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Interracial-Interethnic Unions and Fertility in the United States

*How does the fertility of interracial and interethnic couples compare to the fertility of endogamous couples? If exogamous couples have transcended the boundary between them, then exogamy should not affect fertility. Alternatively, opposition to the relationship from the couple's family and friends may reduce fertility. This study uses 2000 – 2005 American Community Survey data on married (*n = *272,336) and cohabiting (*n = *48,769) couples to compare the fertility of endogamous and exogamous couples. Interracial and interethnic partnering do not affect fertility for cohabiting, Black-White, Mexican-White, and Puerto Rican-White intermarried couples, but it does reduce fertility in Chinese-White and Asian Indian-White intermarriages. These results are largely consistent with the argument that intermarried couples have transcended group boundaries.*

Recent decades have seen American social scientists devote increasing attention to the incidence of racial and ethnic intermarriage. Researchers have described intermarriage patterns for European ancestry groups (Lieberson & Waters, 1988), Blacks (Kalmijn, 1993), Latinos (Qian & Cobas, 2004), and Asians (Qian, Blair, & Ruf, 2001). Studies have examined trends (Gullickson, 2006a; Qian & Lichter, 2007) and differences by gender (Jacobs & Labov, 2002), education (Gullickson, 2006b), and nativity (Qian & Lichter, 2001).

Intermarriage has received so much attention because crossing racial and ethnic boundaries in spouse selection provides an indication of the importance of racial and ethnic distinctions. The conventional wisdom is that couples who engage in a relationship as intimate and enduring as marriage must have transcended the boundary between them. Increasing intermarriage has been celebrated as evidence that racial and ethnic boundaries are weakening. Furthermmore, intermarriage is regarded as an engine of social change (Kalmijn, 1998) because children of interracial and interethnic couples are less likely to identify with a single group and challenge group boundaries by their very existence.

Although the consequences of racial and ethnic intermarriage are used to justify studying it, relatively little research has directly investigated these consequences. Past studies have investigated differential marital quality (Chan & Smith, 2001) and duration (Jones, 1996; Kalmijn, de Graaf, & Janssen, 2005), but no research has investigated differential fertility between racially and ethnically endogamous and exogamous couples.

Fertility patterns have direct implications for theoretical arguments about intermarriage. If exogamous couples truly have transcended group boundaries, their behavior should resemble that of endogamous couples. But if exogamous couples have unique fertility patterns, intermarriages may be occurring even as group boundaries remain strong. Differential fertility also has consequences for the view of intermarriage as an engine of social change. If exogamous couples

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bear fewer children, this weakens intermarriage as an engine of social change.

This study uses 2000 – 2005 American Community Survey (ACS) data to investigate fertility differences between endogamous and exogamous couples. Because of the growing importance of cohabitation and the greater likelihood that cohabiting unions are interracial or interethnic (Qian & Lichter, 2007), I consider both married and cohabiting couples. With the more casual nature of and weaker norms surrounding cohabiting unions, I expect that the effects of interracial partnering will be weaker for them than for marriages.

Background

Opposition to intermarriage. The history of intermarriage in the United States is primarily one of efforts to enforce status distinctions between Whites and non-Whites and maintain a racial hierarchy. The first antimiscegenation laws during the colonial era sought to maintain strict boundaries between African slaves and European indentured servants who were in close contact as laborers. Centuries later, as Asians increased in number in the West, states enacted laws prohibiting marriages between Whites and Asians to preserve racial hierarchy and affirm Asians' status as aliens ineligible for citizenship (Koshy, 2004). The civil rights movement and the Supreme Court's 1967 *Loving v. Virginia* decision finally ended legal restrictions on intermarriage, although social control (albeit no longer with state involvement) continues to limit interracial and interethnic relationships.

Conceptually, marriage can be viewed as a property relationship organizing the intra- and intergenerational transmission of resources (i.e., between husband and wife, from parents to children, from grandparents to grandchildren). Antimiscegenation statutes defined the groups within which resource transmission through marriage was permissible and allowed Whites to maintain their social and economic advantages. Norms of endogamy also exist because members of racial and ethnic groups seek to maintain and transmit their customs and traditions to future generations.

Despite the repeal of legal restrictions, intermarriage remains out of favor. In 1997, 33% of White Americans reported that they disapproved of intermarriage between Whites and Blacks. This marked a substantial change from 1991, when 49% were opposed (Schuman, Steeh, Bobo, & Krysan 1997, p. 107). Qualitative studies also provide similar evidence about opposition to Black-White (e.g., Childs, 2005; Romano, 2003; Root, 2001), Asian-White (Kibria, 2002; Spickard, 1989) and Latino/non-Latino (Wieling, 2003) intermarriage.

Studies of the consequences of intermarriage for divorce generally support the notion that intermarriage violates social norms. These studies argue that intermarriages receive less social support from family and other social network members, resulting in higher divorce rates. The strongest recent research (Kalmijn et al., 2005) found, using Dutch data, that interethnic marriages experience higher disruption rates than endogamous marriages. Studies of religious intermarriage (Kalmijn et al.; Lehrer & Chiswick, 1993) also have found higher divorce rates for intermarried couples.

Intermarriage and fertility. How might opposition to intermarriage affect fertility? Much of the fertility literature focuses on the transition from high to low fertility levels currently prevailing in industrialized countries and declining fertility in less industrialized countries (see Hirschman, 1994, for a review). At the individual and family level, one approach relevant to this study conceives of children as a form of social capital (Schoen, Kim, Nathanson, Fields, & Astone, 1997). In industrialized countries children no longer contribute to the family economy and instead draw heavily on parental resources both directly and through opportunity costs. Thus, the net material benefit of children may be negative in industrialized countries, as children are no longer relied on for their household production or as a form of old age security. Schoen et al. (p. 336) argue, "[C]hildren create access to critical material resources through ties of kinship and other personal relationships made possible by children." Family and friends may provide greater emotional and material support to parents, and children can enhance social integration with community, friends, and kin. Thus, the motivation to bear children comes from the social ties that childbearing can activate and strengthen.

Interracial and interethnic couples may have fewer resources available to them through childbearing because intermarried couples violate prevailing norms of endogamy. This social support deficit may not overwhelm their daily lives, but

it may impact more significant decisions these couples make, such as those regarding fertility. In fact, one frequently reported reason for opposition to intermarriage is that children will face adjustment difficulties (Childs, 2005; Root, 2001). Challenges with passing on values and traditions to the next generation are also often cited by intermarriage opponents. Thus, great emphasis is placed on the children that exogamous couples may have. Even if opposition by family members and peers is not strong enough to prevent the intermarriage from taking place, it may affect subsequent fertility behavior. Thus, for intermarried couples, children may be a less rewarding form of social capital than they are for endogamous couples. The material and social resources that children provide access to may be less for interracial couples because of norms against intermarriage. According to this social capital perspective, then, intermarried couples will have lower fertility than endogamous couples.

Friedman, Hechter, and Kanazawa (1994) provide an alternative perspective, arguing that childbearing in industrialized societies is not motivated by material incentives but instead motivated by the increase in marital solidarity that children provide through increased mutual dependence between husband and wife. Friedman et al. argue that people generally wish to reduce uncertainty about the future. Childbearing accomplishes this by placing parents in social roles as mother and father. Because parenthood is a permanent status, it is highly effective in reducing uncertainty about future courses of action. Once the couple engages in these social roles, their dependence on each other increases as they share childrearing responsibilities.

For racial and ethnic intermarriage, the uncertainty reduction perspective expects fertility levels to be higher for intermarried than endogamous couples. Because intermarried couples may have lower marital solidarity because of cultural differences and opposition from third parties, these couples will have a greater incentive to reduce uncertainty through childbearing. Childbearing may even serve to enhance relationships with third parties including other family members. Childbearing may be a mechanism in effect for winning over family members who initially oppose the intermarriage (e.g., Kibria, 2002, p. 172).

A third perspective is the conventional view of intermarriage (Kalmijn, 1998; Gordon 1964). This is the argument that intermarried couples are highly selective and only form if they, their family, and their friends approve of or accept the union. Because of the obligations and responsibilities concomitant with marriage and the influence of friends and family on spouse selection, individuals may intermarry only if they are confident of the support of their key social network members. In this way, intermarriage represents the transcendence of racial and ethnic boundaries. If this social boundary is unimportant to a relationship as intimate, durable, and consequential as marriage, then it is likely unimportant in other aspects of life as well.

To summarize, this paper considers three hypotheses about the effects of intermarriage on fertility. If (a) intermarried couples receive less social support because of opposition to their unions and (b) children represent a form of social capital, then the data will support Hypothesis 1: Intermarried couples will have lower fertility than endogamous couples. Alternatively, if (a) intermarried couples receive less social support because of opposition to their unions and (b) children are used to enhance marital solidarity, then the data will support Hypothesis 2: Intermarried couples will have higher fertility than endogamous couples. Finally, if intermarried couples do in fact represent a genuine weakening of group boundaries, then the data will support Hypothesis 3: Intermarried couples will have the same fertility as endogamous couples.

Because several racial and ethnic intermarriage combinations occur, it is possible to further specify expected differential fertility patterns. Hypothesis 4 is that intermarriage combinations facing the greatest opposition should have the largest fertility differentials (deficits under Hypothesis 1 and increments under Hypothesis 2) because these exogamous couples will receive the lowest levels of social support and this will have the greatest impact on fertility. Specifically, I expect that intermarriages with African Americans will have the greatest fertility deficits if the data support the social capital approach or the greatest fertility increments if consistent with the uncertainty reduction approach. African Americans experience the greatest amount of discrimination in U.S. society as measured by outcomes such as residential segregation and wages. After controlling for group size, intermarriage with African Americans is also the most rare (e.g., Qian & Lichter, 2007). Thus, opposition to intermarriage with African Americans is

strongest and I expect that fertility differentials for these intermarriages will be greater than for intermarriages with Asian and Latino groups.

Cohabitation. I include both cohabiting and married couples in this study because cohabiting unions are more likely to be interracial or interethnic than marriages (Qian & Lichter, 2007) and the incidence of childbearing and childrearing in cohabiting unions has increased significantly in recent decades (Bumpass & Lu, 2000; Raley, 2001). Cohabiting unions are typically viewed as trial marriages or alternatives to marriage (Seltzer, 2000; Smock, 2000), usually have shorter durations, and command weaker commitments than marriages. In addition, they lack the formal legal status of marriages and possess weaker norms about appropriate forms of interaction with friends and extended family members. Cohabitors also differ from those who marry with respect to education, economic resources, and attitudes about gender roles (Clarkberg, Stolzenberg, & Waite, 1995). For interracial and interethnic couples, cohabitation may be a more attractive union than marriage because it brings fewer entanglements for networks of family and friends.

How might this alternative union context influence the effect of interracial and interethnic partnering on fertility? The key differences between marriage and cohabitation are the weaker commitment and the weaker norms regarding appropriate forms of interaction for cohabitors, their family, and friends. A subset of cohabitors may have the same level of commitment as married couples do, but for another subset the relationship is weaker and more casual. The rights and responsibilities of cohabitors, their family, and friends to each other are less well defined compared to married couples. Thus, if interracial and interethnic partnering have an effect on cohabiting unions, the effect should be weaker than it is for marriages.

The conceptual arguments for married couples apply to cohabitors as well. If children represent a form of social capital for cohabitors, then interracial cohabitors' fertility rates should follow Hypothesis 1 and be lower than same-race cohabitors' rates. If fertility enhances the solidarity of unions, interracial and interethnic cohabitors' fertility rates should follow Hypothesis 2 and be higher than same-race cohabitors' rates. Finally, if interracial and interethnic cohabiting unions represent full transcendence of group boundaries, then fertility patterns should follow Hypothesis 3 and there should be no effect of interriacial and interethnic partnering. If differences do exist, Hypothesis 4 suggests that differentials will be greatest for combinations involving Blacks because these face the greatest opposition.

METHOD

To empirically assess these hypotheses I use microdata from the 2000 – 2005 American Community Survey (U.S. Census Bureau, 2003). The ACS is carried out by the U.S. Census Bureau and includes approximately 3 million households annually. Because intermarriages are relatively rare, I pool data from six survey years. The samples available to researchers are approximately 0.13% of the U.S. population for 2000, 0.4% for 2001 – 2004, and 1% for 2005. I use the IPUMS version of the ACS (Ruggles et al., 2004) and a variable constructed from individuals' relationship to the household head (IPUMS, 2003) to identify married couples. I also use household members' relationship to the head to identify cohabiting unions.

Key to the study of fertility is the inclusion of an ACS questionnaire item asking if women aged 15 – 50 gave birth to any children over the past 12 months. I restrict the sample to women in the prime childbearing age range 20 – 34. Marital fertility at younger ages may be inflated because of shotgun weddings. Fertility estimates for married women aged 15 – 19 are also subject to a great deal of sampling variability because fewer women in this age range are in unions. Including teenaged women in the sample would also bias downward the fertility of the least educated because these women have not had time to attain higher levels of education (Rindfuss, Morgan, & Offutt, 1996).

I classify married and cohabiting partners into eight racial or ethnic groups: non-Latino White, non-Latino Black, non-Latino Asian Indian, non-Latino Chinese, non-Latino Filipino, Mexican, and Puerto Rican. For readability I omit the modifier non-Latino when discussing the above groups. Mexicans and Puerto Ricans can be of any race. Pacific Islanders, Others, other Asians, and other Latinos were omitted because of small sample sizes. Because of the fluidity of American Indian identity (Eschbach, Supple, & Snipp, 1998) and discrepancies between ACS and National Center for Health Statistics (NCHS) fertility measures, I also omit American Indians and

Alaskan Natives (a comparison of ACS and NCHS fertility rates is available upon request from the author). I also omit cohabiting unions involving Asian Indians because of data sparseness. Although the ACS does allow respondents to identify with more than one racial group, I exclude non-Latino multiracial respondents because only 1.5% of couples included one or more non-Latino multiracial partners. Because of data sparseness, I consider only interracial and interethnic unions with Whites.

I estimate separate logit models of fertility for marriages and cohabiting unions, and within each union type I estimate models for all births regardless of parity and for first births. The social capital and uncertainty reduction hypotheses may be most relevant for childless couples. The transition to parenthood may yield substantial social support and uncertainty reduction but additional offspring may attract less support from a couple's social network or provide less uncertainty reduction. The ACS does not contain an explicit parity measure but it is possible to crudely investigate first births by restricting the sample to couples who are either childless or report a birth in the previous 12 months and have one child in the family.

Depending on the sample, I include up to three-way interactions of woman's age (including a quadratic term), woman's education (*less than high school degree*, *high school degree*, *some college*, *bachelor's degree or more*), and woman's race-ethnicity because there is evidence of racial-ethnic differences in the age-education pattern of fertility (Yang & Morgan, 2003). I also include the interaction of woman's nativity and woman's race-ethnicity. In models for all births, I also include parity (*zero*, *one*, *two*, *three or more*), approximated by the woman's number of children in the household, less one if she gave birth in the previous year.

I model the effect of intermarriage (for ease of writing, I use intermarriage, exogamy, and endogamy to refer to both marital and cohabiting unions) with the interaction of man's race-ethnicity and woman's race-ethnicity. In this parameterization fertility is the result of a woman's contribution (effect of woman's race-ethnicity) and a man's contribution (effect of man's race-ethnicity). The interaction reveals whether the woman's contribution depends on the man's race-ethnicity and whether the man's contribution depends on the woman's race-ethnicity. If, for example, Black women's fertility contribution differs when married to Black men instead of White men, this would be evidence of an intermarriage effect. With no significant interaction effects, men and women have the same fertility behavior in endogamous and exogamous unions.

Given the sample restriction I impose, this interaction term comprises distinct parameters for endogamous Black, Asian Indian (marriages only), Chinese, Filipino, Mexican, and Puerto Rican couples. Each of these interaction terms simultaneously represents how men and women of a particular group vary in their fertility behavior when in endogamous and exogamous unions. In other words, the Black-Black effect represents both the effect of exogamous partnering for Black women as well as the corresponding effect for Black men. In this parameterization, the omitted category is exogamous unions, and the estimated parameters describe how exogamous unions differ. Thus, the effects will be positive if Hypothesis 1 holds (endogamous couples experience a fertility deficit) and negative if Hypothesis 2 holds (exogamous couples experience a fertility increment).

Because of identification limitations, it is not possible to estimate distinct effects for different gender combinations. In other words, it is not possible, for example, to estimate different effects of Black husband-White wife couples and White husband-Black wife couples. The estimated Black-Black interaction effect represents the intermarriage effect for both types of couples. Furthermore, differences in the behavior of endogamous and exogamous Whites are not identified in this parameterization because they represent comparisons of White intermarried couples with White-White couples. These comparisons are precisely the main effects of husband's race-ethnicity and wife's race-ethnicity and it is not possible to ascertain what portion of each difference is based on differences in the behavior of Whites.

This interaction parameterization is a more intuitive and elegant way to evaluate the effect of intermarriage than comparing endogamous couples to exogamous couples of the two constituent groups (e.g., Mexican-White vs. White-White and Mexican-Mexican couples). Comparisons of that sort can be indeterminate if, for example, Mexican-White fertility is lower than Mexican-Mexican fertility but higher than White-White fertility. The conclusion from such a result is not obvious, but the interaction parameterization I employ

yields straightforward conclusions: If an interaction term is statistically significant, this indicates that men and women of the group in question have different fertility patterns in endogamous and exogamous unions.

RESULTS

Descriptive Statistics

Table 1 displays the percentages reporting a birth in the last year for married women by husband's and wife's race-ethnicity. Sixteen percent of endogamous White couples reported a birth. This is higher than the percentages reporting births for all marriages including a White husband and a non-White wife, supporting the social capital Hypothesis 1. Even so, it does fall near the median of the percentages for White-wife, non-White-husband couples, suggesting an inconsistent effect of intermarriage on fertility. Overall, the differences for married couples are small, seldom exceeding two or three percentage points. A large discrepancy occurs between Puerto Rican endogamous marriages (13%) and White-wife, Puerto Rican-husband marriages (19%), supporting the uncertainty reduction Hypothesis 2. Nonetheless, the generally small differences support the conventional claim about intermarriage in Hypothesis 3.

Table 2 presents the percentages reporting a birth in the last year for cohabiting women by man's and woman's race-ethnicity. Not unexpectedly, the overall percentage giving birth is lower for cohabiting women (11%) than for married women (16%). The discrepancies between same-race and interracial couples are greater than for married couples. Nine percent of endogamous White cohabiting unions reported a birth but only 1% of Chinese-woman, White-man unions reported a birth, supporting the social capital Hypothesis 1. For endogamous Mexican unions, 20% reported a birth, but only 13% of exogamous unions with White women and 9% of exogamous unions with White men reported births, supporting the social capital Hypothesis 1.

These results are descriptive in nature and do not account for age, education, and nativity differences between endogamous and exogamous couples. Nor do they rely on hypothesis tests. To obtain results that account for

Table 1. *Percentage of Married Women Giving Birth by Husband's Race-Ethnicity and Wife's Race-Ethnicity*

Husband's Race-Ethnicity	Wife's Race-Ethnicity								Total
	White	Black	Asian Indian	Chinese	Filipina	Mexican	Puerto Rican		
White	16.3% (n = 224,133)	15.2% (n = 777)	13.8% (n = 228)	12.7% (n = 570)	12.5% (n = 1,009)	15.2% (n = 2,256)	13.9% (n = 566)		16.2% (n = 229,539)
Black	16.6% (n = 2,333)	15.0% (n = 13,967)							15.2% (n = 16,300)
Asian Indian	14.0% (n = 258)		15.9% (n = 4,937)						15.8% (n = 5,195)
Chinese	13.4% (n = 209)			15.5% (n = 2,613)					15.4% (n = 2,822)
Filipino	16.0% (n = 355)				16.2% (n = 1,491)				16.1% (n = 1,846)
Mexican	19.1% (n = 2,205)					18.2% (n = 13,202)			18.3% (n = 15,407)
Puerto Rican	19.4% (n = 579)						13.0% (n = 648)		15.4% (n = 1,227)
Total	16.4% (n = 230,072)	15.1% (n = 14,744)	15.8% (n = 5,165)	15.1% (n = 3,183)	14.7% (n = 2,500)	17.9% (n = 15,458)	13.3% (n = 1,214)		16.4% (N = 272,336)

Note: Percentages are weighted and include only marriages where the wife is aged 20 – 34.

Table 2. *Percentage of Cohabiting Women Giving Birth by Man's Race-Ethnicity and Woman's Race-Ethnicity*

Man's	Woman's Race-Ethnicity						
Race-Ethnicity	White	Black	Chinese	Filipina	Mexican	Puerto Rican	Total
White	8.5% ($n = 39{,}013$)	9.9% ($n = 221$)	1.0% ($n = 138$)	2.4% ($n = 137$)	8.7% ($n = 504$)	6.3% ($n = 150$)	8.4% ($n = 40{,}163$)
Black	15.1% ($n = 1{,}382$)	15.4% ($n = 4{,}018$)					15.3% ($n = 5{,}400$)
Chinese	5.5% ($n = 57$)		3.8% ($n = 161$)				4.1% ($n = 218$)
Filipino	5.9% ($n = 77$)			9.8% ($n = 112$)			8.3% ($n = 189$)
Mexican	12.5% ($n = 623$)				19.6% ($n = 1{,}767$)		18.0% ($n = 2{,}390$)
Puerto Rican	10.8% ($n = 211$)					13.6% ($n = 198$)	12.4% ($n = 409$)
Total	8.9% ($n = 41{,}363$)	15.1% ($n = 4{,}239$)	2.6% ($n = 299$)	5.7% ($n = 249$)	17.7% ($n = 2{,}271$)	10.8% ($n = 348$)	10.8% ($N = 48{,}769$)

Note: Percentages are weighted and include only unions where the woman is aged 20 – 34.

background differences, I estimate logit models of fertility.

Fertility Models

Table 3 displays χ^2 statistics from Wald tests (using robust standard errors because of the sampling weights) for the terms included in the models. Models are estimated separately for marriages and cohabiting unions and within each union type for samples of all births and first births. Model 1 includes main effects for age, age^2, parity (all-birth samples only), woman's education, man's race-ethnicity, and the interaction of woman's race-ethnicity and nativity, along with lower-order terms. Because no native-born Chinese women cohabitors had first births, I eliminate the nativity effect for them in the first-birth sample. Model 2 allows the age pattern of fertility to vary by education (Rindfuss et al., 1996), and these additional terms contribute significant explanatory power for all four combinations of union type and parity. Model 3 allows the age pattern of fertility to vary by woman's race-ethnicity. These additional terms are again statistically significant for all four samples. Model 4 adds terms for the interaction of woman's race-ethnicity and education, and these terms are statistically significant for all samples except first births for married couples. Because no cohabiting Filipinas with less than a high school degree had a birth, I do not include an interaction term with high school degree for them. For the all-birth sample of marriages I add the three-way interaction of wife's race-ethnicity, wife's education, and age in Model 6. These terms are statistically significant ($\chi^2 = 101.41$, $df = 36$, $p < .001$). Data for the other three samples are too sparse to support these interactions. Thus, for the all-birth sample of marriages, Model 6 is the baseline model, and Model 4 is the baseline model for the other three samples.

Model 7 adds the interaction of husband's race-ethnicity and wife's race-ethnicity to the baseline model for marriages and all births and provides evidence of an intermarriage effect ($\chi^2 = 14.30$, $df = 6$, $p < .05$). The interaction is statistically significant and suggests that intermarried men and women exhibit fertility behavior distinct from the behavior of endogamous men and women. For marriages and first births, Model 5 ($\chi^2 = 17.88$, $df = 6$, $p < .01$) is evidence that intermarried couples differ from

Table 3. *Wald Test χ^2 Statistics for Fertility Models*

	Marriages				Cohabiting Unions			
	All Births ($N = 272,336$)		First Births ($n = 96,311$)		All Births ($N = 48,769$)		First Births ($n = 36,206$)	
Model	*df*	χ^2	*df*	χ^2	*df*	χ^2	*df*	χ^2
Model 1: age + age^2 + parity + woman's education + nativity * woman's race-ethnicity + man's race-ethnicity	27	3,860.36***	24	205.30***	24	856.39***	20	665.75***
Model 2: Model 1 + age * woman's education + age^2 * woman's education	33	4,696.69***	30	729.30***	30	962.11***	26	735.01***
age * woman's education + age^2 * woman's education	6	951.99***	6	521.06***	6	63.54***	6	39.20***
Model 3: Model 2 + age * woman's race-ethnicity + age^2 * woman's race-ethnicity	45	4,812.84***	42	785.57***	40	1,004.64***	36	777.50***
age * woman's race-ethnicity + age^2* woman's race-ethnicity	12	49.47***	12	29.46***	10	29.96***	10	27.48**
Model 4: Model 3 + woman's race-ethnicity * woman's education	63	4,850.18***	60	825.14***	54	1,002.47***	50	787.16***
woman's race-ethnicity * woman's education	18	32.01*	18	19.52	14	59.74***	14	65.80***
Model 5: Model 4 + woman's race-ethnicity * man's race-ethnicity			66	840.34***	59	1,006.46***	55	791.54***
woman's race-ethnicity * man's race-ethnicity			6	17.88**	5	7.90	5	6.23
Model 6: Model 4 + woman's race-ethnicity * age * woman's education + woman's race-ethnicity * age^2 * woman's education	99	5,042.94***						
woman's race-ethnicity * age * woman's education + woman's race-ethnicity * age^2 * woman's education	36	101.41***						
Model 7: Model 6 + woman's race-ethnicity * man's race-ethnicity	105	5,059.72***						
woman's race-ethnicity * man's race-ethnicity	6	14.30*						

*$p < .05$. **$p < .01$. ***$p < .001$.

endogamous couples. For cohabitors, there is no evidence that endogamous and exogamous unions differ in their fertility patterns for either first or all births (Model 5 all births: $\chi^2_2 = 7.90$, $df = 5$, $p > .05$; Model 5 first births $\chi^2 = 6.23$, $df = 5$, $p > .05$).

Table 4 presents the estimated parameters for the interaction of man's race-ethnicity and woman's race-ethnicity from Model 7 for marriages and all births and Model 5 for the other three samples. The full set of coefficients for each model is available from the author. For marriages and all births, the only statistically significant interaction effect is for Chinese couples. The coefficient is positive, indicating that when Chinese men and women marry Whites they have smaller fertility contributions than when they marry endogamously. Compared with those married to Whites, endogamous Chinese men and women's fertility contribution was were 115% (= exp[0.764] − 1) greater. This supports the social capital Hypothesis 1. No other effects were significant for this sample, supporting the traditional view of intermarriage in Hypothesis 3.

For marriages and first births, two effects were statistically significant and positive, again supporting the social capital Hypothesis 1. Endogamous Asian Indian men and women's fertility contribution was 275% (= exp[1.321] − 1)

Table 4. *Estimated Parameters for Woman's Race-Ethnicity and Man's Race-Ethnicity Interaction*

	Marriages						Cohabiting Unions					
	All Births Model 7 ($N = 272{,}336$)			First Births Model 5 ($n = 96{,}311$)			All Births Model 5 ($N = 48{,}769$)			First Births Model 5 ($n = 36{,}206$)		
Interaction Term	β	*SE*	*exp*(β)	β	*SE*	*exp*(β)	β	*SE*	*exp*(β)	β	*SE*	*exp*(β)
Black * Black	0.079	0.166	1.082	0.148	0.247	1.160	0.005	0.354	1.005	−0.341	0.401	0.711
Asian Indian * Asian Indian	0.564	0.326	1.758	1.321**	0.449	3.747						
Chinese * Chinese	0.764**	0.287	2.147	1.007**	0.361	2.737	1.181	1.509	3.258	1.141	1.556	3.130
Filipina * Filipino	0.450	0.250	1.568	0.370	0.340	1.448	1.381	0.854	3.979	1.058	0.937	2.881
Mexican * Mexican	−0.033	0.133	0.968	0.008	0.213	1.008	0.449	0.340	1.576	0.306	0.396	1.358
Puerto Rican * Puerto Rican	−0.253	0.298	0.776	0.024	0.417	1.024	1.132	0.657	3.102	1.345	0.764	3.838

Note: Controls include woman's education, woman's age, woman's age squared, woman's race-ethnicity, and interactions thereof, parity for all-birth models, and main effect of man's race-ethnicity (coefficients omitted from table).

**$p < 0.01$.

greater in endogamous marriages than in intermarriages. Chinese men and women's fertility contribution toward a first birth was 174% (= exp[1.007] − 1) greater in endogamous marriages than intermarriages with Whites. No other effects were statistically significant for marriages and first births, supporting the standard view of intermarriage in Hypothesis 3.

The results from cohabiting unions support the standard view of interracial partnering in Hypothesis 3, as no effects at all are significant. These results for marriages and cohabiting unions also contradict Hypothesis 4, which expected the strongest effects for Black-White unions, which face the greatest opposition. No effects were observed at all for Black-White unions.

To further illustrate the results, Table 5 presents predicted probabilities by wife's race-ethnicity and husband's race-ethnicity calculated from Model 7 for the all-birth sample of marriages. The probabilities are calculated for a native woman at the sample median age (age 30), sample median education (some college), and modal parity (parity 0). Unlike the percentages in Table 1, these figures adjust for background differences in nativity, education, and age. These probabilities are not comparable to the usual summary statistics describing racial-ethnic differences in fertility, although the presence of differences in the predicted probabilities is consistent with the persistent and well-known (albeit still poorly understood) racial-ethnic differences in fertility (Yang & Morgan, 2003).

The significant effect for endogamous Chinese couples is apparent, with one quarter of such couples expected to have a birth but only 19% of White husband-Chinese wife couples and 13% of Chinese husband-White wife couples expected to have a birth. The same pattern of higher fertility for endogamous couples also

Table 5. *Predicted Probability of First Birth by Husband's Race-Ethnicity and Wife's Race-Ethnicity*

Husband's Race-Ethnicity	Wife's Race-Ethnicity						
	White	Black	Asian Indian	Chinese	Filipina	Mexican	Puerto Rican
White	19.1%	14.4%	17.5%	18.8%	16.2%	17.5%	13.6%
Black	20.1%	16.2%					
Asian Indian	14.6%		21.2%				
Chinese	13.4%			24.7%			
Filipino	18.0%				22.0%		
Mexican	22.8%					20.4%	
Puerto Rican	23.0%						13.4%

Note: Probabilities calculated using All-Birth Model 7 for native-born women age 30 with some college at parity 0.

appears for Asian Indians and Filipinos, although their estimated parameters in Table 4 are not statistically significant. Sixteen percent of Black-Black couples are expected to have a birth, which is between the 20% for Black husband-White wife couples and the 14% for White husband-Black wife couples. The same pattern exists for Mexicans with the birth probabilities for endogamous couples falling between the probabilities for the two intermarriage combinations. Puerto Rican-Puerto Rican couples' birth probability of 13.4% is essentially indistinguishable from the 13.6% probability for White husband-Puerto Rican wife couples but lower than the 23% probability for Puerto Rican husband-White wife couples.

One noteworthy pattern in Table 5 (also present in Table 1) is the higher expected fertility of intermarried couples with Black, Mexican, and Puerto Rican husbands compared to the corresponding endogamous couples and intermarried couples with Black, Mexican, and Puerto Rican *wives*, respectively. In other words, fertility probabilities for intermarriages with White women are higher than fertility probabilities for endogamous couples and intermarriages with White men for these three groups. This suggests that gender may interact with race in determining fertility. I revisit this issue below in the discussion.

Discussion

This paper has empirically assessed one aspect of the theoretical basis for studying racial-ethnic intermarriage incidence. The conventional perspective is that intermarriage represents weak group boundaries and produces offspring who by their very existence weaken group boundaries even further. I compare fertility patterns between endogamous and exogamous couples and find evidence supporting this conventional perspective on intermarriage. There is modest support for the perspective that fertility will be lower for exogamous couples because children are a form of social capital. There is no support for the perspective that fertility will be higher for exogamous couples because childbearing is a strategy for enhancing marital stability. The evidence presented here supports the prevailing perspective that exogamous couples who engage in a relationship as intimate and durable as marriage have transcended racial and ethnic boundaries. These fertility patterns are evidence that the incidence of intermarriage for the most part accurately measures the strength of group boundaries. With a few exceptions, exogamous couples bear children at the same rate as endogamous couples, producing children for whom racial-ethnic distinctions may be less important. These results generally support the soundness of the theoretical basis for studying the incidence of intermarriage.

Why does intermarriage affect Asian Indian and Chinese couples but not Black, Filipino, Mexican, or Puerto Rican couples? A definitive answer may require qualitative research with intermarried couples and their families, but the relative acceptability of the different intermarriage combinations may account for this variation. Blacks have the lowest rates of intermarriage with Whites (Qian & Lichter, 2007), suggesting very strong Black-White boundaries. Thus, Black-White couples who marry under these circumstances must be highly selected and may share a greater commitment to each other than other couples. This greater commitment may immunize them from any disapproval that they encounter. At the other end of the spectrum, the Latino-White intermarriage boundary is the most porous (Qian & Lichter, 2007). Thus, intermarriage may have no effect on the fertility of these unions. Many Latino-White intermarriages may be pairings of a non-Latino White partner with a Latino partner who is perceived racially as White. These Latino-White intermarriages may represent a softer form of boundary crossing compared to Black-White or Asian-White intermarriage.

Asian-White intermarriage tendencies fall between Black-White and Latino-White tendencies. Although percentages of young Asian American men and women who intermarry exceed corresponding percentages for young Latinos, this is due in part to the smaller numbers of Asian Americans in the marriage market. With fewer Asian American potential spouses available it is not surprising that Asian Americans are more likely to intermarry than Latinos, who have more Latino potential spouses available for marriage. After controlling for population composition, though, Asian-White intermarriage tendencies are in fact weaker than Latino-White intermarriage tendencies (Qian & Lichter, 2007; Rosenfeld, 2002). Thus, Asian-White couples do not experience opposition as extreme as Black-White couples, but they experience more opposition than Latino-White couples. Asian-White couples are thus in a position for a social support deficit to affect their fertility.

Why does crossing a racial or ethnic boundary have a small effect on marriages but not cohabiting unions? The finding that there were no effects of exogamous partnering for cohabitors confirms the expectation that effects for cohabiting unions would be weaker than effects for married couples. This is consistent with the argument that the commitment level and norms for cohabiting unions are weaker than for marriages. With weaker commitments, some cohabiting couples do not even entertain the thought of childbearing. With weaker norms, the ability of family and friends to influence cohabitors is less.

One limitation of this paper is its inability to explore gender differences in the effect of intermarriage. Table 1 shows that the number of marriages between Black men and White women far exceeds the number between White men and Black women. The gender imbalance is reversed for unions of Whites with Chinese and Filipinos. Furthermore, as discussed above, the birth probabilities in Table 5 for Black, Mexican, and Puerto Rican men intermarried with White women exceed the probabilities for corresponding endogamous couples and intermarriages with White men. Clearly gender is important to intermarriage. Nonetheless, despite the attention that intermarriage has received, gender differences in intermarriage are poorly understood. The most focused study (Jacobs & Labov 2002) finds that current theories have limited explanatory power.

Nevertheless, a classical perspective on family suggests one possible approach to gender, intermarriage, and fertility. According to Malinowski (1930), a father is required to legitimize a birth and connect the child to the rest of the community. Although single parenthood is more acceptable in the current American kinship system, the usual patriarchal practice of the wife and children taking the husband's family name suggests that fathers are still key to tradition, family continuity, and conferring an identity on children (Rothman, 1989).

Thus, the higher fertility of Black, Mexican, and Puerto Rican intermarriages with White women may be an effort by fathers to assert their identity and produce offspring to ensure family and racial-ethnic continuity. These men's disadvantaged minority status may combine with feelings of insecurity from the violation of social norms that their marriages represent and lead to higher fertility. Drawing on Friedman et al.'s (1994) uncertainty reduction framework, a birth would cement a couple's legitimacy. This argument is supported by the positive main effects for Black (0.063, standard error [*SE*] 0.074), Mexican (0.224, *SE* 0.080), and Puerto Rican (0.237, *SE* 0.167) men in Model 7, although only the effect for Mexican men is statistically significant ($p < .01$). White men intermarried to Black, Mexican, and Puerto Rican women would be less threatened by social norms and uncertainty because these couples are headed by White men who are more secure and comfortable at the top of the racial and gender hierarchies.

The intermarriage model in this paper is unable to identify gender differences of this sort, though. Conceptually this paper's model views a couple's fertility as resulting from a mother's contribution and a father's contribution. An intermarriage effect exists if a mother's or a father's contribution depends on spouse's race, but gender differences in the effect of intermarriage are not uniquely identified. The key interaction terms in Table 4 simultaneously describe, for example, both (a) the difference in the contribution of Black husbands when they are married to White versus Black wives and (b) the difference in the contribution of Black wives when they are married to White versus Black husbands. This interaction term by definition cannot be attributed uniquely to either Black men or Black women. If an intermarriage effect exists for only one gender combination, then this model would have less power for detecting an intermarriage effect.

A simple comparison of fertility, for example, between Black husband-White wife couples and endogamous Black couples would also be insufficient to establish either a gender-specific or another sort of intermarriage effect. Differences between Black husband-White wife couples and endogamous Black couples may come from two sources: (a) differences between White and Black women in their contribution to fertility and (b) differences in the behavior of Black men in endogamous and exogamous marriages. My approach enables one to uniquely identify an intermarriage effect (b) but is unable to identify gender differences in intermarriage effects. This remains a worthy problem for future research to address.

Another limitation of this study is that the data used come from a sample of prevailing marriages that have survived to appear in the ACS. These marriages may not be representative of all the marriages that might have occurred. Some marriages may have formed despite opposition from

family. These more vulnerable marriages may have already experienced disruption and not survived to appear in the ACS. These more vulnerable marriages may have faced the greatest opposition and received the least support from family members and friends. These same marriages would be most likely to experience lower fertility, according to Schoen et al. (1997) because these couples would benefit least from childbearing as a form of social capital. Past research has in fact found support for the notion that marital stability and childbearing are related (Lillard & Waite, 1993; Waite & Lillard, 1991), although no study has explicitly examined this question for interracial couples. Addressing the selectivity of the couples appearing in this sample would require a joint model of marital disruption and fertility using longitudinal data.

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