

Crossing Racial Boundaries: Changes of Interracial Marriage in America, 1990-2000

Zhenchao Qian

Daniel T. Lichter

Department of Sociology
The Ohio State University
300 Bricker Hall
190 N. Oval Mall
Columbus, OH 43210
qian.26@osu.edu

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Abstract

Trends in interracial marriage provide an indirect indicator of changes in race relations and intergroup social distance in America. Using data from the 5% Public Use Microdata Sample (PUMS) of the 1990 and 2000 U.S. censuses, we examine changes and variations in interracial marriage among whites, blacks, Latinos, Asians, and American Indians. In the 1990s, interracial marriage with whites increased for all racial and ethnic minorities. African Americans had the largest increase but remained less likely than other racial minorities to marry whites. Educational attainment strongly affected interracial marriage for Latinos and Asian Americans, but not blacks. Highly educated Latinos and Asian Americans are much more likely to marry whites than their less educated counterparts. Interracial relationships with whites increased significantly, especially for minorities with less education, when cohabiting couples are included in the analysis. Including immigrants, however, slowed the increases in interracial unions with whites for Latinos and Asian Americans. We address the role of the new multiracial classification in the 2000 Census in changing levels of interracial unions. American Indian-white marriages are affected the most by changes in multiracial classifications.

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Interracial marriage is an indirect measure of race relations and intergroup social distance. High rates of interracial marriage indicate the weakening of group boundaries and suggest frequent interracial contact between groups (Blau, Beeker, and Fitzpatrick 1984). Witnessing the rapid increase of interracial marriage in the 1980s, Besharow and Sullivan (1996) claim that race relations have improved and racial distance has declined. However, rates of interracial marriage remain low, accounting for less than 3 percent of all marriages in 2000. Interracial marriages also are uneven across racial groups. African Americans are least likely to outmarry while American Indians are most likely to marry whites (Qian 1997; Qian and Lichter 2001; Sandefur and Trudy 1986). Differences can be explained in part by racial differences in educational attainment, which is positively associated with interracial marriage (Qian 1997).

In addition to educational attainment, increasing levels of cohabitation, the influx of immigration, and changing definitions of racial classification may further affect the levels of interracial marriage. Cohabitation has played an important role in the decline of marriage (Bumpass, Sweet, and Cherlin 1991). Cohabitation has low levels of commitment and does not necessarily involve the interactions of families and friends from both sides (Bennett, Blanc, and Bloom 1988; Brown and Booth 1996). This living arrangement may be attractive to interracial couples because they can avoid family complications often associated with extended kin. The influx of immigrants changes the native-foreign-born mix for racial minorities. This slows down interracial marriage for racial minorities because immigrants have much lower levels of interracial marriage (Qian and Lichter 2001). Meanwhile, newly arrived immigrants from Asia or Latin America replenish the demographic supply of potential partners for natives of the same

race and ethnicity (Massey 1995). Finally, changes in racial classification between 1990 and 2000 also may affect the measurement of interracial marriage. In the 2000 census, Americans were able to mark one or more racial categories for the first time. Excluding multiracial individuals from single-race populations will most certainly affect levels of interracial marriage.

In this paper, we use 1990 and 2000 census data to examine changes in interracial marriage in the 1990s for whites, African Americans, Latinos, Asian Americans, and American Indians. Given that educational attainment is an important dimension of assortative mating, we examine how educational attainment affects interracial marriage. Meanwhile, we explore how cohabitation, immigration, and racial classification affect interracial relationships. We employ log-linear models to explore levels of interracial marriage across racial groups by educational combinations of partners. Then, we examine how levels of interracial marriage respond to the inclusion of cohabiting couples and immigrants. Finally, we compare how levels of interracial relationships change in response to classifications of multiracial individuals.

RACE AND INTERRACIAL MARRIAGE

Gordon's assimilation theory has been used extensively to explain increases in interracial marriage (Gordon 1964). In the words of Park and Burgess (1969: 735), assimilation is "a process of interpenetration and fusion in which persons and groups acquire the memories, sentiments and attitudes of other persons and groups and, by sharing their experience and history, are incorporated with them in a common culture life." Indeed, European immigrants who arrived in the United States at the turn of the twentieth century were diverse ethnically and socio-economically at the beginning of their arrival but soon reached equity in educational and labor-market opportunities (Alba 1990). Ethnic boundaries weakened and interethnic marriage became

commonplace (Lieberson 1980; Pagnini and Morgan 1990). Thus, European immigrants and their descendants gradually became assimilated in American society.

Racial and ethnic minorities fare differently in American society. Racial prejudice and discrimination has long limited the opportunities of racial and ethnic minorities to achieve socioeconomic success. Miscegenation laws forbidding people of different races from marrying made interracial marriage illegal in many states for a long time. This law was not abolished nationwide until 1967. Assimilation theory sees assimilation as an inevitable process but does not take into account various barriers facing racial and ethnic minorities in their integration into mainstream society. From the perspectives of racial minorities, assimilation is not necessarily their goal in American society. They strive for socioeconomic success simply fulfills the goals of improving their lives and those of their children rather than active pursuit for assimilation (Alba and Nee 2003).

One consequence of socioeconomic success for some racial minorities – a good education, a good job, and a nice place to live – indicates a decline in social distance with whites. Social distance “refers to the degrees and grades of understanding and feeling that persons experience regarding each other” (Bogardus 1925,299). It is created through the human practice of classifying people of different racial groups into ranked categories. As minority individuals improve their socioeconomic status, they are more likely to meet whites in college, workplace, and neighborhood. Increasing racial contact with whites for minority individuals provides opportunities for interracial interactions and improves mutual understandings. Consequently, interracial marriage is likely to follow. Clearly, socioeconomic status of racial minorities is an important factor of interracial marriage. We use educational attainment as an approximation for socioeconomic success as it is a key determinant of labor market success and of other aspects of

lifestyle (Mare 1991). We hypothesize that highly educated racial minorities are more likely to be interracially married than their less educated counterparts.

Social distance between groups tends to be narrowing down as a result of frequent social contact across groups at the individual levels. In recent years, especially after civil rights movement in the 1960s, racial minorities have made some headway in socioeconomic status, which may have contributed to the increases in interracial marriage. Different levels of socioeconomic achievement among racial minority groups may lead into different levels of interracial marriage. Asian Americans with greater socioeconomic status than other racial minorities (Farley 1996) may have greater levels of interracial marriage with whites than do other racial minorities.

Although Latinos have lower socioeconomic status than Asian Americans, Latinos are diverse in socioeconomic status. But the majority of Latinos identify themselves as white. Social distance with non-Latino whites is likely to be small because of shared racial identity. Indeed, Qian and Cobas (Forthcoming) analyzed 1990 census data and show much higher levels of intermarriage with non-Latino whites for Latinos self-identified as white than for Latinos self-identified as nonwhite. Thus, we expect to see higher levels of intermarriage with non-Latino whites for Latinos than for other racial minorities. We also expect much stronger effects of educational attainment on intermarriage among Latinos in comparison to other racial minorities.

Analyses based on previous censuses have shown that African Americans are least likely of all racial minorities to marry whites (Blackwell and Lichter 2000; Harris and Ono Forthcoming; Qian 1997). This pattern is unlikely to have changed in the 1990s. In recent decades, the growth of the black middle class has fueled increases of African Americans in integrated workplaces and neighborhoods (Neckerman, Carter, and Lee 1999). Residential

segregation, despite declines in the 1990s, remains higher for African Americans than for the other groups (Iceland, Weinberg, and Steinmetz 2002). One reason is that well-educated Latinos and Asian Americans tend to live in predominantly white neighborhoods but well-educated African Americans remain highly segregated in largely black neighborhoods. Geographic distance reflects social distance, while reinforcing segregation. There is little reason to believe that African Americans have become more likely than other racial minorities in the 1990s to marry whites.

Although African Americans and American Indians have the longest and perhaps most turbulent histories of minority group prejudice and discrimination in the United States, their interracial marriage patterns are dramatically different. Black-white marriages were strongly discouraged and subject to legal penalties while American Indian-white marriages were promoted for political and economic reasons (Sandefur and Trudy 1986). Interracial marriage with whites has always been relatively high among American Indians. In fact, several generations of American Indian-white marriages have weakened American Indian identity as mixed-race identities of their descendants proliferated (Eschbach 1995). Thus, social distance is likely to be the shortest between American Indians and whites and to have continued to decline in the 1990s. American Indians are expected to have the highest level of interracial marriage with whites among all racial groups.

COHABITATION AND INTERRACIAL MARRIAGE

More Americans approve of interracial marriage now than ever. In 1997, 67 percent of whites and 83 percent of African Americans approved of such marriages, but this level of support lags behind their support of racial integration of schools, housing, and jobs (Schuman,

Steeh, Bobo, and Krysan 1997). This means that many Americans feel comfortable supporting racial integration and equality in public and impersonal arena, but remain uneasy about interracial intimacy. Interracial couples may have difficulties receiving support from families and friends about their relationships. Joyner and Kao (2003) found that white and African American adolescents are more likely to introduce their partners to their families if their partners are in the same race than in the different race. Some qualitative analyses also show that parents actively discourage such relationships, often pointing to other peoples' prejudice and expressing concern for their child's well-being (Romano 2003; Root 2001).

Cohabitation then can become a popular living arrangement for interracial couples. Cohabitation has played an important role in the decline of marriage (Bumpass, Sweet, and Cherlin 1991). It is a short-lived living arrangement and, compared with marriage, involves different set of motivations, levels of commitment, and interaction styles among partners (Bumpass and Sweet 1989; Clarkberg, Stolzenberg, and Waite 1995). Examining differences in mate selection between married and cohabiting couples, Blackwell and Lichter (Forthcoming) found that transitions from cohabiting to marital unions are marked by increasing selectivity in the mate selection process. In other words, racial endogamy is much stronger in married relationships than in cohabiting relationships. Many interracial couples just live together so they can avoid family complications were they to choose marriage.

It remains to be seen how patterns of interracial cohabitation have changed in the 1990s. Given that African Americans are least likely to marry whites, does it mean that they are also least likely to cohabit? Or because of continuing strong proscriptions against interracial marriage between whites and African Americans, cohabitation may be an alternative and perhaps

more acceptable living arrangement among romantically involved African Americans and whites.

IMMIGRANTS AND INTERRACIAL MARRIAGE

The share of the foreign-born in the U.S. population increased rapidly over the last decade, from 7.9% in 1990 to 11.1% in 2000 (Malone, Baluja, Costanzo, and Davis 2004). Such rapid increases in the foreign-born population have generated considerable public discourse about the cultural and economic incorporation of recent immigrants and their children into American society and about their impact on its social institutions and core values (Smith and Edmonston 1997). The concern goes beyond the immigrant population; it also is a racial issue because of the changing racial mix of immigrants over the past quarter century. Changing patterns of union formation and marital choice among immigrants, especially racial and ethnic endogamy and exogamy, is a central dimension of these concerns.

Racial and ethnic minority immigrants are diverse in culture, language, religion, educational attainment, and socioeconomic status. Overall, they are unskilled, have lower socioeconomic status, and have limited English proficiency (Chiswick and Sullivan 1995). They are more likely to live in segregated neighborhoods with limited interactions with mainstream cultures (Massey 1995; Portes and Bach 1985). Immigrants' lack of opportunities for socioeconomic mobility along with limited social contact with mainstream society suggests greater social distance with whites. Marriage between minority immigrants and whites is less likely to occur as a result.

Indeed, American society remains highly race conscious. Prospects for intermarriage are strongly affected by race and ethnicity. To a large extent, immigrant adaptation will both reflect

and depend upon how their native-born counterparts have fared in American society. Whites may perceive racial and ethnic minority immigrants in the same stereotypical or negative ways as their native counterparts. Racial and ethnic minority immigrants' positive interactions with mainstream society may be structurally constrained by race and ethnicity – through residential or occupational segregation. Under such circumstances, it is highly unlikely that racial and ethnic minority immigrants will have greater levels of interracial marriage with whites compared to their native born counterparts. So we hypothesize that immigrants are less likely to marry whites than their native-born counterparts for each racial and ethnic group.

The continuing heavy influx of immigrants replenishes the demographic supply of potential partners for natives of the same race and ethnicity (Massey 1995). This slows down not only integration patterns of immigrants into American society but also rates of intermarriage with whites for native-born counterparts. This is because Asian and Latino immigrants may reinforce distinctive cultural traditions of native-born minorities – partly through marriage with same-race or same-ethnicity natives.

Although rarely addressed empirically, a commonplace assumption is that intermarriage between immigrants and natives for each racial and ethnic group depends on physical proximity (i.e., in work settings or neighborhoods) and similarities in the social and economic characteristics (e.g., age, education) that attract partners to each other. Immigrants and natives of one racial and ethnic minority may see each other very differently and perceive greater social distance between the two, in which case, intermarriage is less likely. For example, beginning with slavery, African Americans have faced a long history of social injustice and racial oppression in the United States. Native-born blacks therefore were more likely than other racial minorities to experience and perceive racism and overt discrimination. On the other hand, black

immigrants, mostly originating from the Caribbean, may perceive their place in American society differently – perhaps more positively – than their native-born black counterparts. Recent black immigrants may perceive that they value hard work, family, and education more than native-born African Americans; in fact, they often maintain their ethnic identity, language (including strong accent), and cultural traditions so as to distinguish themselves from native-born blacks (Waters 1999). This social distance between black natives and immigrants also may be due to distance in generational status between the two groups. African Americans have lived in the U.S. for many generations while black immigration into U.S. is a recent phenomenon. For Latinos and Asian Americans, on the other hand, social distance between natives and immigrants may be shorter because natives are more likely to be early generation natives than later generation natives. The closeness in generational status indicates similarities in culture and socioeconomic status and promotes intermarriage between the two groups.

RACIAL CLASSIFICATION AND INTERRACIAL MARRIAGE

Some of the changes in interracial marriage may simply be due to changes in racial classification. For the first time in 2000, the Census collected data on multiple race identification; individuals can choose more than one race to classify their race. In contrast, multiracial individuals in 1990 could self-identify themselves as one race only. Although only 2.4% of Americans marked more than one race, its effect on interracial marriage could be large. On the one hand, as children born to intermarried couples, they are much more likely than other single race individuals to become interracially married. On the other hand, regardless of which single race individuals they are married to, they are counted statistically as interracial marriages.

How did multiracial individuals choose their race in the 1990 census? There is no clear answer to this question. However, a study of racial identification of children born to intermarried couples shows that children born to Asian American-white couples are mostly likely to be identified as white, followed by children born to American Indian-white couples, while children born to African American-white couples are least likely to be identified as white (Qian Forthcoming). If this pattern is true for multiracial adults in the 1990 census, African American-white individuals are least likely to identify themselves white; and Asian American-white couples are most likely to identify themselves white. If these multiracial individuals choose more than one race in the 2000 census, which single race to classify these individuals affects levels of interracial marriage. The purpose of reclassifying multirace into single race is not to change the meaning of multirace for multiracial individuals but to show how sensitive racial classification could be in affecting reported levels of interracial marriage. If black-white mixed race individuals are more likely to classify themselves as white if they are married to whites, then interracial marriage between blacks and whites may be underreported. On the other hand, if white-minority race individuals classify themselves as minority, it may increase levels of interracial marriage between Asian Americans and whites because Asian American-white individuals were more likely to be identified as white. In this paper, we examine how racial classification of multiracial individuals changes levels of interracial marriage.

THE CURRENT STUDY

Interracial marriage is sometimes viewed as the final stage of assimilation for racial minorities (Gordon 1964). Although scholars do not agree completely on the meaning of assimilation (Alba and Nee 2003), marriage across racial and ethnic groups surely signals

declines of racial and ethnic boundaries. Intermarriage “reveals the existence of interaction across group boundaries, it also shows that members of different groups accept each other as social equals” (Kalmijn 1998: 396). We argue here that interracial marriage reveals the extent of social distance across different racial and ethnic groups.

Differences in socioeconomic status, racial prejudice, immigration history, and skin color suggest uneven intermarriage patterns among racial and ethnic minorities. Census data from 1990 census and earlier years show that two racial groups with the longest histories in the United States are located at opposite poles in rates of interracial marriage with whites. African Americans are least likely to marry whites while American Indians are most likely. Although Latinos have on average lower socioeconomic status than Asian Americans, Latinos have higher levels of intermarriage with whites than Asian Americans because many Latino are white or have lighter skin tone. Although we can expect that these differences persisted during the 1990s, it is less clear how these patterns have changed over the past decade, especially in light of wide differences and changes in educational attainment across racial groups.

We expect interracial marriage to be on the rise, but several factors can slow down or even reverse the trend for some minorities. These factors include cohabitation, immigration, and racial classifications. We therefore have three additional goals in this study. First, we examine the role of cohabitation in interracial relationships and pay attention to racial differences in patterns of marriage and cohabitation. Second, we evaluate the effect of immigration on the rate of interracial marriage for different racial and ethnic minorities. Third, we investigate whether changes in racial classification (i.e., self-identification of two and more races) have affected conclusions about racial differences and changes in interracial unions during the 1990s.

DATA AND METHODS

The data for this study come from the state Public Use Microdata (PUMS) 5% samples of the 1990 and the 2000 Censuses. We distinguish among non-Latino whites, non-Latino blacks, Latinos, Asian Americans, and American Indians. Latinos include individuals with any race, but must identify themselves as of Spanish origin. These categories are self-reported responses to the race and Spanish origin questions in the 1990 and 2000 census schedules. In the 2000 census, individuals can also report more than one race. Of all multiracial individuals, an overwhelming majority report white race and a minority race. We analyze patterns of interracial marriage in three ways. First, we limit the sample to single race individuals only. Second, we classify white-minority mixed race individuals as whites. Third, we classify white-minority mixed race individuals as the minority race they identify themselves with. Sensitivity analyses reveal how different multiracial classifications affect patterns of interracial marriage.

The censuses did not ask questions about the date of the first marriage or the order of the current marriage. Our sample therefore contains currently married couples of varying marriage durations and orders. The sample may be biased because marital disruption differs by marriage duration and order (Jacobs and Furstenberg 1986; Kitano, Yeung, Chai, and Hatanaka 1984). To reduce potential bias, we include only married couples aged 20-34 at the time of each census. These couples are likely to have formed unions recently and are less likely to have experienced disruptions. A limitation of this approach is that interracial marriages may be underestimated if men or women who first married at older ages are more likely to be interracially married than those first married at young ages (Porterfield 1982).

Our objective is to examine marriages contracted in the United States. The censuses, however, do not allow us to distinguish marriages contracted within the U.S. from those

contracted overseas. To reduce the number of marriages contracted overseas, we limit the sample to persons who immigrated to the U.S. under age 20. These immigrants were likely to be single when they came to the United States. A large share undoubtedly came to the United States when they were children or relatively young. They are more likely than older immigrants to have adopted the cultural values and norms of the host society as they proceeded through public education system. These young immigrants were subject to marriage market conditions in the United States when they searched for mates.

The 1990 and 2000 censuses included, for the first times, information on unmarried partners in cohabiting coresidential relationships. To be consistent with the married sample aged 20 to 34, we created the sample of cohabiting couples both of whom are ages 20 to 34 by linking the householder with his or her unmarried partners of the opposite sex. As a result, the married sample includes 482,292 couples in 1990 and 343,343 couples in 2000. The cohabiting sample includes 31,278 couples in 1990 and 53,414 couples in 2000. For immigrants, there were 33,280 unions in 1990 and 47,511 unions in 2000.

Log-linear models have been used in studies of intermarriage across religious, racial/ethnic, and educational boundaries (Blackwell and Lichter 2000; Kalmijn 1991; Pagnini and Morgan 1990; Qian 1997). These models estimate associations between spouses' different characteristics, independent of the marginal distributions of these characteristics. This is an especially important feature if the marginal distributions have changed over time (e.g., the 1990s). For this study, log-linear models control for marginal distributions of spouses' race and ethnicity, educational attainment, and year. Our analyses are limited to five race and ethnic groups. These are non-Latino white, non-Latino black, Latino, Asian American, and American Indian. Educational attainment is measured as: no high school diploma, high school diploma,

some college, and college degree and above. We first analyze the number of native-born marriages by husbands' and wives' race and ethnicity, educational attainment, and year (1990 or 2000). Thus, the cross-tabulation of husbands and wives has a total of 800 cells (5 x 4 x 5 x 4 x 2). The basic log-linear model takes the following form:

$$\log F_{ijmnt} = \mathbf{b}_0 + \mathbf{b}_i^{HR} + \mathbf{b}_j^{WR} + \mathbf{b}_m^{HE} + \mathbf{b}_n^{WE} + \mathbf{b}_t^T + \mathbf{b}_{imt}^{HRET} + \mathbf{b}_{jnt}^{WRET}, \quad (1)$$

where F_{ijmnt} is the expected number of marriages between husbands in race and ethnicity i and education m , and wives in race and ethnicity j and education n at time t ; \mathbf{b}_0 is the constant; \mathbf{b}_i^{HR} (\mathbf{b}_j^{WR}) denotes husbands' (wives') race and ethnicity (i or j = non-Latino white, black, Latino, Asian American, and American Indian); \mathbf{b}_m^{HN} (\mathbf{b}_n^{WN}) denotes husbands' (wives') educational attainment (m or n = no high school diploma, high school diploma, some college, and college degree and above). In addition to controlling for marginal distributions of these characteristics, we also account for the three-way interaction between race and ethnicity, educational attainment, and time for husbands and wives, respectively (\mathbf{b}_{imt}^{HRNT} , \mathbf{b}_{jnt}^{WRNT}).

Rather than introducing native-born cohabitating couples' mate selection as another dimension, we then expand the sample to include cohabiting couples. Thus, F_{ijmnt} is the expected number of unions between men in race and ethnicity i and education m , and women in race and ethnicity j and education n at time t . Similarly, we expand the analysis to include immigrants. Thus, F_{ijmnt} is the expected number of unions between native- and the foreign-born men in race and ethnicity i and education m , and native- and foreign-born women in race and ethnicity j and education n at time t . Then we repeat the analyses by including multiracial individuals in 2000 in the models. First, we classify multiracial individuals with part white race as whites. Second, we classify multiracial individuals with part minority race as minority race. For example, we first

analyze the data by classifying black-white individuals as white and then analyze the data by classifying black-white individuals as black. Our objective is to compare parameter estimates that uncover the effects of cohabitation, immigration, and multiracial classifications on 1990s changes in interracial marriage.

RESULTS

Descriptive Results

Table 1 presents percentage of endogamous marriages by race and ethnicity for men and women in 1990 and 2000. There are three columns for 2000 – The first column does not include any multiracial individuals; the second column includes multiracial individuals with part white race as white; and the third column includes multiracial individuals with part minority race as minority. Columns 1 to 4 present percentages of endogamous marriages for the native-born; Columns 5 to 8 present percentages of endogamous unions for the native-born; and Columns 9 to 12 present percentages of endogamous union for the native- and foreign-born combined.

(Table 1 about here)

Our descriptive results on interracial marriage for the native-born yield several important findings. First, percentage of endogamous marriages declined for native-born whites, blacks, and Asian Americans, but started to increase for native-born American Indians and Latinos in the 1990s. Second, racial differences in interracial marriage are inversely proportional to population size. Whites, the largest group, had the highest percentage of endogamous marriages. Asian Americans, the smallest group, had the lowest percentage of endogamous marriages. Third, sex differences in interracial marriage are very strong for blacks and Asian Americans. In 2000, 87.8 percent of black men were married to blacks while 95.5 percent of black women were married to

blacks. In contrast, 42.2 percent of Asian American men were married endogamously while only 31.4 percent of Asian American women did so. Fourth, including multiracial individuals lowers the percentage of endogamous marriages for all racial and ethnic groups, suggesting higher levels of marriages across racial and ethnic boundaries for multiracial individuals.

Columns 5 to 8 present percentages of endogamous unions for the native born between 1990 and 2000. Compared to interracial marriages, the changes in endogamous unions were stronger for whites, blacks, and Asian Americans and the increase of endogamous unions were smaller than that of endogamous marriages for Latinos, indicating higher levels of interracial cohabiting relationships than interracial marriage. However, American Indians showed even higher percentage of endogamy when cohabitation is included. The last four columns present percentages of endogamous unions for the native- and foreign-born combined. While whites, blacks, and Americans Indians showed little changes in endogamy in the 1990s, the percentage of endogamous marriages increased sharply for Latinos and Asian Americans. Evidently, interracial unions have slowed down significantly in the 1990s for Latinos and Asian Americans when immigrants are taken into account.

Modeling Marriages and Unions

Although these descriptive results are informative, they do not control for marginal distributions. The percentages of endogamous marriages are confounded by the size of each racial and ethnic group, sex compositions, and educational compositions. With log-linear models, different marginal distributions can be controlled so that the association between men and women by race and ethnicity, educational attainment, and year can be compared.

Table 2 presents likelihood-ratio chi-square statistics for selected models of assortative mating. We ran 9 series of models. We first include single race individuals in 2000 and predict

marriages for the native born, unions for the native born, and unions for the native- and foreign-born combined. We then repeat the same analyses by including multiracial individuals (first as whites and then as minority for white-minority individuals). Our baseline model is described in Equation 1. This model adjusts for the marginal distributions of men's and women's race and ethnicity, educational attainment, and time. This model also takes into account the interactions of race and educational attainment (racial and ethnic differences in educational attainment) for men and women. Furthermore, potential differences of the interactions across two time periods are also taken into account. This model assumes that marriages or unions are completely random, which generate expected cell counts that fail to reproduce the observed data. This is indicated by a very large log-likelihood ratio for all the baseline models.

(Table 2 about here)

To evaluate changes in interracial marriage, we add a set of racial quasi-symmetry parameters in Model 2. To be specific, these parameters include white-black, white-American Indian, white-Asian Americans, white-Latino, black-American Indian, black-Asian American, black-Latino, American Indian-Asian American, American Indian-Latino, and Asian American-Latino marriages. These parameters are interacted with time so we can measure changes over time. The model fit has improved dramatically – indicating significant amount variability of the data has been captured in the model. We then add educational parameters Model 3 – both couples have no high school diploma, both have high school diploma, both have some college, both have at least college education, and then a parameter that indicates whether minority spouse or partner has better educational attainment than his or her white spouse or partner. The model fit again improved, indicating educational assortative mating is strong for all couples, including interracial couples.

Our goal is to identify changes in interracial marriage and interracial union. Although BIC statistics do not indicate that our models are preferred to the saturated model, they show which model has the better fit. The lower the BIC statistic, the closer it is to the saturated model. Overall, modeling interracial marriage for the native born without taking into account multiracial individuals provide the better fit to the model, indicating that marriage patterns of multiracial individuals are indeed different from those of single race individuals. Meanwhile, BIC statistics also show that cohabitators and immigrants do have different assortative mating patterns than native-born married couples. Overall, these models provide parameter estimates of assortative mating patterns for native-born marriages, native-born unions, and unions for both the native- and the foreign-born. We turn to parameter estimates of Model 2 and Model 3 in detail.

Changes in Interracial Marriage and Interracial Union

Model 2 examines changes in interracial marriage in the 1990s and variations across racial and ethnic groups. The numbers in the table indicate the number of racially exogamous marriages to 1000 endogamous marriages or unions. For example, in 1990 the predicted number of native-born black-white marriages is 9 relative to 1000 endogamous marriages. We summarize the results from this table. First, for native-born Americans, interracial marriage with whites for blacks, American Indians, Asian Americans, and Latinos continued to increase in the 1990s. The increase was most dramatic for black-white marriage. It increased from 9 per 1000 endogamous marriages to 17 per 1000 endogamous. Despite the dramatic increase, black-white marriage remained least likely. Latino-white marriage was most likely, followed by American Indian-white marriage and then Asian American-white marriage.

(Table 3 about here)

Second, intermarriage across racial and ethnic minorities remained infrequent. Latinos were more likely to marry other racial minorities, possibly due to the fact that Latinos include people of all races. Blacks, on the other hand, were least likely to marry other racial minorities. Third, including cohabiting couples in the sample increased the rate of interracial relationships, suggesting more frequent interracial cohabitation than interracial marriage. The exception was American Indians, who show lower levels of interracial union than interracial marriage. Fourth, including immigrants in the sample reduced interracial marriage dramatically for Asian Americans and Latinos. The increases in interracial union with whites for Asian Americans and Latinos are no longer significant. Take Asian American-white unions as an example. There were 31 unions between Asian Americans and whites (natives and immigrants combined) for every 1000 endogamous unions in 2000, half the unions (62) between native-born Asian Americans and whites. Immigrants from Asia and Latin America indeed slowed down interracial marriage in the 1990s. On the other hand, the influx of black immigrants did not slow down interracial marriage between blacks and whites. This suggests that black immigrants had about the similar levels of interracial union with whites as did African Americans.

Multiracial Classification and Interracial Relationships

When we add individuals who classified themselves multiracial in the 2000 census, interracial marriage for the native-born increased even more in the 1990s. This is especially true for American Indians. American Indian-white Americans play a significant role in interracial marriage between whites and American Indians. If they are counted as white, interracial marriage between whites and American Indians declined in the 1990s. However, if they are counted as American Indian, interracial marriage between whites and American Indians increased in the 1990s. On the one hand, this suggests multiracial American Indian-white

Americans are relatively numerous thanks to a long history of interracial marriage between American Indians and whites (Eschbach 1995; Sandefur and Trudy 1986). On the other hand, many American Indian-white couples would have classified themselves white if there were no multiracial classification in the 2000 census.

At the other extreme, multiracial classification has little impact of black-white marriage. While including individuals who classified themselves as black and white in the 2000 census increased the level of interracial marriage between blacks and whites, the increase was relatively small. More importantly, whether classifying them as white or black makes little difference in intermarriage. This provides clear evidence of persistent racial boundaries between blacks and whites in America.

Educational Effect on Interracial Marriage

Our next goal is to examine educational differences in intermarriage with whites for blacks, Latinos, Asian Americans and Americans Indians. Table 4 presents the predicted number of interracial marriages and interracial unions by educational combinations of men and women for 1990 and 2000. These estimates are derived from Model 3 described in Table 2. The patterns are similar whether we include multiracial individuals in the model. So for simplicity, this table only presents the results from the single race sample.

(Table 4 about here)

Native-born black-white marriage has increased for every educational combination. For both whites and blacks with less than high school, intermarriage doubled in the 1990s (from 8 to 16 per thousand endogamous marriages). This is significant given that interracial marriage among the less educated for other racial groups declined in the same period. Part of this explanation could be that less educated white women with unmarried childbearing were more

likely to marry interracially compared to other white women (Qian, Lichter, and Mellott 2003). Intermarriages in which black spouses are better educated than their white spouse also were relatively high. Compared to interracial marriage with whites for other racial minorities, one striking finding is that black-white interracial marriage did not increase dramatically when educational attainment increased. This may reflect the strong association between color and social distance. It may be related to their residential patterns. Well-educated blacks are less likely to live in predominantly white neighborhoods compared to well-educated Latinos and Asian Americans.

Native-born American Indian-white intermarriage declined for every educational combination but the extent of decline was particularly large for less educated combinations. This decline indicates strong differences between American Indians living in reservations and those living in cities (Eschbach, Supple, and Snipp 1998; Nagel 1995). American Indians living in cities, many of whom are descendants of interracial marriage, are fully integrated in American society. American Indians who live in reservations tend to be less educated and have lower levels of interracial marriage with whites.

Native-born Asian American-white intermarriage has different patterns of changes in the 1990s. For those with high school diploma or less, interracial marriage between Asian Americans and whites declined in the 1990s. In contrast, those with some college education or more experienced increases in the 1990s. This pattern is also true for native-born Latino-white marriage. The effect of educational attainment seems particularly strong for Asian Americans and Latinos. Highly educated Asian Americans and Latinos are often in integrated colleges and workplaces. They are far more likely than highly educated African Americans to live in predominantly white neighborhoods. Different from blacks, distance from whites for Latinos and

Asian Americans seem to have more to do with their current economic situations. For those with high levels of educational attainment, the gap in social distance with whites narrowed.

Educational Effect and Interracial Union

The second panel of Table 4 presents interracial union for the native born of each racial and ethnic minority by educational combination. Compared to interracial marriage shown in the first panel, interracial union is much higher than interracial marriage in 2000 than in 1990, suggesting cohabitation has increasingly become a popular living arrangement for interracial couples. With the exception of American Indian-white unions, including cohabiting couples in our analyses increases the levels of interracial relationships for every educational combination. However, cohabitation plays a stronger role among the less educated than among the highly educated. For example, we no longer see a decline in interracial union for those with less than high school education when cohabitation is included (35 in 1990 and 35 in 2000 per thousand endogamous marriages for Asian American-white unions, and 53 in 1990 and 54 in 2000 for Latino-white unions). In addition, the extent of increase in interracial union relative to increase in interracial marriage is stronger for black-white relationships than for other minority-white relationships. Thus, while cohabitation is on the rise for interracial couples, it plays an important role for those with less education and for those in black-white relationships.

The last panel of Table 4 presents interracial union for the native- and the foreign-born combined. Including immigrants in the sample does not change the results for black-white marriages and American Indian-white marriages, but changes the results significantly for Asian American-white and Latino-white marriages. This is because most immigrants came from Asia and Latin America. When immigrants are included, interracial union between Asian Americans and whites declined for every educational combination with the exception for the combination

that both have at least college diploma. Even for the most highly educated group, the increase was from 50 in 1990 to 52 in 2000. Indeed, Asian immigrants reduced significantly the levels of interracial union with whites for almost every educational combination. Immigration also had a similar effect for Latinos. However, the effect was less pronounced for well-educated Latinos. Increases in interracial marriage were still strong for highly educated Latinos even when immigrants were taken into account. This is most likely due to the differences in educational compositions between Asian and Latino immigrants. Proportionately, more Asian immigrants have at least college education than Latino immigrants.

SUMMARY AND CONCLUSION

Racial and ethnic minorities have achieved varying degrees of socioeconomic success in recent decades (Farley 1996). Improvement in socioeconomic status for racial and ethnic minorities has increased the opportunities for meeting whites in colleges, workplaces, and neighborhoods. These opportunities foster more interracial contacts, interracial friendships, and, by extension, interracial marriages. Yet, socioeconomic outcomes and opportunities for interracial contact vary widely among minority and immigrant populations. In this study, we use 1990 and 2000 census data to examine changes in interracial marriage and explore how educational attainment, union type, nativity status, and racial classification play a role in racial and ethnic differences in interracial marriage.

We start with the premise that socioeconomic success for racial minorities is linked with declines in social distance from whites. Interracial marriage is likely to follow as a result. Thus, we hypothesize that highly educated racial minorities are more likely to be interracially married than their less educated counterparts. Our results partially support this hypothesis. Educational

attainment is associated with greater interracial marriage with whites, but the impact is much stronger for Asian Americans and Latinos. Among the college-educated, Asian American-white and Latino-white marriages are at least three times as likely as those among those both with less than high school education. In contrast, black-white marriages among the highly educated are only slightly more likely than those among the less educated. Race trumps education in the mate selection process. Although residential segregation is on the decline for African Americans, African Americans remain most segregated among racial minorities (Wilkes and Iceland 2004). In particular, well-educated African Americans are much less likely to live in predominantly white neighborhoods than well-educated Asian Americans and Latinos (Iceland, Weinberg, and Steinmetz 2002; Massey and Denton 1993). These differences may have explained somewhat different effects of educational attainment on interracial marriage for these racial and ethnic groups.

At the aggregate level, Latinos are most likely to marry whites despite their lower average socioeconomic status than Asian Americans. This points to the importance of skin tone in interracial marriage. Because of a shared white race with non-Latino whites for many Latinos, intermarriage with non-Latino whites for Latinos is much higher than that for Asian Americans at every educational level. Similarly, black Americans are least likely to marry whites and other racial minorities regardless of their educational attainment. Skin tone indeed plays an important role in predicting interracial marriage (Bonilla-Silva Forthcoming).

This study also shows that interracial cohabitation has become an increasingly common living arrangement among interracial couples. The increases in interracial cohabitation with whites in the 1990s outpaced the increases in interracial marriage with whites for all racial and ethnic groups with the exception of American Indians. The increases were the greatest for blacks

and for less educated Asian Americans and Latinos. This could mean that the relationships with whites for these groups may be difficult to translate in marriage. Indeed, for them cohabitation may be an alternative to marriage. Continuing social distance from whites may provide blacks and other less educated minorities with a poor basis for the long-term commitment and support necessary from family and community to ensure a stable marriage.

The influx of immigrants from Latin America and Asia Immigrants indeed affects interracial marriage with whites for Latinos and Asian Americans. Native-born Latinos and Asian Americans showed much slower increases in interracial marriage with whites compared to native-born blacks. The demographic availability of marriageable mates of the same race and ethnicity may have reinforced distinctive cultural traditions of native-born minorities while promoting endogamous marriages. Meanwhile, immigrants are much less likely than native minorities to marry whites. Their lower socioeconomic status, as indexed by low education, is prime reason. However, their intermarriage patterns are more comparable to their native-born counterparts rather than other racial minorities. This indicates that immigrant adaptation depends on how their native-born counterparts have fared in American society. For the highly educated, the decline in Asian American-white unions is greater than the decline in Latino-white unions when immigrants are taken into account. It is likely that highly educated Latino immigrants may be more likely to marry whites than Asian immigrants due to Latinos' race. Immigrants from Asia are on average better educated than immigrants from Latin America, in which case, immigration fosters intermarriage among Asian Americans more than among Latinos.

Finally, multiracial individuals are more likely than single-race individuals to marry or cohabit interracially. When multiracial individuals are included in the analyses, interracial marriage increased more rapidly in the 1990s for all racial and ethnic minorities. The impact of

including multiracial individuals on intermarriage is particularly strong for American Indian-white marriages when multiracial American Indian-white individuals are counted as American Indian. A long history of interracial marriage between American Indians and whites has produced many descendents of mixed-race American Indian-white individuals. It seems quite likely that this group of multiracial American Indians is the driving force that keeps interracial marriage with whites at a high level.

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Table 1. Percentage of Endogamous Marriages and Unions By Race and Ethnicity and Sex, 1990-2000

Race	Marriage for the Native-Born				Union for the Native-Born				Union for the Native- and Foreign-Born				
	1990	2000		1990	2000		1990	2000		1990	2000		
	(1)	No MR	MR_W		MR_M	(5)		No MR	MR_W		MR_M	(9)	No MR
Multirace Individuals Not Included													
<i>Men</i>													
White	%	97.6	96.9	96.8	96.3	97.5	96.7	96.6	96.0	97.3	96.5	96.3	95.8
	N	(429,350)	(291,649)	(296,593)	(293,500)	(453,634)	(330,256)	(336,409)	(332,557)	(464,102)	(337,873)	(344,888)	(340,314)
Black		92.5	86.8	86.0	85.4	91.6	85.1	84.3	83.7	91.3	84.7	83.9	83.3
		(28,750)	(24,355)	(24,572)	(25,293)	(33,252)	(32,661)	(32,977)	(34,016)	(34,578)	(34,365)	(34,709)	(36,007)
Indian		41.7	43.5	42.7	36.1	44.8	47.8	47.1	38.9	44.4	47.7	47.0	38.8
		(3,879)	(2,352)	(2,392)	(3,861)	(4,492)	(3,008)	(3,053)	(4,792)	(4,567)	(3,039)	(3,085)	(4,848)
Asian		44.3	42.2	40.6	35.5	43.5	40.9	39.6	35.2	69.0	77.8	76.9	71.3
		(1,312)	(994)	(1,031)	(1,759)	(1,512)	(1,306)	(1,349)	(2,282)	(4,969)	(7,192)	(7,282)	(8,740)
Latino		62.0	64.2	63.3	63.4	61.3	63.1	62.2	62.3	73.7	80.9	80.2	80.3
		(19,001)	(18,486)	(18,755)	(18,700)	(20,680)	(22,616)	(22,969)	(22,907)	(38,634)	(53,842)	(54,304)	(5,4231)
<i>Women</i>													
White		97.4	96.5	96.4	95.9	97.2	96.0	95.8	95.3	96.8	95.4	95.2	94.7
		(430,014)	(292,881)	(297,940)	(294,629)	(454,687)	(332,759)	(339,082)	(334,953)	(466,741)	(341,766)	(348,977)	(344,155)
Black		97.1	95.5	95.2	94.4	96.8	95.3	95.0	94.1	96.4	95.0	94.6	93.7
		(27,388)	(22,134)	(22,206)	(22,882)	(31,455)	(29,155)	(29,263)	(30,234)	(32,753)	(30,662)	(30,784)	(31,991)
Indian		40.6	42.3	41.6	35.0	43.5	46.7	47.1	37.7	42.7	46.0	45.3	37.1
		(3,985)	(2,418)	(2,459)	(3,990)	(4,626)	(3,080)	(3,128)	(4,949)	(4,752)	(3,148)	(3,197)	(5,078)
Asian		38.4	31.4	30.0	27.1	37.2	30.8	39.6	26.9	68.8	75.4	74.1	67.6
		(1,515)	(1,336)	(1,397)	(2,306)	(1,770)	(1,733)	(1,812)	(2,985)	(4,983)	(7,421)	(7,552)	(9,214)
Latino		60.8	62.2	61.3	61.5	60.2	61.7	62.2	60.9	75.7	81.7	81.0	81.1
		(19,390)	(19,067)	(19,341)	(19,306)	(21,032)	(23,120)	(23,472)	(23,433)	(37,621)	(53,314)	(53,758)	(53,702)

Notes:

No MR: Multirace individuals are not included, MR_W: Multirace Individuals who reported white and minority races are counted as white. MR_M: Multirace individuals who reported white and minority races are counted minority.

Table 2. Likelihood-Ratio Chi-Square Statistics for Selected Models of Assortative Mating

	Excluding 2000 Multi-Race Individuals			2000 White-Minority as White			2000 White-Minority as Minority		
	L ²	df	BIC	L ²	df	BIC	L ²	df	BIC
Modeling Marriages for the Native Born									
A1. Baseline Model	407163	722	397331	407466	722	397634	408987	722	399151
A2. A1 + racial quasisymmetry parameters x time	178004	702	168445	179104	702	169540	179217	702	169653
A3. A1 + racial quasisymmetry parameters x education parameters x time	33403	654	24497	33581	654	24671	33701	654	24791
Modeling Unions for the Native Born									
B1. Baseline Model	460185	722	450353	460532	722	450696	462103	722	452267
B2. B1 + racial quasisymmetry parameters x time	195660	702	186033	197049	702	187416	197188	702	187556
B3. B1 + racial quasisymmetry parameters x education parameters x time	37488	654	28519	37729	654	28755	37865	654	28891
Modeling Unions for the Native- and Foreign-Born									
C1. Baseline Model	619259	722	609427	619432	722	609596	621010	722	611174
C2. C1 + racial quasisymmetry parameters x time	220132	702	210445	221807	702	212115	221991	702	212299
C3. C1 + racial quasisymmetry parameters x education parameters x time	41917	654	32893	42188	654	33278	42395	654	33366

Table 3. Predicted Number of Marriages/Unions Relative to 1000 Endogamous Marriages/Unions

Interracial Couples	Native-Born Marriages			Native-Born Unions			Native- and Foreign-Born Unions					
	1990	2000		1990	2000		1990	2000				
		No MR	MR_W	MR_M	No MR	MR_W	MR_M	No MR	MR_W	MR_M		
Black-White	9	17	19	20	11	20	22	24	11	21	23	24
American Indian-White	80	72	74	113	76	66	67	108	77	66	67	108
Asian American-White	45	57	60	86	48	62	66	92	32	31	33	47
Latino-White	97	108	112	108	100	113	117	113	77	73	76	73
Black-American Indian	8	6	6	11	8	6	6	12	8	6	6	12
Black-Asian American	4	9	9	14	5	9	9	14	4	6	6	9
Black-Latino	15	26	26	30	16	29	29	34	14	20	20	23
American Indian-Asian	7	9	9	25	9	8	8	25	7	3	3	11
American Indian-Latino	36	29	29	46	37	31	31	47	28	19	19	30
Asian-Latino	40	34	34	56	41	40	40	62	23	18	18	26

Notes:

No MR: Multirace individuals are not included, MR_W: Multirace Individuals who reported white and minority races are counted as white. MR_M: Multirace individuals who reported white and minority races are counted minority.

The figures in bold are insignificant from those in each corresponding 1990 column (p=.05). All the figures in 1990 columns are significant (p=.01).

Table 4. Predicted Number of Interracial Marriages/Unions by Educational Combination Relative to 1000 Endogamous Marriages

	Black-White		American Indian-White		Asian American-White		Latino-White	
	1990	2000	1990	2000	1990	2000	1990	2000
Native-Born Marriages								
Both Less Than High School	8	16	79	41	33	28	52	46
Both High School Graduates	7	14	75	64	47	30	75	79
Both Some College	12	21	93	92	43	56	139	145
Both College Graduates	10	14	79	73	63	85	151	161
Minority Better Educated	9	16	89	76	28	31	125	128
Native-Born Unions								
Both Less Than High School	9	19	75	45	35	35	53	54
Both High School Graduates	8	18	72	59	46	33	76	84
Both Some College	14	24	92	82	48	59	144	151
Both College Graduates	11	17	78	72	69	94	160	173
Minority Better Educated	10	18	84	66	29	32	91	91
Native- and Foreign-Born Unions								
Both Less Than High School	9	20	74	46	10	6	31	27
Both High School Graduates	8	18	72	60	22	13	65	60
Both Some College	14	24	91	81	34	30	128	134
Both College Graduates	12	17	79	72	50	52	143	154
Minority Better Educated	8	14	66	52	17	15	66	64