

Broken Boundaries or Broken Marriages?
Racial Intermarriage and Divorce in the United States*

Vincent Kang Fu
Department of Sociology
University of Utah

Nicholas H. Wolfinger
Department of Family and Consumer Studies
University of Utah

13 May 2009

Ms. SSR-D-08-00057

*Earlier versions of this paper were presented at the 2007 annual meeting of the Population Association of America and the 2008 National Survey of Family Growth Research Conference. We thank Alta Williams for research assistance. Direct correspondence to vincent.fu@soc.utah.edu; (801) 585-5930 [office]; (801) 585-3784 [fax]; University of Utah Department of Sociology; 380 South 1530 East Room 301; Salt Lake City, UT 84112-0250.

Broken Boundaries or Broken Marriages?
Racial Intermarriage and Divorce in the United States

Abstract

Several recent studies have investigated the consequences of racial intermarriage for marital stability. None of these studies uniquely identify the effect of intermarriage because they do not simultaneously control for racial differences in divorce risk. Our paper builds on an earlier generation of studies to develop a model that appropriately identifies the effect of crossing racial boundaries in matrimony. We analyze 1995 and 2002 National Survey of Family Growth data and find elevated divorce rates for Latino/White intermarriages but not for Black/White intermarriages.

Keywords

interracial marriage, divorce, racial intermarriage, race, ethnicity, ethnic intermarriage

Broken Boundaries or Broken Marriages?

Racial Intermarriage and Divorce in the United States

Does racial intermarriage lead to higher divorce rates? Over a century of scholarly research emphasizes the challenges faced by couples who cross racial boundaries in matrimony (Baber 1937; Barron 1951; DuBois 1899; Root 2001; Bratter and Eschbach 2006; Cheng and Yamamura 1957; Hohmann-Marriot and Amato 2008; Monahan 1966, 1970, 1971; Zhang and Van Hook 2009). Most recent studies find that intermarriages have higher divorce rates (Bramlett and Mosher 2002; Bratter and King 2008; Heaton 2002; Jones 1996; Kalmijn et al. 2005; Phillips and Sweeney 2006), although this conclusion is not universal (Zhang and Van Hook 2009).

Earlier studies have several limitations. Some are not focused specifically on racial intermarriage and divorce (e.g., Bramlett and Mosher 2002; Heaton 2002; Phillips and Sweeney 2006). More importantly, these and other studies fail to identify whether intermarried couples have uniquely high divorce rates because they do not account for first-order racial differences in divorce propensities (Kalmijn et al. 2005; Bratter and King 2008; Zhang and Van Hook 2009). Many studies also do not distinguish the racial compositions of intermarried couples (Jones 1996; Heaton 2002; Bramlett and Mosher 2002; Sweeney and Phillips 2004).

This study pools data from the National Survey of Family Growth (NSFG) Cycles 5 and 6 (Kelly et al. 1997; Groves et al. 2005) to investigate differences in divorce rates between Black/White, Latino/White, and same-race couples. These data were collected in 1995 and 2002 and therefore provide recent information on marital stability. We discuss overlooked methodological issues in determining whether intermarriages have uniquely high divorce rates

and respond with a model that resolves the identification problem that plagued earlier studies. Finally, we present results and their implications for thinking about racial boundaries.

In 1970 there were about 900,000 interracial and Latino/non-Latino couples. This figure increased over fivefold, to 4,900,000, by 2000 (Lee and Edmonston 2005). There have been corresponding increases in the number of children being raised by interracial and Latino/non-Latino parents. In 1970 these children numbered 1,700,000. Three decades later 5,400,000 were living with interracial or Latino/non-Latino parents (Lee and Edmonston 2005). These figures underscore the importance of studying the stability of interracial unions.

Background

Intermarriage, Social Support Deficits, and Incompatibility

Theories of divorce generally emphasize the effects of family of origin, individual characteristics, social context, and husband-wife interaction (Larson and Holman 1994). The latter two emphases provide the basis for most theories proposed to account for the higher divorce rate of intermarriages (Kalmijn et al. 2005). First, opposition from third parties may limit the social support available to intermarried couples. Family members may have a strong interest in passing on racial and ethnic identities, traditions, and values. Intermarried couples are less likely to be able to pass on a group's way of life. Marriage also organizes the transfer of property from parents and grandparents to offspring. Older generations may be less willing to share financial and other resources with members of other racial groups. These challenges leave intermarried couples vulnerable to disruption because of reduced social and material support. Research on social support for intermarried couples is scarce, although one study does find that diminished parental support lowers relationship quality (Hohmann-Marriott and Amato 2008).

On the other hand, opposition to intermarriage is very well documented. Legal restrictions against racial intermarriage in the U.S. were not completely abolished until the Supreme Court's 1967 ruling in *Loving v. Virginia*. As late as 1994, a full 49 percent of White Americans expressed disapproval of White/Black intermarriage (Schuman et al. 1997). Qualitative and historical studies also document strong opposition to Black/White (e.g., Childs, 2005; Romano, 2003; Root, 2001) and Latino/non-Latino (Wieling, 2003) intermarriage. Mixed couples report reactions ranging from lukewarm acceptance to outright hostility from family members (McNamara et al. 1999). Although overt hostility from the general public has become less common, intermarried couples still experience consistent violations of public civility, ranging from poor service in stores and restaurants to sneers and disapproving stares (Romano 2003).

The second main argument for lower marital stability among intermarried couples is based on social psychological theories of interpersonal attraction (Clarkwest 2007). The "effectance-arousal" model (Byrne 1971) implies that homogamy is common because similarity in tastes, values, and world-views enhances marital intimacy. People with similar attitudes marry because of mutual confirmation of values and tastes. Social psychologists also argue that similarity enhances interpersonal interaction (Burlison and Denton 1992). Differences in values and cultural orientations may undermine marital stability and satisfaction (Pasley et al. 2001). Regardless of the precise mechanism, there exists substantial evidence that similarity benefits marital stability and satisfaction (e.g., Larson and Holman 1994). For instance, Clarkwest (2007) found that differences in attitudes toward fertility and domestic tasks raise divorce rates. Gaunt (2006) showed that similarity in personality traits and values increased marital satisfaction.

We know of only one study that has documented greater value differences for intermarried couples (Hohmann-Marriott and Amato 2008). On the other hand, a great deal of research documents racial differences in a wide range of attitudes and values. Black men have less conservative attitudes than White men regarding women's employment, whereas Latino men are more conservative than White men when it comes to the gender division of labor (Ciabattari 2001). Blacks hold more critical attitudes toward gender stratification than Whites (Kane 1992). Blacks and Whites disagree about a variety of social issues, such as racial inequality and racial discrimination (e.g., Hochschild 1995). Qualitative work also provides evidence of within-couple differences in values, interests, and lifestyles that potentially weaken intermarriages (Porterfield 1978). These differences may not be great enough to inhibit marriage, but they may subsequently threaten marital stability.

Convergence

Although the case for higher divorce rates among intermarried couples is strong, it is nevertheless useful to consider the alternative hypothesis that intermarriage does not produce uniquely high divorce rates. Some group boundaries may be sufficiently porous that intermarriage does not violate any significant social norms. Perhaps couples who do violate social norms by intermarrying may only wed if they anticipate being able to manage any difficulties they eventually encounter, or if their families fully support the proposed marriage. Divorce rates for these intermarried couples would then follow a pattern that researchers have labeled *convergence* (Jones 1994, 1996; Zhang and Van Hook 2009), where "divorce propensities should reflect a mix of the divorce rates for the two constituent origin groups" (Jones 1996: 213). People bring their own attitudes, the gendered norms of their group, and their

position in the social structure—that is, their individual propensities for marital stability—into a union. The resulting divorce rate for intermarried couples should be sum of the effects of husband’s and wife’s characteristics (and nothing more). In other words, Black husband/White wife couples would be expected to have divorce rates that are the sum of contributions from Black husbands and White wives.

In the U.S., racial differences in divorce rates are typically reported on the basis of the wife’s race. Black women divorce more than White women, who in turn have higher divorce rates than Latinas (Bramlett and Mosher 2002). Far less research explores divorce rates by husband’s race. This is a noteworthy omission, since the lower socioeconomic status of Black and Latino men might undermine marital stability. Thus, under the convergence hypothesis, Black/White divorce rates should fall between White/White and Black/Black divorce rates because of the Black partner’s higher divorce propensity. If convergence holds for Latino/White couples, they should have divorce rates higher than endogamous Latino unions but lower than purely White couples.

Past Intermarriage Research

Research on interracial marriage and divorce dates back over 50 years (Cheng and Yamamura 1957). Social scientists have studied California (Rankin and Maneker 1987), Hawaii (Cheng and Yamamura 1957; Monahan 1966; Schwertfeger 1982; Ho and Johnson 1990; Jones 1996), Iowa (Monahan 1970), Kansas (Monahan 1971), Australia (Jones 1994), and the Netherlands (Kalmijn et al. 2005). Only in recent years have studies employed national data (Bratter and King 2008; Zhang and Van Hook 2009). As the literature on other dimensions of intermarriage (religious, age, education, etc.) is voluminous, we focus our discussion on studies

of interracial marriage and divorce. However, we do bring in selected studies on other varieties of intermarriage where appropriate.

The theoretical consensus about the deleterious effect of racial intermarriage on marital stability is generally supported by past research. Scholars have employed two analytic strategies. The first, typically employed by earlier studies, compares the racial composition of divorcing couples to the racial composition of couples marrying in preceding years. These studies produce mixed findings, with three (Monahan 1971; Cheng and Yamamura 1957; Jones 1994) finding higher divorce rates for intermarried couples and three (Monahan 1970; Ho and Johnson 1990; Monahan 1966) showing no difference between intermarried and homogamous unions. Recent studies are stronger, employing retrospective marital histories (Bramlett and Mosher 2002; Bratter and King 2008; Heaton 2002; Phillips and Sweeney 2006), population registers (Kalmijn et al. 2005), panel data (Zhang and Van Hook 2009), and vital statistics records (Schwertfeger 1982; Jones 1996). These studies generally find greater marital instability for intermarried couples. However, many are not specifically focused on the relationship between intermarriage and divorce and do not distinguish among different racial combinations of spouses in mixed marriages (Bramlett and Mosher 2002; Heaton 2002; Phillips and Sweeney 2006; Jones 1996).

Two recent studies are noteworthy because they focus explicitly on racial intermarriage and divorce. Bratter and King (2008) use 2002 National Survey of Family Growth data and report mixed findings on the effect of crossing racial boundaries on divorce. Zhang and Van Hook (2009) employ 1990-2001 Survey of Income and Program Participation data and find no evidence that intermarried couples have higher rates of marital dissolution. These studies and others (e.g., Kalmijn et al. 2005; Lehrer and Chiswick 1993 on religious intermarriage) share a

conventional approach for assessing the effect of intermarriage on divorce: they directly compare the divorce rates of interracial and same-race couples, ascertaining, for example, whether divorce rates of Black wife/White husband couples differ from those of Black/Black and White/White couples.

This approach is inadequate because it does not uniquely identify the effect of racial intermarriage on divorce. In the above example, Black wife/White husband couples differ from endogamous White couples in two respects: (i) the presence of a Black wife and (ii) the crossing of a racial boundary. Either could be responsible for the higher divorce rate. In order to uniquely identify the effect of intermarriage, a statistical model must control for first-order racial differences in divorce propensities. Only then can the effect of crossing a racial boundary be identified.

Given that members of different racial groups have different divorce propensities, the divorce rate for Black/White couples should be compared to the *expected* Black/White divorce rate suggested by the convergence hypothesis, which states that crossing racial boundaries has no effect on divorce. Only if the observed Black/White divorce rate exceeds the expected rate (based on additive contributions from one Black and one White spouse) can one conclude that intermarriage actually elevates divorce rates.

This point has been made in other contexts. Heaton (1984) criticizes Glenn's (1982) study of religious homogamy and marital satisfaction on these grounds. Glenn's study makes the conventional comparisons of marital satisfaction between Protestant/Protestant couples and Protestant/Other couples. Heaton argues that Glenn's comparisons are inadequate because it is necessary to examine "the effects of homogamy while simultaneously controlling the influence of husband's and wife's religion on marital satisfaction" (Heaton 1984: 729-30). Another

example is Bumpass and Sweet's (1972) classic paper on divorce rate differentials. They examine the effects of age, educational, and religious homogamy on divorce, hypothesizing that age, education, and religious differences contribute to elevated divorce rates. They sought to determine whether divorce rates were due to the effects of these differences or merely the additive result of husband's and wife's characteristics. To accomplish this Bumpass and Sweet compared observed divorce rates of heterogamous couples with expected divorce rates under an additive model for effects of husband's and wife's characteristics. When the observed divorce rates exceeded the expected additive rate, they concluded that heterogamy increases marital dissolution.

Our paper follows Bumpass and Sweet and Heaton by uniquely identifying the effect of crossing racial boundaries on divorce, distinguishing this effect from the individual contributions of spouses of different races. The divorce rate for White/White couples is modeled as the product of contributions from White husbands and White wives. The divorce rate for Black/Black couples is modeled as the product of contributions from Black husbands and Black wives. Thus, the *expected* divorce rate under the convergence perspective for Black wife/White husband couples is the sum of contributions from Black wives and White husbands when both are in endogamous unions. If the actual Black wife/White husband divorce rate exceeds this expected divorce rate, we have evidence that crossing racial boundaries increases marital instability.

Black/White and Latino/White Intermarriage

This paper focuses on Black/White and Latino/White intermarriage. For economy of expression we refer to Latinos as a “racial” group and Latino/White marriages as “interracial” even though Latinos are often considered an “ethnic” group. Over the twentieth century, Black/White intermarriages have grown over thirty-fold, from less than 0.05 percent of marriages to men aged 20-30 in 1900 to 1.8 percent of marriages of men aged 20-30 in 2000 (calculations from Gullickson 2006: 295). The twentieth century has also been marked by convergence in the education and earnings of Blacks and Whites (Jaynes and Williams 1989). Nevertheless, deep divisions remain, as shown by the persistence of residential segregation (Massey and Denton 1992; Logan et al. 2004), labor market discrimination (Pager 2003), and wealth differentials (Oliver and Shapiro 1995). Despite the growth in Black/White unions, Blacks are still the least chosen intermarriage partners for Whites (Qian and Lichter 2007). These studies suggest that race continues to be highly significant for Blacks and Whites. By determining whether Black/White couples have higher divorce rates, we will contribute new evidence about the state of the Black/White divide.

Although data are more limited than for Black/White intermarriage, national statistics for Latinos became available by the late twentieth century. Latino/White intermarriage, more common than Black/White unions, has also increased in recent decades (Qian 1997; Qian and Lichter 2007). The percentage of young Mexican American women married endogamously declined from 77 percent in 1970 to 74 percent in 1980 to only 66 percent in 1990 (Rosenfeld 2002).

The relatively high intermarriage rate between Latinos and Whites and increases in intermarriage at the end of the twentieth century suggest a higher degree of acceptance for

Latinos compared to Blacks. Thus, the effect of intermarriage on divorce may be weaker for Latino/White couples than for Black/White unions. Even though Latino/White intermarriage has become more common, we still expect to observe elevated divorce rates. Substantial gaps between Whites and Latinos exist in high school and college completion, wages, household income, and poverty (Saenz 2005).

With recent increases in both Black/White and Latino/White unions, we hypothesize that intermarriage effects on divorce have diminished over time. For Black/White marriages, this may be a product of convergence in socioeconomic status. Trends in inequality between Latinos and Whites are complicated by continuing immigration, but evidence of socioeconomic progress exists (Smith 2003) and may also have produced a declining intermarriage effect.

Data and Method

We use data from the 1995 and 2002 waves of the National Survey of Family Growth (Kelly et al. 1997; Groves et al. 2005) to investigate divorce differentials between endogamous and intermarried couples. The NSFG has been conducted periodically since 1973 by the National Center for Health Statistics to study family life, fertility, and health. The 1995 survey included only women. For 2002 we only use the female file because female marital histories are far more reliable than men's (Bumpass, Martin, and Sweet 1991). The 1995 survey is representative of the civilian, non-institutionalized population of women aged 15-44 and had a response rate of 79 percent (Potter et al. 1998). The 2002 female NSFG is representative of the household population of women aged 15-44 and had a response rate of 79 percent (Lepkowski et al. 2006). Earlier NSFG waves lack sufficient information on husband's race. In addition, the data predate legal same-sex marriage. We pool the two data sets to obtain more precise

estimates of the effects given the larger number of intermarriages in the combined sample.

Estimates using the 1995 and 2002 data separately yield similar results.

We construct marriage duration data from retrospective histories on marriages with durations of at least one month. We limit our sample to women's first marriages because remarriages are substantively different (Cherlin and Furstenberg 1994) and have higher divorce rates (Goldstein 1999). Unions ending in the death of a spouse or intact at the time of the interview are considered censored. Couples who have divorced, separated, or annulled their marriages are treated as divorced. We classify husbands and wives as non-Latino White, non-Latino Black, and Latino using the NSFG recode for wives and the group identified as the best race for husbands with more than one racial identity. For ease of notation we henceforth omit the modifier non-Latino. We limit our sample to Black/White and Latino/White intermarriages as there were few Black/Latino intermarriages and Asians in the NSFG.

In our marriage duration models we control for a number of factors associated with both race and divorce (Teachman 2002): marriage cohort (in century months/1000), wife's education (less than high school degree, high school degree, some college without bachelor's degree, bachelor's degree or more), wife's age at marriage, whether the wife was raised in an intact family, religion (wife raised with any religion or not), having a premarital birth, premarital cohabitation, whether the marriage is a remarriage or first marriage for the husband, and survey year (NSFG 1995 or 2002). We use the NSFG sample weights in our analyses and delete listwise observations with missing values (see Allison 2001 for the advantages of this technique).

We estimate divorce risk using a sickle model, a parametric event history model well suited to describing divorce (Blossfeld and Rohwer 1995; Diekmann and Mitter 1984). The

sickle model captures the nonmonotonic risk of divorce, which increases during the first few years of marriage and then slowly declines. This hazard function also has the attractive feature of producing a defective distribution of event times, accounting for the fact that some couples will never dissolve their marriages. The sickle model takes the form

$$\log r(t) = \log a + \log t - t / b ,$$

where $r(t)$ is the divorce rate at duration t , and a and b include parameters to be estimated. The b term is the shape parameter: $b = \exp(\beta_0)$. Estimated values for β_0 indicate the point in the risk function where divorce rate is highest. Covariates are included with the a term, where $\log a = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \dots + \alpha_K x_K$; x_1, x_2, \dots, x_K ; $\exp(\alpha_i)$ are the hazard ratios. Cox regression with robust standard errors yields results similar to our sickle model.

To estimate the effect of intermarriage we include main effects of husband's race and wife's race in the model along with interactions between husband's race and wife's race:

$$\log a = \alpha_1 \text{husb}_{black} + \alpha_2 \text{husb}_{latino} + \alpha_3 \text{wife}_{black} + \alpha_4 \text{wife}_{latino} + \alpha_5 \text{husb}_{black} \text{wife}_{black} + \alpha_6 \text{husb}_{latino} \text{wife}_{latino} + \dots ,$$

where Whites are the omitted category for race (regressors for variables besides race are not shown in the above equation). The α_1 and α_2 parameters capture how the divorce contributions for Black and Latino husbands respectively differ from those for White men. The α_3 and α_4 parameters capture how the divorce contributions for Black and Latina wives respectively differ from those for White wives.

The α_5 and α_6 interaction coefficients are the key terms for our hypotheses. They respectively distinguish Black/Black unions from Black/White intermarriages and Latino/Latina marriages from Latino/White intermarriages. Negative coefficients for these interaction terms indicate that endogamous Black or Latino marriages have lower divorce risks than would result from an additive model. These interaction terms capture divorce risk differences when Blacks and Latinos are endogamously married versus when they are intermarried. Thus, negative coefficients would imply that endogamous Black or Latino couples have lower divorce risks and would therefore constitute evidence of our hypothesized relationship between intermarriage and divorce. Most specifically, the interaction terms determine whether, for instance, a Latino husband or wife's contribution to divorce risk depends on the race of his or her spouse. An interaction that is not statistically significant would be consistent with the additive model of the convergence perspective and suggests that husbands' and wives' contribution to their unions' divorce risks are the same whether they are intermarried or not.

With this parameterization it is not possible to determine whether an intermarriage effect is limited to either Latino husband/White wife or White husband/Latina wife unions (or both). Distinct effects for these two types of intermarriages are not identified. If Latino/Latina divorce risks differ from the risk expected by combining the behavior of Latino men and women in intermarriages, it is impossible to know if this is due to differences in Latino men's or women's behavior.

Results

Descriptive statistics

Table 1 contains descriptive statistics for our sample of 10,155 women's first marriages. Forty-three marriages (unweighted) are between a White man and a Black woman. Eighty-four pair a Black man with a White woman. The sample includes 354 marriages between White men and Latinas, and 275 marriages between Latino men and White women. Most of the marriages in our sample took place in the 1980s and 1990s and occurred when the woman was in her late teens or early 20s. The women in our sample typically possess a high school diploma or have completed some college. About two-thirds are from intact families and 94 percent were raised with religion. Fifteen percent of the marriages were remarriages for the husband. Sixteen percent of women experienced a premarital birth and 41 percent engaged in premarital cohabitation.

The bottom of Table 1 lists the value of the survivor function for marriages by husband's race and wife's race at a duration of 10 years. Sixty-seven percent of White/White marriages are still intact, but only 52 percent of White husband/Black wife, 48 percent of Black husband/White wife, and 50 percent of Black/Black marriages are still intact. Survival probabilities for Black/White intermarriages are closer to those for endogamous Black marriages but it is unclear whether these results support the convergence hypothesis or suggest that Black/White intermarriages have a higher than expected rate of disruption. Our sickle model results, presented below, allow us to test the convergence hypothesis while simultaneously controlling for confounding factors.

Sixty-one percent of White husband/Latina wife marriages, 53 percent of Latino husband/White wife marriages, and 69 percent of Latino/Latina marriages are still intact after 10

years of marriage. The survival probabilities for the two types of Latino/White intermarriages both fall below the probabilities for endogamous White and Latino marriages. This suggests that Latino/White marriages may indeed experience higher dissolution rates than would be expected if the effects of race were additive.

Sickle Models of Divorce

Table 2 presents results for our sickle models of divorce. Model 1 includes only wife's race and produces results consistent with our descriptive statistics. Black women's marriages have a divorce hazard that is 57 percent higher than White women's marriages ($\exp[0.453] = 1.57$). Latina women's marriages have a divorce hazard that is 9 percent lower than White women's marriages ($\exp[-0.092] = 0.91$), although this difference is not statistically significant.

These effects represent a weighted average of the divorce propensities for endogamous and interracial marriages. The divorce rate for the omitted category for White women is a composite of White women's marriages with White, Black, and Latino men. The higher hazard for Black women represents an average of the divorce rates for Black/Black and Black wife/White husband marriages that is heavily weighted toward Black/Black marriages since they greatly outnumber Black wife/White husband marriages. For Latina wives, their lower estimated hazard represents an average of the divorce rates for Latino/Latina and Latina wife/White husband marriages that is also heavily weighted toward endogamous marriages because they outnumber Latina/White intermarriages.

Model 2 adds effects for husband's race to Model 1, thereby conceptualizing divorce risk as an additive product of husbands' and wives' characteristics. Only the main effects of race are included and the divorce risk contributions of each spouse are not contingent on the other

spouse's race. Thus, the estimated effects for wife's and husband's race represent the average contribution over endogamous and interracial marriages.

In Model 2 the individual effects for Black husbands and Black wives are not statistically significant, although both are positive. The positive coefficients suggest that both Black men and Black women bring higher divorce propensities to their marriages than do White men and women, respectively. The lack of statistical significance for these two terms does not mean that there are no Black/White differences in divorce propensities. On the contrary, a likelihood ratio test of the null hypothesis that the effects for Black husbands and wives are simultaneously zero is soundly rejected (likelihood-ratio $\chi^2 = 72.23$, $df = 2$, $p < 0.001$). Blacks' marriages do in fact have higher divorce rates than White marriages. The regressors for Black husbands and Black wives are highly correlated ($R = .95$) because Black/White intermarriage is rare. The high correlation raises the standard errors for the estimated effects beyond the level that would yield statistical significance at the conventional $p = 0.05$ level.

The coefficients for Latina wives and Latino husbands in Model 2 are both statistically significant, but the effect for wives is negative whereas the effect for husbands is positive. The negative effect for Latina wives is consistent with the established finding that Latina women's marriages have lower divorce rates than White women's marriages (Bramlett and Mosher 2002). The effect for Latino husbands may reflect their inferior socioeconomic status compared to White men.

We add interaction terms in Model 3 for Black/Black marriages and Latino/Latina marriages, allowing us to distinguish the between effects of husband's race and wife's race in endogamous and interracial marriages. Black husbands' and wives' respective contributions to divorce risk are positive and remain greater than those of White husbands and wives, but are still

not statistically significant. Our hypothesis is that the estimated coefficient for the Black/Black interaction term will be negative because this would suggest that these endogamous marriages have a greater ability to avoid divorce compared to Black/White intermarriages. The estimated coefficient is indeed negative, but it is not statistically significant. Thus, Black husbands' and wives' divorce risk contributions are the same whether they are in mixed or endogamous marriages. We have no evidence that Black/White couples' divorce risks are larger than would be suggested by a model that includes only additive measures of husbands' and wives' characteristics. In other words, Black/White marriages face higher divorce rates because they include an at-risk spouse, not because they are interracial.

Latino husbands' contribution to marital instability continues to be significantly greater than that of White husbands. On the other hand, Latinas' statistically significant negative effect on marital stability (Model 2) has become positive and non-significant in Model 3. After allowing for the possibility of an interaction between husband's and wife's race, intermarried Latina wives make the same contribution to divorce risk as do White wives. In addition, the negative and statistically significant coefficient for the Latino/Latina interaction term in Model 3 shows that Latino/Latina marriages have lower divorce rates than expected under an additive model. When Latinos and Latinas are endogamously married, their contribution to their marriages' divorce risk is 52 percent of their contribution when they are married to Whites ($\exp[-0.652] = 0.52$). Thus when Latinos are wed to Whites their contribution to their risk of divorce is greater than when they are endogamously married.

Model 4 adds control variables to Model 3. Consistent with past research, age at first marriage, education, and being raised in an intact family are negatively related to divorce risk; wife's religion has no effect. Couples experiencing a premarital birth, premarital cohabitation,

and remarriages for the husband are more likely to divorce. We also find that NSFG 2002 marriages have higher divorce rates than NSFG 1995 marriages.

The pattern of race effects found in Model 3 persists in Model 4. Black husbands' and Black wives' divorce risk contributions remain respectively greater than White husbands' and White wives' contributions but are not statistically significant. The interaction term for Black/Black marriages also remains non-significant, suggesting that crossing racial boundaries does not affect Black/White marriages. Latina wives still make a small, positive, but not statistically significant contribution to divorce rates. Latino husbands make a positive divorce rate contribution that is statistically significant. The interaction effect for Latino/Latina marriages remains negative, suggesting that Latino's divorce rate contributions in endogamous marriages are only 47 percent of their contributions in interracial marriages ($\exp[-0.746] = 0.47$).

In models not shown we examine trends in the effect of intermarriage by comparing (1) a constrained model including two-way interactions of marriage cohort with husband's race and marriage cohort with wife's race with (2) an unconstrained model including three-way interactions of marriage cohort, husband's race, and wife's race. The three-way interaction terms describe whether the effect of intermarriage varies over time. The estimated coefficients were not statistically significant (likelihood-ratio $\chi^2 = 2.4$, $df = 2$, $p > 0.05$), so we conclude that there is no evidence of trends in the effect of racial intermarriage on divorce.

In Table 3 we tabulate the survivor function at selected durations for a respondent with a typical set of covariate values: married in mid-1986 at age 22, the wife with some college, from an intact family, raised with a religion, without premarital cohabitation or birth, first marriage for the husband, and from the 1995 NSFG. These survival probabilities, calculated from Model

4 in Table 2, show racial disparities in divorce propensities while holding constant other differences between respondents.

The two types of Black/White intermarriages have fifteen-year survival probabilities (57 percent and 60 percent) that essentially fall between those for White/White (66 percent) and Black/Black (56 percent) marriages. This is consistent with the notion of convergence, which suggests that divorce rates for intermarried couples will be an average of the divorce rates for endogamous couples from the two constituent groups. The absence of an effect of crossing racial boundaries for Black/White marriages is clear. On the other hand, Latino/White marriages have fifteen-year survival probabilities (62 percent and 56 percent) falling squarely below those for White/White (66 percent) and Latino/Latina marriages (73 percent). The survival probabilities for these intermarried couples are clearly not an average of the survival probabilities for endogamous marriages of the two constituent groups. Instead, the probabilities of survival are lower than those for the two types of endogamous marriages. This suggests that crossing the racial boundary in Latino/White marriages makes divorce more likely.

Conclusion

This research has sought to determine whether interracial marriages are less stable than same-race marriages. To this end, we estimated a survival model using recent data on Black/White and Latino/White intermarriages in the United States. Recent work on racial intermarriage and divorce has not sufficiently appreciated the analytic strategy of older research studying the effects of religious, age, and educational intermarriage on marital dissolution. Building on the insights of these older studies we develop a model of divorce that controls for first-order group differences in divorce propensities to determine whether crossing racial

boundaries raises marital dissolution rates. We find that crossing the Latino/White boundary in marriage does elevate divorce rates but crossing the Black/White divide does not. Marriages between Whites and African-Americans dissolve at higher rates than endogamous White marriages because the intermarriages contain a Black spouse, not because they are intermarriages. Thus the convergence hypothesis is borne out for Black/White marriages but not Latino/White unions.

These results are contrary to our expectation that the intermarriage effect would be stronger for Black/White than for Latino/White marriages because of the deeper social boundaries between Blacks and Whites. One explanation is that our sample of Black/White marriages was too small for the estimated effects to attain statistical significance. Out of our sample of 10,155 marriages, only 127 were intermarriages between Blacks and Whites. The estimated effects for Black wives, Black husbands, and the interaction term were all in the expected directions, but none were statistically significant. As more Whites and Blacks intermarry, future studies may be able to verify our findings using larger samples of intermarriages.

How do our findings compare to those of Bratter and King (2008) and Zhang and Van Hook (2009)? One major difference is that our predictions and results are less ambiguous because they distinguish composition effects from unique intermarriage effects. These two studies make comparisons which do not necessarily lead to clear conclusions.

Bratter and King (2008) use the 2002 NSFG, half of the data we use. They employ a slightly different sample and a different statistical model, but the key distinction between their study and ours is that they directly compared intermarried couples to White/White couples to determine if intermarriage increases divorce rates. How do our conclusions compare to theirs?

They found that Latino husband/White wife and Latina wife/White husband marriages had the same divorce rates as White/White couples and that Latina/Latino marriages had lower divorce rates than White/White couples. Bratter and King conclude that Latino/White intermarriages do not have elevated divorce rates, whereas we find the opposite to be true. Under our framework their results can be explained by the increased contributions Latina wives and Latino husbands make to divorce risk when they are intermarried, compared to when they are endogamously married. In other words, intermarriage itself uniquely elevates divorce risks; the individual contributions of the spouses do not. Bratter and King's results are therefore consistent with our conclusion.

Bratter and King (2008) also find that White/White and Black/Black marriages have the same divorce rates. However, in their study, White wife/Black husband marriages have higher divorce rates and Black wife/White husband marriages have lower divorce rates than White/White marriages. They conclude that intermarriage increases divorce only for White wife/Black husband marriages; we conclude that crossing a racial boundary in Black/White intermarriages had no effect on divorce risks. Their comparison does not uniquely identify the effect of intermarriage on marital dissolution. Our model design does not allow us to identify an intermarriage effect for one sex pairing (Black husband/White wife) and not the other (White husband/Black wife). The reason is that the interaction term in our models simultaneously captures (1) the difference between a Black husband's contribution to divorce risk when intermarried compared to when he is endogamously married and (2) the difference between a Black wife's contribution when intermarried versus when she is endogamously married.

Zhang and Van Hook (2009) study 23,139 couples from the Survey of Income and Program Participation (SIPP). Although their sample is larger than ours, couples in their data

were observed for at most a 3-4 year period, whereas our data are based on marital histories. The greatest difference between their study and ours is how the effect of intermarriage is modeled. Their overall conclusion is that intermarriage does not increase divorce. They find that Black/White couples have a divorce rate less than or equal to that for Black/Black couples but greater than that for White/White couples. In addition, divorce rates for Latino/White couples are not significantly greater than for Latina/Latino or White/White couples. Based on these comparisons, Zhang and Van Hook conclude that intermarriage between Whites and Latinos does not increase divorce rates. It is not possible to say what their results would be with our analytic strategy, but their findings may actually be consistent with our conclusions.

What do our results say about intermarriage as an indicator of the strength of group boundaries? For Latinos, the relatively high intermarriage rates with Whites may not represent a correspondingly high level of social integration. Latino/White couples still face significant obstacles, judging by the fact that their marriages dissolve at higher rates than expected under the convergence perspective. On the other hand, our results suggest that the low rate of Black/White intermarriage may provide an accurate assessment of the social boundaries between Blacks and Whites. Perhaps the only Black/White couples to wed are those relative few who are willing and able to overcome the severe obstacles posed by their intermarriage. Black/White intermarriages are therefore the exception that prove the rule about intermarriage and social boundaries. Our findings about Latinos demonstrate that we might not have transcended racial and ethnic boundaries to the extent that relatively high rates of intermarriage might suggest.

For a great number of characteristics, including age, education, race, and religion, the evidence suggests that homogamy promotes marital stability. This study contributes one more piece of evidence toward that claim. Our paper also makes a methodological contribution to the

homogamy literature: we revive the apparently forgotten distinction between additive effects of spouse characteristics and interactive effects that are necessary for identifying the effect of intermarriage.

Table 1: Percentage distribution of marriages

	Percentage
Race of husband and wife	
White husband/White wife	73
White husband/Black wife	0.3
White husband/Latina wife	3
Black husband/White wife	1
Black husband/Black wife	9
Latino husband/White wife	3
Latino husband/Latina wife	11
Marriage cohort	
1960s	1
1970s	22
1980s	39
1990s	32
2000s	6
Wife's age at marriage	
9-14	1
15-19	30
20-24	43
25-29	19
30+	7
Wife's education	
less than high school	12
high school diploma	36
some college	28
bachelor's degree or more	24
Wife from intact family	68
Wife raised with any religion	94
Premarital birth	16
Premarital cohabitation	41
Remarriage for husband	15
Survey: NSFG 2002	48
Marriage intact at 10 years	
White husband/White wife	67
White husband/Black wife	52
White husband/Latina wife	61
Black husband/White wife	48
Black husband/Black wife	50
Latino husband/White wife	53
Latino husband/Latina wife	69
Total	65

Source: 1995 and 2002 National Survey of Family Growth, $N = 10,155$. Percentages are weighted.

Table 2: Coefficients for Sickle Models of Divorce

Variable	Model 1	Model 2	Model 3	Model 4
Wife's race (omitted category is White)				
Black	0.453***	0.253	0.399	0.303
	0.052	0.169	0.287	0.287
	1.573	1.288	1.490	1.353
Latina	-0.092	-0.295***	0.085	0.124
	0.053	0.086	0.115	0.115
	0.912	0.744	1.089	1.132
Husband's race (omitted category is White)				
Black		0.217	0.286	0.185
		0.167	0.193	0.194
		1.242	1.331	1.353
Latino		0.252**	0.462***	0.340***
		0.081	0.089	0.090
		1.286	1.588	1.405
Husband's race*Wife's race				
Black*Black			-0.209	-0.146
			0.348	0.349
			0.812	0.864
Latina*Latino			-0.652***	-0.746***
			0.154	0.156
			0.521	0.474
Marriage cohort (century months/1000)				0.369
				0.271
				1.447
Wife's age at marriage				-0.106***
				0.006
				0.900
Wife's education (omitted category is less than high school)				
high school diploma				0.099
				0.056
				1.104
some college				0.067
				0.060
				1.070
bachelor's degree or more				-0.181*
				0.072
				0.834
Wife from intact family				-0.260***
				0.049
				0.771
Wife raised with any religion				-0.058
				0.073
				0.944
Premarital birth				0.381***
				0.050
				1.464
Premarital cohabitation				0.224***
				0.039
				1.252
Remarriage for husband				0.364***
				0.049
				1.439
NSFG 2002 (vs. 1995)				0.176***
				0.045
				1.192
Constant α	-8.209***	-8.221***	-8.234***	-6.357***
	0.032	0.032	0.033	0.255
	0.000	0.000	0.000	0.002
Constant β	3.909***	3.910***	3.912***	3.901***
	0.019	0.019	0.019	0.019
	49.864	49.904	49.999	49.467

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ Source: 1995 and 2002 National Survey of Family Growth, $N = 10,155$ Statistics listed are the α coefficient, standard error, and hazard ratio $exp(\alpha)$.

Table 3: Estimated Survivor Function by Husband's Race and Wife's Race

	Percentage of marriages intact at		
	5 years	10 years	15 years
Couple's race			
White husband/White wife	85	72	66
White husband/Black wife	80	64	57
White husband/Latina wife	83	69	62
Black husband/White wife	82	67	60
Black husband/Black wife	80	63	56
Latino husband/White wife	80	63	56
Latino husband/Latina wife	88	78	73

References

- Allison, Paul D. 2001. *Missing Data*. Sage University Papers Series on Quantitative Applications in the Social Sciences, 07-136. Thousand Oaks, CA: Sage.
- Baber, Ray. 1937. "A Study of 325 Mixed Marriages." *American Sociological Review* 2:705-716.
- Barron, Milton L. 1951. "Research on Inter-marriage: A Survey of Accomplishments and Prospects." *American Journal of Sociology* 57:249-255.
- Blossfeld, Hans-Peter. and Götz Rohwer. 1995. *Techniques of Event History Modeling: New Approaches to Causal Analysis*. Hillsdale, NJ: Erlbaum.
- Bramlett, Matthew D. and William D. Mosher. 2002. *Cohabitation, Marriage, Divorce, and Remarriage in the United States*. Vital and Health Statistics, Series 23, No. 22. Hyattsville, MD: National Center for Health Statistics.
- Bratter, Jennifer L. and Karl Eschbach. 2006. "'What About the Couple?' Interracial Marriage and Psychological Distress." *Social Science Research* 35:1025-1047.
- Bratter, Jennifer L. and Rosalind B. King. 2008. "'But Will It Last?': Marital Instability Among Interracial and Same-Race Couples." *Family Relations* 57:160-171.
- Bumpass, Larry L., Teresa Castro Martin, and James A. Sweet. 1991. "The Impact of Family Background and Early Marital Factors on Marital Disruption." *Journal of Family Issues* 12: 22-42.
- Bumpass, Larry L. and James A. Sweet. 1972. "Differentials in Marital Instability: 1970." *American Sociological Review* 37:754-766.

Burleson, Brant R. and Wayne H. Denton. 1992. "A New Look at Similarity and Attraction in Marriage: Similarities in Social-Cognitive and Communication Skills as Predictors of Attraction and Satisfaction." *Communication Monographs* 59:268-287.

Byrne, Donn. 1971. *The Attraction Paradigm*. New York: Academic Press.

Cheng, C. K. and Douglas S. Yamamura. 1957. "Interracial Marriage and Divorce in Hawaii." *Social Forces* 36: 77-84.

Cherlin, Andrew J. and Frank F. Furstenberg, Jr. 1994. "Stepfamilies in the United States: A Reconsideration." *Annual Review of Sociology* 20:259-281.

Childs, E. 2005. *Navigating Interracial Borders: Black-White Couples and Their Social Worlds*. New Brunswick, NJ: Rutgers University Press.

Ciabattari, Teresa. 2001. "Changes in Men's Conservative Gender Ideologies: Cohort and Period Influences." *Gender and Society* 15: 574-591.

Clarkwest, Andrew. 2007. "Spousal Dissimilarity, Race, and Marital Dissolution." *Journal of Marriage and Family* 69: 639-653.

Diekmann, Andreas and Peter Mitter. 1984. "A Comparison of the 'Sickle Function' with Alternative Stochastic Models of Divorce Rates." Pp. 123-153 in *Stochastic Modeling of Social Processes*, edited by A. Diekmann and P. Mitter. Orlando, FL: Academic Press.

DuBois, William Edward Burghardt. 1899 [1996]. *The Philadelphia Negro*. Reprint edition. Philadelphia, PA: The University of Pennsylvania Press.

Gaunt, Ruth. 2006. "Couple Similarity and Marital Satisfaction: Are Similar Spouses Happier?" *Journal of Personality* 74:1401-1420.

Glenn, Norval. 1982. "Interreligious Marriage in the United States: Patterns and Recent Trends." *Journal of Marriage and Family* 44:555-566.

- Goldstein, Joshua R. 1999. "The Leveling of Divorce in the United States." *Demography* 36:409-414.
- Groves, R.M., G. Benson, W.D. Mosher, J. Rosenbaum, P. Granda, W. Axinn, J.M. Lepkowski, and A. Chandra. 2005. *Plan and Operation of the 2002 National Survey of Family Growth*. Vital and Health Statistics, Series 1. Hyattsville, MD: National Center for Health Statistics.
- Gullickson, Aaron. 2006. "Black/White Interracial Marriage Trends, 1850-2000." *Journal of Family History* 31: 289-312.
- Heaton, Tim B. 1984. "Religious Homogamy and Marital Satisfaction Reconsidered." *Journal of Marriage and Family* 46:729-733.
- Heaton, Tim B. 2002. "Factors Contributing to Increasing Marital Stability in the United States." *Journal of Family Issues* 23:392-409.
- Ho, Fung Chu and Ronald C. Johnson. 1990. "Intra-ethnic and Inter-ethnic Marriage and Divorce in Hawaii." *Social Biology* 37: 44-51.
- Hochschild, Jennifer L. 1995. *Facing up to the American Dream: Race, Class, and the Soul of the Nation*. Princeton, NJ: Princeton University Press.
- Hohmann-Marriott, Bryndl E. and Paul Amato. 2008. "Relationship Quality in Interethnic Marriages and Cohabitations." *Social Forces* 87:825-855.
- Jaynes, Gerald D. and Robin M. Williams, Jr.. 1989. *A Common Destiny: Blacks and American Society*. Washington, DC: National Academy Press.
- Jones, F. L. 1994. "Are Marriages That Cross Ethnic Boundaries More Likely to End in Divorce?" *Journal of the Australian Population Association* 11: 115-132.
- Jones, F. L. 1996. "Convergence and Divergence in Ethnic Divorce Patterns: A Research Note." *Journal of Marriage and the Family* 58: 213-218.

- Kane, Emily W. 1992. "Race, Gender, and Attitudes Toward Gender Stratification." *Social Psychology Quarterly* 55: 311-320.
- Kalmijn, Matthijs, Paul M. de Graaf, and Jacques Janssen. 2005. "Intermarriage and the Risk of Divorce in the Netherlands." *Population Studies* 59: 71-85.
- Kelly J.E., W.D. Mosher, A.P. Duffer, and S.H. Kinsey. 1997. *Plan and Operation of the 1995 National Survey of Family Growth*. Vital and Health Statistics, Series 1. Hyattsville, MD: National Center for Health Statistics.
- Larson, Jeffry H. and Thomas B. Holman. 1994. "Premarital Predictors of Marital Quality and Stability." *Family Relations* 43:228-237.
- Lee, Sharon M. and Barry Edmonston. 2005. "New Marriages, New Families: U.S. Racial and Hispanic Intermarriage." *Population Bulletin* 60(2). Washington, DC: Population Reference Bureau.
- Lehrer, Evelyn L. and Carmel U. Chiswick. 1993. "Religion as a Determinant of Marital Stability." *Demography* 30: 385-404.
- Lepkowski, J.M., W.D. Mosher, K.E. Davis, et al. 2006. *National Survey of Family Growth, Cycle 6: Sample Design, Weighting, Imputation, and Variance Estimation*. National Center for Health Statistics. Vital and Health Statistics, Series 2(142). Hyattsville, MD: National Center for Health Statistics.
- Logan, John R., Brian J. Stults, and Reynolds Farley. 2004. "Segregation of Minorities in the Metropolis: Two Decades of Change." *Demography* 41: 1-22.
- McNamara, Robert P., Maria Tempenis, and Beth Walton. 1999. *Crossing the Line: Interracial Couples in the South*. Westport, CT: Praeger.

- Massey, Douglas and Nancy Denton. 1993. *American Apartheid*. Cambridge, MA: Harvard University Press.
- Monahan, Thomas. 1966. "Interracial Marriage and Divorce in the State of Hawaii." *Eugenics Quarterly* 13: 40-47.
- Monahan, Thomas. 1970. "Are Interracial Marriages Really Less Stable?" *Social Forces* 48: 461-473.
- Monahan, Thomas. 1971. "Interracial Marriage and Divorce in Kansas and the Question of Instability of Mixed Marriages." *Journal of Comparative Family Studies* 2: 107-120.
- Oliver, Melvin L. and Thomas M. Shapiro. 1995. *Black Wealth, White Wealth: A New Perspective on Racial Inequality*. New York: Routledge.
- Pager, Devah. 2003. "The Mark of a Criminal Record." *American Journal of Sociology* 108: 937-975.
- Pasley, Kay, Jennifer Kerpelman, and Douglas E. Guilbert. 2001. "Gendered Conflict, Identity Disruption, and Marital Instability: Expanding Gottman's Model." *Journal of Social and Personal Relationships* 18:5-27.
- Phillips, Julie A. and Megan M. Sweeney. 2006. "Can Differential Exposure to Risk Factors Explain Recent Racial and Ethnic Variation in Marital Disruption?" *Social Science Research* 35(2):409-434.
- Porterfield, Ernest. 1978. *Black and White Mixed Marriages: An Ethnographic Study of Black-White Families*. Chicago, IL: Nelson-Hall.
- Potter F.J., V.G. Iannachione, W.D. Mosher, R.E. Mason, J.D. Kavee. 1998. *National Survey of Family Growth Cycle 5: Design, Estimation, and Inference*. Vital and Health Statistics, Series 2 (124). Hyattsville, MD: National Center for Health Statistics.

- Qian, Zhenchao. 1997. "Breaking the Racial Barriers: Variations in Interracial Marriage Between 1980 and 1990." *Demography* 34: 263-276.
- Qian, Zhenchao and Daniel Lichter. 2007. "Social Boundaries and Marital Assimilation: Interpreting Trends in Racial and Ethnic Intermarriage." *American Sociological Review* 72: 68-94.
- Rankin, Robert P. and Jerry S. Maneker. 1987. "Correlates of Marital Duration and Black-White Intermarriage *Race* in California." *Journal of Divorce* 11: 33-49.
- Romano, Renee C. 2003. *Mixing: Black-White Marriage in Postwar America*. Cambridge, MA: Harvard University Press.
- Root, Maria. 2001. *Love's Revolution: Interracial Marriage*. Philadelphia, PA: Temple University Press.
- Rosenfeld, Michael J. 2002. "Measures of Assimilation in the Marriage Market: Mexican Americans 1970–1990." *Journal of Marriage and Family* 64: 152–162.
- Saenz, Rogelio. 2005. Latinos and the Changing Face of America. Pp. 352-379 in *The American People: Census 2000*, edited by R. Farley and J. Haaga. New York: Russell Sage Foundation.
- Schuman, Howard, Charlotte Steeh, Lawrence Bobo, and Maria Krysan. 1997. *Racial Attitudes in America: Trends and Interpretations*. Revised edition. Cambridge, MA: Harvard University Press.
- Schwertfeger, Margaret M. 1982. "Interethnic Marriage and Divorce in Hawaii: A Panel Study of 1968 First Marriages." *Marriage and Family Review* 5: 49-60.
- Smith, James. 2003. "Assimilation Across the Latino Generations." *American Economic Review* 93: 315-319.

Sweeney, Megan M. and Julie A. Phillips. 2004. "Understanding Racial Differences in Marital Disruption: Recent Trends and Explanations." *Journal of Marriage and Family* 66: 239-250.

Teachman, Jay. 2002. "Stability across Cohorts in Divorce Risk Factors." *Demography* 39: 331-351.

Wieling, Elizabeth. 2003. "Latino/a and White Marriages: A Pilot Study Investigating the Expectations of Interethnic Couples in the United States." *Journal of Couple and Relationship Therapy* 2: 41-55.

Zhang, Yuanting and Jennifer Van Hook. 2009. "Marital Dissolution among Interracial Couples." *Journal of Marriage and Family* 71:95-107.