Mixed Blood*, Madison: University of Wisconsin Press
- TIZARD, BARBARA and PHOENIX, ANN 1993 *Black, White or Mixed Race?* London: Routledge
- WATERS, MARY C. 1990 *Ethnic Options*. Berkeley: University of California Press
- 1991 'The role of lineage in identity formation among Black Americans', *Qualitative Sociology*, vol. 14, pp. 57–76
- 1999 *Black Identities: West Indian Immigrant Dreams and American Realities*, New York: Russell Sage
- WILSON, ANNE 1987 *Mixed Race Children*, London: Allen and Unwin
- YAMAGUCHI, KAZUO 1990 'Some Models for the analysis of asymmetric association in square contingency tables with ordered categories', in C. Clogg (ed.), *Sociological Methodology 1990*, Cambridge: Basil Blackwell, pp. 181–212

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Appendix

Let U = the man's race/ethnicity ($h = 1, \dots, 7$), V = the woman's race/ethnicity ($i = 1, \dots, 7$), W = the man's education ($j = 1, 2$), X = educational hypergamy ($k = 1, 2$), Y = the man's age ($l = 1, 2$), S = the couple's place of residence ($m = 1, \dots, 2$), T = whether they cohabit ($n = 1, 2$). The partnerships in our sample are cross-classified by these seven variables. The cross-classification of the seven variables yields a $7 \times 7 \times 2 \times 2 \times 2 \times 2 \times 2 = 1,568$ cell table. $F_{hijklmn}$, the expected cell frequency, denotes the number of unions expected in cell $hijklmn$ of the table.

To predict the number of unions in each cell, we estimate a series of hierarchical log-linear quasi-symmetry models (Bishop *et al.* 1989). The first includes only the racial/ethnic marginals and the mean exogamy preference coefficients. No adjustment is made for the covariates, the man's education and age, hypergamy, residence, and cohabitation or for asymmetry. The formula for this model is

$$\text{Log } F_{hijklmn} = \lambda + \lambda_h^U + \lambda_i^V + \delta_{hi} \tag{I}$$

The second model adds the marginals of the covariates. Its formula is:

$$\text{Log } F_{hijklmn} = \lambda + \lambda_h^U + \lambda_i^V + \lambda_j^W + \lambda_k^X + \lambda_l^Y + \lambda_m^S + \lambda_n^T + \delta_{hi} \tag{II}$$

Next we add bivariate associations among the covariates and bivariate associations among the covariates and the man's and woman's race/ethnicity:

$$\begin{aligned} \text{Log } F_{hijklmn} = & \lambda + \lambda_h^U + \lambda_i^V + \lambda_j^W + \lambda_k^X + \lambda_l^Y + \lambda_m^S + \lambda_n^T + \\ & \lambda_{hj}^{UW} + \lambda_{hk}^{UX} + \lambda_{hl}^{UY} + \lambda_{hm}^{US} + \lambda_{hn}^{UT} + \lambda_{ij}^{VW} + \lambda_{ik}^{VX} + \\ & \lambda_{il}^{VY} + \lambda_{im}^{VS} + \lambda_{in}^{VT} + \lambda_{jk}^{WX} + \lambda_{jl}^{WY} + \lambda_{jm}^{WS} + \lambda_{jn}^{WT} + \\ & \lambda_{kl}^{XY} + \lambda_{km}^{XS} + \lambda_{kn}^{XT} + \lambda_{lm}^{YS} + \lambda_{ln}^{YT} + \lambda_{mn}^{ST} + \delta_{hi} \end{aligned} \tag{III}$$

Then, we add interactions of the covariates with exogamy preference and asymmetry coefficients:

$$\begin{aligned} \text{Log } F_{hijklmn} = & \lambda + \lambda_h^U + \lambda_i^V + \lambda_j^W + \lambda_k^X + \lambda_l^Y + \lambda_m^S + \lambda_n^T + \\ & \lambda_{hj}^{UW} + \lambda_{hk}^{UX} + \lambda_{hl}^{UY} + \lambda_{hm}^{US} + \lambda_{hn}^{UT} + \lambda_{ij}^{VW} + \lambda_{ik}^{VX} + \\ & \lambda_{il}^{VY} + \lambda_{im}^{VS} + \lambda_{in}^{VT} + \lambda_{jk}^{WX} + \lambda_{jl}^{WY} + \lambda_{jm}^{WS} + \lambda_{jn}^{WT} + \lambda_{kl}^{XY} \\ & + \lambda_{km}^{XS} + \lambda_{kn}^{XT} + \lambda_{lm}^{YS} + \lambda_{ln}^{YT} + \lambda_{mn}^{ST} + \delta_{hi} + \delta_{hi}^W + \delta_{hi}^X + \\ & \delta_{hi}^Y + \delta_{hi}^S + \delta_{hi}^T + \alpha_{hi} \end{aligned} \tag{IV}$$

The terms of greatest theoretical interest are the associations between the man's and the woman's race/ethnicity. Here called exogamy preference coefficients (Pullum and Peri 1997), these are the final terms in each specification. d_{hi} , represents the mean exogamy preference for each

interracial combination, e.g., non Hispanic whites with native born West Indians ($h = 1, i = 2$ or $h = 2, i = 1$). $\delta = 0$ when $i = j$ and $\delta_{hi} = \delta_{ih}$ when $i \neq j$. Model IV contains this term as well as terms conveying the interaction between each of the covariates and exogamy preference, e.g. $\delta_{hi} + \delta_{hi}^W + \delta_{hi}^X + \delta_{hi}^Y + \delta_{hi}^S + \delta_{hi}^T$

The exogamy preference coefficient represents the postulated symmetry in the man's ethnicity by woman's ethnicity table and is defined as $\frac{1}{2}[\log(F_{hi}) + \log(F_{ih}) - \log(F_{hh}) - \log(F_{ii})]$. In other words the logarithms of the expected number of exogamous union (e.g., white man - Black Caribbean woman and Black Caribbean man - white woman) are averaged and then compared with the average logarithm of endogamous unions (i.e., white man - white woman and Black Caribbean man - Black Caribbean woman). The exogamy preference coefficients are typically reported in exponentiated form, i.e., as $\exp(\delta_{hi})$. In exponential form we define exogamy preference as $\sqrt{F_{hi}F_{ih}}/\sqrt{F_{hh}F_{ii}}$. A ratio of 1.0 means that exogamous unions are as likely as endogamous unions. A ratio less than 1.0 indicates a preference for endogamous unions over exogamous unions. The exogamy preference ratio can also be interpreted as the odds of an exogamous union to an endogamous union. In reporting exogamy preference, we multiply this ratio by 1000 so that the coefficient represents the rate of exogamous unions per 1000 endogamous unions.

The final parameters in the model, α_{hi} , are asymmetry coefficients (Yamaguchi 1990, Smits *et al.* 1998). They have been introduced to accommodate departures from the quasi-symmetry model that have been found in interracial unions. Like the exogamy preference coefficient, δ , the asymmetry coefficient $\alpha = 0$ when $i = j$, but unlike δ , $\alpha_{hi} = -\alpha_{ih}$. The asymmetry coefficient represents the extent to which the off diagonal association, δ , deviates from its average. For example, suppose the average exogamy preference of African American - white unions is 12 unions per thousand, such that $\delta = -4.42$. But African American men are more often in unions with white women than the reverse. Thus, the 'true' preference for African American men and white women may be as high as 24 per thousand ($\delta = -3.73$), while the preference for white men and African American women may be as low as 6 per thousand ($\delta = -5.11$). If this is the case, the value of α will be $-.69$. In effect, the asymmetry coefficient tells us to double or cut in half the average exogamy preference rate of African American - white unions, depending on the man's race/ethnicity.

It should be noted that to simplify the notation, only the subscripts h and i have been used in the definition. In actuality, the logarithm of the hi , ih , hh , and ii expected cell frequencies are averaged over all the combinations of the covariates, indexed by j, k, l, m , and n . Furthermore, as stated above, in Model IV we add δ 's with superscripts W, X, Y, S, and T to indicate deviations in the mean exogamy preference created by

the covariates. That is, we hypothesize that the covariates are associated with higher or lower levels of interracial/interethnic partnerships. These coefficients are reported in their exponentiated form, but are not multiplied by 1,000 because they are multipliers. They convey how much a particular covariate, such as the man's education, increases ($\exp(\delta_{hi}^W) > 1$) or decreases ($\exp(\delta_{hi}^W) < 1$) the mean exogamy preference indicated by $1000 * \exp(\delta_{hi})$.